THE CHARGE NURSE: JOB ATTITUDES AND OCCUPATIONAL STABILITY

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A thesis submitted for the degree of Ph.D in the University of Aston

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ABSTRACT

Charge Nurses (CNs) from two general hospitals provided information about their work through the media of attitude scales, questionnaires and individual interviews. Investigation was made of the relationship between the CNs' attitudes and perceptions of their jobs and their satisfactoriness and withdrawal.

Aspects of the job considered important by the CNs were, on the whole, provided by the organization, although if the needs - rewards discrepancy on pay and the competence of the nursing officer in training the staff were reduced, then dissatisfaction would decrease. Enabling the CN to make greater use of her abilities and to have some influence over appropriate hospital policies and practices would reduce her propensity to leave.

The level of job satisfaction was high although there was some dissatisfaction with environmental aspects. Perceived role conflict and job related tension were relatively high particularly with respect to the workload and organizational support. Role ambiguity did not emerge as a significant problem.

Propensity to stay, role clarity and short tenure were, in combination, related to job satisfaction, and low satisfaction and high role clarity predicted propensity to leave. The positive relationship of role clarity to both satisfaction and propensity to leave is explained in terms of challenge and job tenure.

Twenty eight percent of the sample left during the eighteen months following questionnaire administration, and the median tenure was twenty months. This suggests a strong 'mobility culture' in hospital CNs. Leavers gave lower scores on extrinsic but not intrinsic satisfaction, and higher scores on job-related tension, role conflict and propensity to leave.

The value and limitations of using the methods employed in this study have been discussed and suggestions have been given for the design of further research in this area.

key words: nurses, satisfaction, role stress, turnover.

ACKNOWLEDGEMENTS

My thanks are due, in particular, to the following:

Peter Spurgeon, my teacher, advisor, supervisor and friend whose help has been continuous whether he has been in this country or overseas. Professor Singleton, who acted as an advisor and who found time for many discussions.

I am grateful to the Department of Health and Social Security for granting me a nursing research fellowship and for sponsoring the study, and to Dr Sylvia Lelean, Principal Nursing Officer (Research) who was my liaison officer.

Many friends and colleagues helped with the design and analysis of the study. They include Pat Shipley from Birkbeck College,
Dr Charles Jackson, formerly at Aston University and now at UWIST,
and Keith Jacka from Chelsea College. Holmes Pegler and John Russell
were most patient in helping me with the computer programs.

Sue Roberts and Joyce Hine typed the drafts and final version and met the formidable deadlines I requested with equanimity.

Lastly I thank all the charge nurses and nursing officers who were the subjects of this study and made it possible.

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I. INTRODUCTION

I.1 The DHSS Nursing Research Fellowship Scheme

The amount of research done in nursing in this country is small in comparison with medical research and research in nursing overseas, notably in North America. The development and sponsorship of nursing research fellowships by the Department of Health and Social Security were introduced in an attempt to encourage and enable nurses critically to examine their profession and practice. Such research would help to develop a body of nursing knowledge and provide nurses with information about nursing which could lead to the initiation of change in policy and practice in order to improve patient care.

Most nurses are trained under an apprenticeship scheme before becoming qualified as state registered or state enrolled nurses. This training is the responsibility of schools of nursing approved by the General Nursing Council, and few links exist with centres of higher education. The apprenticeship nature of preparation has resulted in the student being trained to become a safe practitioner rather than educated in the art and science of nursing. Consequently, the teaching of nurses has been based on experience, assumption and myth and the need for research in nursing has not, generally, been appreciated. Those nurses who have recognised the role of research in nursing have not been equipped to make use of such research findings that do exist, nor to carry out research themselves, because they have not had any preparation in research methods. The DHSS fellowship scheme was developed with

two aims. First, and most important, to enable nurses to obtain training in research techniques. This should increase their powers of critical thinking and their ability to investigate problems in their own fields of nursing. Second, to sponsor research which needs to be done and which has a practical application for the nursing service. As increasing numbers of nurses make use of the scheme, as they complete research studies and then return to work in all branches of nursing, the opportunity for establishing policy and practice based on a certain degree of scientific rigour, becomes a possibility.

I.2 The Present Study

This study is concerned with the feelings that the hospital sister and charge nurse* have about their work. A large number of studies has been published on student and pupil nurses, but there is very little information about the more senior hospital nurse with close and constant patient contact. Recently (Royal College of Nursing, 1978), considerable alarm has been expressed about the current state of nursing. Discussions in the House of Commons on the Nurses, Midwives and Health Visitors' Bill have reached the national press (The Times, November 14, 1978), with Members of Parliament deploring the alleged declining standards of patient care and low morale amongst nurses. The Royal College of Nursing (1978) has maintained that morale is low for several reasons: standards of care have declined, there are not enough nurses to meet health service needs, workloads have increased, career development facilities are inadequate, and nurses' pay is too low.

^{*} both sisters (female) and charge nurses (male) are referred to as CNs, and for convenience, she/her is used throughout to include both women and men.

This alleged gloomy picture has been applied to nursing generally. Is it true for CNs in general hospitals? What do they think of their jobs and the organizations they work in?

The aim of this study was to investigate this, to understand the opinions, perceptions and attitudes that CNs have towards the job of nursing staff, the organization they work in, the people they work with, and the conditions they work under; and whether these relate to performance, absence and wastage, both potential and actual. Thus, the aim was to develop a model of organizational behaviour in which work attitudes and perceptions of hospital CNs could be related to occupational stability. An increased understanding of the CNs'attitudes to work may provide insight into ways in which the work environment could be improved. The study will highlight the proportion of CNs who leave their jobs for negative and avoidable reasons, which could provide a basis from which realistic policies for reducing excessive wastage could be developed.

Nurses have been subjected to extensive upheavals over the last few years, with the introduction of the senior nursing staff structure (the 'Salmon' system), and reorganization of the National Health Service. The reactions of CNs to these changes will emerge from the study together with their opinions as to whether the facilities for patient care and their own career development have improved.

I.3 Outline of the Thesis

An attempt has been made to draw a picture of the state of nursing manpower at ward level and the incidence of withdrawal

(both wastage and absence) in staff nurses (SNs) and CNs.

Information has been collected on national manpower statistics
and on the levels of absence and wastage in SNs and CNs in five
hospitals in the West Midlands region, and these are described in
the manpower section below.

Following this introduction is a review of the relevant
literature and the description of the theoretical framework adopted
in this study. The emphasis in the review is in two theoretical
areas, job satisfaction and role stress, and some of the massive
literature on empirical research in these areas is included. A
separate discussion of the literature on withdrawal from work in
nurses is not provided here because a review has been prepared and
published, and two papers (one written with Jill Clark) have been
included with this thesis.

A description of the pilot work and methods adopted for the main study is given in the methodology section, together with details of the procedure adopted and the problems which occurred.

The bulk of this report is devoted to the results, some of which were descriptive (chapters 4 and 9) and others which involved correlational and comparative analysis (chapters 5 to 8). The format adopted has been to follow each results section with a discussion of the findings in relation to previous research, rather than to include a discussion of all the results together in one section. It is considered that this provides a clearer framework for the reader to follow.

The final chapter contains the conclusions drawn from the study, the implications that these have for nursing, and tentative recommendations.

I.4 Background: The Manpower Picture

At the start of the project (in October 1974) the focus was on wastage and turnover * in registered nurses (charge nurses and staff nurses), and national and regional (West Midlands) manpower statistics were collected in order to obtain a picture of the extent of staff mobility within each grade of nurse. Between 1971 and 1974 it appeared that the number of National Health Service hospital registered nurses, particularly CNs, was falling, the decline being apparently compensated by the rapid increase of state enrolled nurses and nursing auxiliaries and assistants (see Table 1 and Figure 1). By 1975, four reports on wastage or turnover of nurses had been published (Report of the Committee on Nursing, 1972; DHSS, 1974; Harris, 1974; Scottish Home and Health Dept., (SHHD) 1975).

Nationally, the percentage increase of most grades of nurse fell in 1973 and, according to the Halsbury Report (DHSS, 1974), was most serious in the staff nurse grade.

A nurse wastage study based on published DHSS material (Harris, 1974) put the annual net wastage for all registered nurses in England and Wales at 10.6% and the average number of years' service at 9.4. Registered nurses in non-psychiatric hospitals had higher average annual wastage (11.1%) and shorter average tenure

^{*} Wastage as used here refers to leavers from hospitals for any reason. Turnover relates to entrants as well as leavers.

Table I: Numbers (whole time equivalents) of nursing staff
of different grades employed in all non-psychiatric
hospitals in England and Wales, 1971-1976
(figures refer to 31st March each year)

	1971	1972	1973	1974	1975	1976+
Charge nurse	21897	20660	18609	15022	29237	30182
Staff nurse	27201	28432	27753	26942	27860	32476
Enrolled nurse	25944	28400	29521	30700	32594	37218
Student nurse **	38851	39808	41632	42942	44545	48900
Pupil nurse	18082	19306	20719	19314	18783	20414
Nursing auxiliary/ assistant	45001	48578	50383	52418	57382	56210

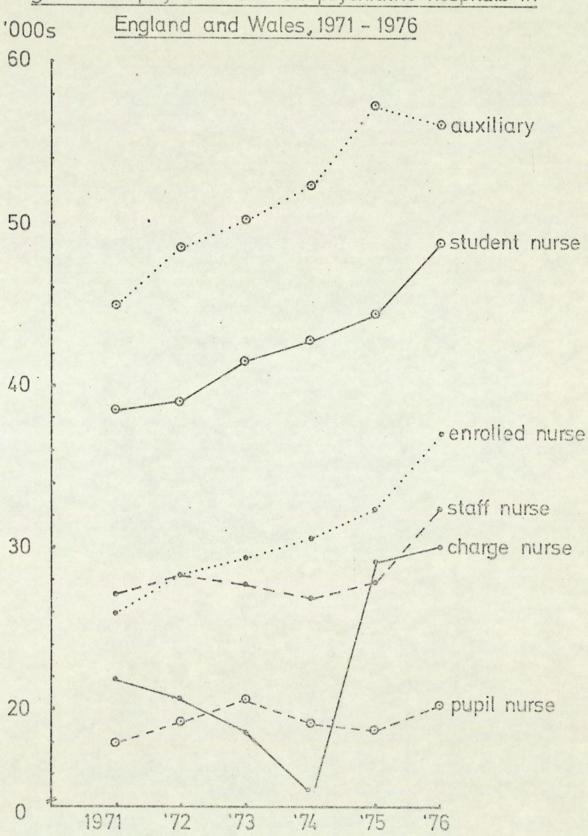
^{**} pre and post-registration students

(9.0 years) than those in psychiatric hospitals (8.7%, 11.5 years). These levels were more than double the wastage figures calculated for school teachers, which was 4.8% in 1971 (Dept. of Education & Science, 1973).

The Scottish Home and Health Department completed a large-scale study into the movements of qualified hospital nurses in Scotland (SHHD, 1975; Abel et al, 1976 a, b). During 1972 the total number of leavers (those who left the Scottish service and those who moved to other nursing posts in Scotland) was 7,121, or 33% of the total number employed at the beginning of the period. This was compared with 7,575 (36%) entrants, consisting of those taking qualified nurse posts in hospitals for the first time or after a break in service, and entrants from other hospitals in Scotland. The general

^{+ 1976} figures refer to 30th September
Source: DHSS Statistics & Research Division and Welsh Office

Figure 1.
Whole time equivalents of nursing staff of different grades employed in all non-psychiatric hospitals in



impression was that movement was high even though the overall trend showed a growth in numbers. The figure of 33% represented a wastage rate for 1972 which consisted of 14% of nurses who moved into other hospital employment in Scotland, and about 20% true wastage from the nursing service in Scotland. The loss to the nursing service may not have been excessive, and indeed, it might have been difficult to absorb the extra number if wastage had been less, but the upheaval for individual hospitals in coping with mobility appeared to be considerable. The survey revealed another potentially disturbing statistic, that of the 22% of nurses classified as 'joiners' (excluding those moving between hospitals), only 10% came from training schools. The majority were nurses who had qualified earlier and were joining or rejoining the Scottish nursing service. This suggests that considerable wastage occurs on qualification.

The 'loss' rates and 'moving' rates were slightly higher for full-time female registered nurses (loss = 22%, moving = 19%) than for their enrolled counterparts (loss = 18%, moving 15%). This was probably due to the different age distributions of the two groups. The highest loss rate for both groups occurred in the under 30 age group, and this rate was higher for registered than enrolled nurses. The loss rate of registered nurses aged 25 or less was over 50%, and for the 25-30 age group, 32%.

A mobility, or turnover, estimate was used by the researchers of the Briggs Report (Report of the Committee on Nursing, 1972) to determine the percent of employees who had been employed by their current employer for 12 months or less on April 1, 1971. This was about 20% for nurses in general: 9% for sisters and more senior grades, 25% for staff nurses, midwives, enrolled nurses and learners,

and 27% for auxiliary and assistant nurses. Comparative figures were provided for school teachers (17%), welfare workers (24%) and secretaries and typists (21%). The global figure of 20% compares favourably with the 19.8% turnover for local authority social workers in 1973 (DHSS, 1973), but the social worker figure excludes management and supervisory staff which have been included in the nurses' figure. No data have been found which indicate national turnover in the charge nurse grade alone, and the 9% mobility reported by the Committee on Nursing is weighted towards the more stable senior nurses.

It is difficult to make comparisons between the findings of these studies because they have not used the same techniques to calculate turnover and wastage. National nursing turnover figures in England and Wales do not appear excessive when compared with other female-dominated occupations, but global figures which combine different age groups, grades and regions are of limited value because they mask local variation. Furthermore, the picture both nationally and regionally has changed probably as a result of the NHS reorganization and the Halsbury pay rise, both of which took place in 1974.

The DHSS nursing manpower statistics for non-psychiatric NHS hospitals in England and Wales show interesting trends since 1974 (see Figure 1 and Table 1). On a national level, CN numbers decreased between 1971 and then doubled over the next two years; SNs maintained a steady level or slight decrease until 1974 and then increased a little in 1975 and substantially in 1976; student nurses have increased steadily but pupil nurses increased only until March 1973, after which numbers declined through 1975 but picked up again in 1976;

and enrolled nurses, auxiliary and assistant nurses all increased in number between 1971 and 1975, the increase being particularly large in the auxiliary nurses. In 1976 there was an increase in all the grades but one, the rise being particularly marked in staff nurses, enrolled and student nurses. CNs increased slightly and auxiliaries/assistants decreased. This suggests that more staff nurses and enrolled nurses were employed in 1976 at the expense of the CN.

The nurse manpower levels in the West Midlands Region show a roughly similar pattern (Table 2 and Figure 2).

Table 2: Numbers (whole time equivalents) of nursing staff of different grades employed in all hospitals in the West Midlands Region* 1971-1976 (figures refer to 31st March each year except for September 1976)

	1971	1972	1973	1974	1975	1976
Charge nurse	2772	2570	1816	1970	3698	4173
Staff nurse	2072	2196	2158	2200	2463	3141
Enrolled nurse	3415	3615	3728	4011	4389	4838
Student nurse **	2931	3265	3513	3999	4587	4922
Pupil nurse	1927	2016	2203	2021	1980	2566
Nursing auxiliary/ assistant	5747	6620	6628	7458	7972	8185

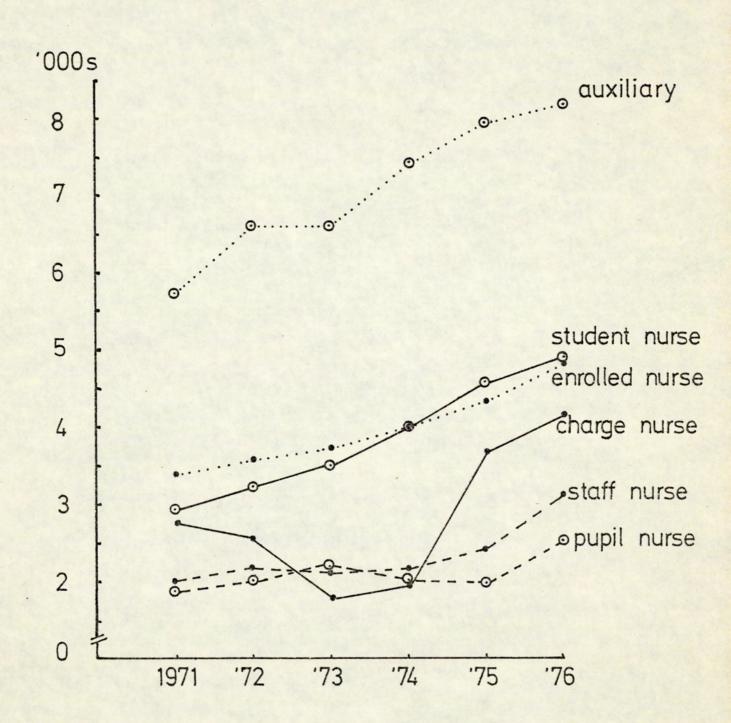
^{*} Birmingham Regional Hospital Board before 1974

Source: DHSS Statistics & Research Division

The national and regional nurse manpower statistics are not directly comparable, however, since Table 2 includes nurses in psychiatric as well as non-psychiatric hospitals.

^{**} pre and post-registration students

Figure 2.
Whole time equivalents of nursing staff of different grades employed in all hospitals in the West Midlands Region, 1971 – 1976



Both nationally and in the West Midlands region the number of CNs increased sharply after the 1974 pay rise and NHS reorganisation and, in comparison, staff nurse numbers showed a more modest increase. One possible explanation is that hospital managers promoted their able staff nurses to the then new grade of junior charge nurse in an effort to retain them, and so the experienced staff nurse of the pase became a junior charge nurse. It is now common for a senior and junior charge nurse to be employed in a ward rather than a charge nurse and senior staff nurse, and the growing number of enrolled nurses have stepped into the junior staff nurses' shoes.

One possible explanation for the rise in CNs is that the increase in unemployment and the cost of living is encouraging more nurses back to work. Another factor which may have made pre and post 1975 comparisons of CN numbers meaningless is that the grade has been given a different label on the manpower forms published by the DHSS. Before 1975 it was 'ward sister' and included men and women. From March 1975 onwards the grade has been relabelled 'nursing sister/charge nurse'. It has been assumed that the former 'ward sister' included all nurses of sister/charge nurse grade even if they were not ward sisters (eg theatre and outpatient department sisters). Another point is that the regional boundary changed at NHS reorganization when the Birmingham regional hospital board became the West Midlands regional health authority, and this may have influenced the proportions of nurses in each region.

The 1976 figures indicate that staff nurses have staged a comeback in that their proportional increase was greater than that of the CNs and much greater than in previous years. One can speculate on the reason for this. It may be that the tight

financial position has led authorities to employ the cheaper staff nurse as a deputy CN rather than a nurse in the CN grade.

These statistics provide a fairly rosy picture of registered nurse levels, but give no indication of inter-hospital mobility.

Consequently, manpower data were collected from selected hospitals to determine the level of local registered nurse wastage, and to support or refute anecdotal evidence supplied by senior nurses in the West Midlands region, of serious staffing problems at that time, 1974/5(Tables 3 and 4).

A note on terminology would be of value at this stage. The words 'wastage' and 'turnover' are used interchangeably in the literature, which is confusing to the reader. The rationale adopted in this study is that wastage refers to those who leave an organisation for any reason, and turnover includes both the leavers and the entrants to the organization. Thus, although some nurses who leave may have left the nursing service, wastage as employed here also includes those who move to jobs in other nursing organizations. The reasons for the decision to use wastage rather than turnover are firstly, that a study of nurse turnover should, strictly speaking, include factors involved in selection and recruitment as well as retention and wastage and this was not possible in the present project. Secondly, the Department of Health and Social Security (1975) produced a document which contained recommendations on how leavers from National Health Service organisations could be classified and measured. That report recommended that wastage should be used rather than turnover.

Table 3: Wastage and stability rates of charge nurses in 1974 in 5 hospitals in the West Midlands region.

(general nursing division only)

		НС	SPITALS	S	
	E * (200)	A (285)	D (300)	C (450)	B (707)
Number employed at beginning of period a	33	44	51	81	98
Entrants during period i. from outside ii. SN+CN internal promotions	9 2	15 11	15 ?	21 16	20 12
b	11	26	15	37	32
Leavers during period i. left hospital/division ii. transfer/promotion within hospital/division	8	13	19	33	36
c c	8	14	19	33	36
Number employed with 12 months' service or more (in present post) at end of period a-c	25	30	32	48	67
Labour force at end of period a+b-c	36	56	47	85	94
Wastage % $\frac{c}{a+(a+b-c)}$ x 100	23.18	28.00	38.78	39.80	35.64
Stability % $\frac{a-c}{a}$ x 100	75.76	68.18	62.75	59.26	65.05

^{*} numbers in parenthesis = number of beds

SN = staff nurse

CN = charge nurse

Table 4: Wastage and stability rates of staff nurses in 1974 in 5 hospitals in the West Midlands region.

(general nursing division only)

			НО	SPITALS		
		(200)*	(285)	D (300)	C (450)	B (707)
Number employed at beginning of period	a	20	34	65	56	52
Entrants during period (including Stn→ SN internal promotions)	b	10	15	19	53	48
Leavers during period	С	9	20	32	48	41
Number employed with 12 months' service or more (in present post) at end of period a	-c	11	14	33	8	11
Labour force at end of period a+b	-c	21	29	52	61	59
Wastage % $\frac{c}{a+(a+b-c)}$ x 1	00	43.90	63.49	54.70	82.05	73.87
Stability % $\frac{a-c}{a}$ x 1	00	55.00	41.18	50.77	14.29	21.15

^{*} numbers in parenthesis = number of beds

StN = student nurse

SN = staff nurse

In five general hospitals wastage in CNs ranged from 23-40% in 1974, and in staff nurses from 44-82%. These rates are considerably higher than the 9% for sisters and more senior nurses and the 25% for staff nurses, midwives, enrolled nurses and learners,

in 1971 (Report of the Committee on Nursing, 1972), and the SHHD figure of 33% for all registered nurses in 1972. However, the figures are not strictly comparable because they are based on different analyses, and in 1974 may not have been typical since it was a year of great change in the NHS.

The five hospitals described here were 'client selected' in that the West Midlands' regional nursing officer provided the author with a list of health districts in which these hospitals were situated. The regional nursing officer thought that these district would probably cooperate and might benefit from a study of this kind.

When the numbers of CNs who left in 1974 were compared across hospitals the difference was not statistically significant $(x^2 = 2.42, df = 4)$. Similarly with SNs, the difference in numbers in that grade who left was not significant $(x^2 = 5.55, df = 4)$.

As well as wastage and stability rates, figures on absence were collected for the CNs in post in 1974 in all five hospitals. Table 5 shows the number of absence spells of specified duration in each hospital.

The difference between the total number of spells across all five hospitals was significant (χ^2 = 46.41, df = 4, p <.001). When comparisons were made between pairs of hospitals, all were significantly different except for the B, E and C, D hospital pairs (Table 6).

The CNs in hospitals A, B and E took fewer absence spells than would be expected by chance, and those in hospitals C and D took more absence than expected.

Table 5: Absence spells of specified duration in charge nurses in 5 hospitals in 1974.

ABSENCE DURATION		HOSPITALS										
(days)	(E 35)*	A (45)		D** (49)	(C (83)		B 01)			
1	33	% 42.3	36	% 53.7		108	% 40.9	110	% 48.5			
2	11	14.1	9	13.4		43	16.3	51	22.5			
3	9	11.5	3	4.5		19	7.2	11	4.9			
4-7	13	16.7	7	10.5		35	13.3	23	10.1			
8-14	5	6.4	6	9.0		19	7.2	14	6.2			
15+	6	7.7	6	9.0		18	6.8	20	7.9			
Unknown	1	1.3	-			22	8.3	-				
TOTAL	78		67		157	264		227				

p < .001

Table 6: Pair comparisons of CNs' absence spells in 1974 in $\frac{5 \text{ hospitals}}{5}$

		HOSPITAL PAIRS											
	A,B A,C A,D A,E B,C B,D B,E C,D C,E D,E												
_x 2	8.92	32.25	29.00	5.95	14.86	11.79	0.01	0.01	7.70	6.94			
р	<.01	<.001	<.001	<.02	<.001	<.001	ns	ns	<.01	<.01			

^{*} numbers in parenthesis = average number of staff in post

^{**} total number of absence spells only available for hospital D

Table 7 shows the frequency rate of absence spells in CNs in 1974 for each of the five hospitals.

Table 7: Frequency rate of absence spells in CNs in 5 hospitals in 1974.

	HOSPITALS								
	Ε	А	D	С	В				
Frequency rate of * absence spells	222.9	148.9	320.4	318.1	224.8				
Average number of staff in post (mean)	35.0	45.0	49.0	83.0	101.0				

^{*} frequency or inception rate (spells) %

Comparisons with frequency rates for all grades of nurse combined can be made: 175% in 1966/67 (Brown, 1968), 309% in 1968 (Pounds, 1969) and 395% in 1970/71 (Clark, 1975). Since it has been found that, with a few exceptions, absence is inversely related to grade of nurse (Lunn, 1975; Clark, 1975; Barr, 1967; Cormack, 1973; Nelson, 1974), then the rates reported in CNs in the five West Midlands hospitals, especially hospitals C and D, were higher than would have been expected. The number of absence spells per CN in 1974 ranged from 1.5 in hospital A to 3.2 in hospitals C and D (E = 2.2, B = 2.2). The mean across all five hospitals was 2.5 which was higher than the 1.9 reported by Lunn (1975) in the same grade of nurse.

The manpower picture in 1974 indicated that although wastage in registered nurses may not have been excessive nationally, it

 $^{= \}frac{\text{number of absence spells in period}}{\text{average number employed}} \times 100$

presented a considerable problem in most of the hospitals studied here. In spite of the extremely high wastage rates for staff nurses in these five hospitals in 1974, the decision was taken to confine the study to charge nurses for the following reasons: the time constraint prevented inclusion of both grades; there were more CNs than SNs in the hospitals (except in hospital D); and, most important, SNs are a mobile group in that they are expected to leave for further training, more experience, or promotion, except for those older, stable SNs who have settled in the area with their families and work part-time. Thus, the number of SNs who leave for purely negative reasons is thought to be small and difficult to identify. CNs are a more appropriate group for the purposes of this study because, although they may also leave for experience, training and promotion, the grade is also a career one, and many remain at that level for the rest of their working lives.

The general nursing division was selected because the evidence suggests that wastage was higher in registered general nurses compared with midwives or psychiatric nurses, and the information on community nurses is much less reliable (Harris, 1974; SHHD, 1975).

Two hospitals (A and B) were selected for the main study, and one (hospital D) was used for pilot study work. Details of the samples are given on p.108 Hospitals A and B were selected from the original five for several reasons. Only two hospitals could be included in the time available and these two were geographically fairly close to each other and likely to draw nurses from roughly the same catchment area. Also, one was large and the other small, which was considered to be important in the

original design of the study in which an emphasis was on the relative rates of wastage on hospitals of different sizes. The nursing management in both these hospitals were enthusiastic about the study, whereas in hospital C they were cautious and restrained and may have refused unconditional access. Finally, hospital E was small (200 beds) and plans were in operation to replace it with a new district general hospital. Thus, the results would have been irrelevant to the new hospital environment.

By 1976 it was apparent that the decrease in registered nurse wastage nationally was also occurring among the CNs of hospitals A and B. The comparative wastage and absence rates in the CNs in each hospital for the years 1974 to 1977 can be seen below (p 14%). In view of this development, plans were made to alter the emphasis of the study somewhat, to give more prominence to other forms of withdrawal (absence and propensity to leave) than leaving altogether and to look more closely at the perceived role pressures, tensions and dissatisfactions that CNs may experience on the job.

2. THE LITERATURE AND THEORETICAL FRAMEWORK

2.1 Attitudes to Work: Motivation and Job. Satisfaction

2.1.1 Theories

Research into work attitudes, specifically motivation and job satisfaction, originates in the four themes of Mayo's Hawthorne studies (1949), Maslow's needs hierarchy (1943), Herzberg's Motivation - Hygiene theory (1966) and Vroom's expectancy theory (1964). The Hawthorne studies conducted at the Western Electric Company in Chicago, provided an approach to the study of the working man which emerged as a complete contrast to the 'economic man' which dominated the thinking of F.W. Taylor (1947) and his 'scietific management' school. The major impact of the Hawthorne studies was that they shifted the focus of attention from financial incentive and physical working conditions to interpersonal relations, work group norms, values and behaviour, supervision, satisfaction and morale. Man is more complex than the '...simple animal driven by a desire for money and at the mercy of his environment.' (Warr & Wall, 1975, p.32). However, as Warr and Wall pointed out, it is mistaken to discount the importance of pay altogether and rely solely on the influence of social factors.

The second theme which stimulated extensive research into work motivation is Maslow's hierarchy of human needs. Many writers have been strongly influenced by the Maslovian approach in their studies of organizational behaviour. For example, Argyris (1960) emphasised the importance of self-actualization in integrating the relatively mature, active, independent adult into the organization. If the requirements

of the organization are incongruent with the needs of the individual, he will experience frustration and conflict, and will adopt coping strategies such as withdrawing from the organization (leaving altogether or taking time off), accepting the organization's norms and seeking promotion, becoming disinterested and apathetic, or developing informal group norms of behaviour which run counter to those of the formal organization.

Likert (1961) recognised that if the organizational environment enables cooperation, such as achievement, security, creativity and economic motives, to develop, both the needs of the individual and the organization will be achieved. McGregor (1957, 1960) relied heavily on the hierarchical nature of Maslow's system when developing his X and Y theories of management. The assumption of Theory X is that man dislikes work and will avoid it if possible. He must therefore be coerced, controlled and punished in order to invest sufficient effort to meet organizational objectives. As he is unambitious, dislikes responsibility and wants security, he is content to be totally directed. In contrast, the assumptions of Theory Y state that man does not by nature dislike work, but it can be a source of satisfaction or punishment. He will exercise self control if committed to the organizational objectives and sufficiently rewarded for achieving them, and he seeks creativity and responsibility in his work. The main principle which distinguishes Theory Y from Theory X is integration, the organization providing the appropriate conditions to enable the individual to satisfy his own needs whilst achieving its goals.

Porter (1961, 1962, 1963) in his work with 'bottom' and 'middle' level managers, was the first to put Maslow's theory into operational

terms. He did, however, exclude the first level physiological needs, since these are largely satisfied in Western societies, and he inserted 'autonomy' needs between the esteem and self actualization levels. He assessed the individual's perception of need-fulfilment deficiencies and need importance with the following questions applied to each characteristic associated with management positions:

- (a) 'how much is there now?'
- (b) 'how much should there be?'
- (c) 'how important is this to you?'

The larger the discrepancy between 'should be' and 'is now', the more deficient the need fulfillment and therefore, the more dissatisfied the individual. Porter found that the greatest discrepancies occurred in security, esteem and autonomy needs.

A large body of research has questioned the validity of Maslow's theory and empirical studies have been conducted to test its key concepts (Hall & Nougaim, 1968; Alderfer, 1969; Roberts et al, 1971; Gibson & Teasley, 1973; Mitchell & Moudgill, 1976). The model has been criticised because it has claimed to provide a static picture of what is essentially a dynamic needs structure; the hierarchy is not necessarily identical for all individuals; it may change over time; and it cannot be assumed that everyone will activate all the levels (Burack, 1975). However, as Mumford (1972) has pointed out, Maslow's theory has often been misunderstood and oversimplified. It is a dynamic theory, because the need system of an individual expands continuously as he strives for fulfilment, and although Maslow claimed that the higher order needs could not be satisfied

before the lower level needs, regression to the lower levels was possible. Furthermore, Maslow agreed that the order of hierarchy will vary between individuals, cultures and over time, and although movement upwards was usual, it was not inevitable (Mumford, 1972).

Maslow's theory can, however, be criticised on the grounds that the levels are not necessarily independent (Alderfer, 1969), it does not account for a large number of factors (e.g. race, status level, culture) which must affect an individual's needs structure (Burack, 1975), and although it is likely that the physiological needs require fulfilment before any others can be considered, the higher level needs cannot be ordered into a hierarchy of prepotency (Alderfer, 1969; Porter, Lawler & Hackman, 1975). Alderfer's (1969) ERG theory reduced the five interdependent levels to three 'core needs' that man strives to fulfil: the 'Existence' needs include all material and physiological aspects (hunger, thirst, pay, physical working conditions, etc), 'Relatedness' needs involve relationships with other people considered important to the individual, and 'Growth' needs '... include all the needs which involve a person making creative or productive effects on himself and the environment.' (Alderfer, 1969, p.146).

Maslow's theory was difficult to test because it was based on theoretical rather than empirically derived concepts but the work by Porter and his associates did convert it into operational terms. The literature also suggests that, in most cases, the needs are more likely to follow a curvilinear rather than a linear function, that is, a point is reached where, given more of a particular item, gratification diminishes (Burack, 1975; Porter, Lawler & Hackman, 1975). An exception to this is the need for self-actualization, which is

thought to be insatiable, and so does not stop being a motivator once initially satisfied (Alderfer, 1969).

Although factor analytic studies have failed to support Maslow's categories, this may have been the case because they used orthogonal factor rotation (Mitchell & Moudgill, 1976). Mitchell and Moudgill argued that factor analysis using oblique rotation was more appropriate because Maslow's categories were not independent. On testing this, they found considerable support for Maslow with two samples (general accountants, and engineers and scientists), but less support for a third sample of chartered accountants. This study showed evidence for a two-level needs hierarchy but the authors were careful to point out that this did not necessarily deny the existence of a five-level hierarchy. Mitchell and Moudgill did not, however, support Maslow's later two-level deficiency-growth hierarchy, in which the 'growth' need of self-actualization was separated from the 'deficiency' physiological, safety, love and esteem needs. They found evidence that it was the security needs which could be separated from those occupying higher levels, and this dichotomy has been suggested by Porter, Lawler & Hackman (1975) as being the most probable categorization. It seems that more research on Maslow's theory is required before conclusive evidence for or against it can be found.

Much more empirical examination has been made of Herzberg's Motivation-Hygiene theory of job satisfaction than of Maslow's hierarchy. Although support has been found for the two-factor theory (e.g. Karp & Nickson, 1973; White & Maguire, 1973; Grigaliunas & Wiener, 1974), much more than half the research

published has been critical (Gardner, 1977). Gardner reviewed the position relatively recently and asserted that '...the fecundity of the theory is not in doubt but its purity is certainly highly suspect' (p.197). Credit has been given to Herzberg for stimulating so much research and interest in job satisfaction, job design and job enrichment, but the weight of evidence against the two independent dimensions of satisfaction (derived from the 'motivators') and dissatisfaction (derived from the 'hygiene factors') is overwhelming (e.g. Cummings & ElSalmi, 1968; Smith & Cranny, 1968; Farr, 1977; Gardner, 1977). These critics of the two factor theory have argued that it is method specific (supportive studies have used the critical incident technique), the self-report technique encourages defensive reactions in that dissatisfying experiences tend to be attributed to contextual factors and satisfying experiences to one's self, and the content analysis technique used to code the responses was experimenter biased and based on inadequate and interdependent operational categories. The critical incident technique is retrospective, selective, subject to social desirability, cannot cater for individual differences, and encourages a response set. Furthermore, Herzberg did not publish evidence for his technique's reliability and validity.

The dichotomous nature of the theory relies on the assertion that only the 'motivators' (achievement, recognition, work itself, responsibility, etc) can predict satisfaction, whereas it is the 'hygiene factors' (company policy and administration, supervision, interpersonal relations, working conditions, and usually, pay) which are responsible for dissatisfaction. Since there is no doubt that some motivators can lead to dissatisfaction and some hygiene factors to satisfaction, it must be the case that the success of the

predictors is merely relative. That is, more motivators predict satisfaction than dissatisfaction, and more hygiene factors predict dissatisfaction than satisfaction (Gardner, 1977). If this is the case, Gardner argues that satisfaction and dissatisfaction cannot be independent dimensions, which supports the traditional single dissatisfaction-satisfaction continuum.

Farr (1977) used Heider's attributional theory to explain why individuals tended to attribute unfavourable (dissatisfying) outcomes to environmental factors and favourable (satisfying) ones to themselves. Farr pointed out that Herzberg's ideas would have been accepted if he and his colleagues had published their research as an exploration of the concepts of job satisfaction and dissatisfaction, but they made an attributional error themselves in believing that their highly qualitative data provided causal bases for satisfaction and dissatisfaction.

Whilst the deficiencies in Maslow's and Herzberg's theories should be recognised, there is no doubt that both have provided the origins for the development of subsequent motivational models and have stimulated considerable research and management interest.

The final research theme which has contributed to the theoretical background of work attitudes and behaviour is Vroom's expectancy theory of work motivation (1964). He saw the motivated individual as one stimulated to perform a certain action provided that he expected this to be followed by a particular outcome (reward) which carried a positive value (valence) for him. If the level of the reward obtained exceeded that expected, then satisfaction was predicted, whereas if the discrepancy was a negative one, the prediction was one of dissatisfaction.

Vroom's theory stimulated a great deal of research interest and several expectancy models have since been developed (Lawler & Suttle, 1973; Burack, 1975). One of the most notable of these is Porter & Lawler's model (Porter & Lawler, 1968; Lawler, 1970, 1973) which argues that the amount of effort put into the job will produce a certain level of performance which will be responsible for certain rewards. The effort or motivation will, however, occur only if certain conditions are met: that a relationship between effort and effective performance is perceived to exist; that rewards are perceived to be dependent upon effective performance; and that attractive rewards are perceived as being available. The theory also suggests that the relationship between effort and performance is influenced by an individual's perception of his role and the most appropriate means of achieving his objectives, and his possession of the necessary skills and abilities for the job.

Eighteen studies which have tested expectancy models were reviewed by Heneman & Schwab (1972) and Lawler & Suttle (1973), and on the whole, support has been found for them. A factor-analytic test of Porter & Lawler's model also found support (Kesselman et al., 1974). Lawler (1973) maintained that the strongest theoretical explanations for satisfaction are found in equity and discrepancy theories, and the advantages of each can be combined into a simple model. Both theories emphasise the relationship of the importance of perceived outcomes to another perception: what the outcomes should be (discrepancy theory), and how they compare with perceived inputs and other people's inputs and outcomes (equity theory). Equity theory stresses the importance of social comparison whereas discrepancy theory regards the individual in isolation.

Burack (1975) recognised how the Maslovian, Herzbergian and expectancy models can be encompassed within a single framework. He suggested that three aspects combined to form an individual's motivational act:

- (i) The individual's perception influenced by his past experience, his personality and his attitudes.
- (ii) A 'factor synthesis' of intrinsic job factors (incorporating Herzberg's motivators and Maslow's need structure), extrinsic environmental or hygiene factors controlled by the organization, and equity, which reconciles the individual's experiential and educational 'investment' with his own aims.
- (iii) Motivational force which is the result of the likelihood and desirability of a particular outcome, and the reward attained from goal achievement.

The model which Burack described includes the learning required before expertise is attained, goal-seeking behaviour, and Maslow's needs seen as a dynamic, non-hierarchical structure.

The model depicted by Patricia Cain Smith and her colleagues

(e.g. Smith & Cranny, 1968) agreed with Lawler and Porter that

satisfaction and performance are related only indirectly through

the effects of effort, and similarly, the relationship between

rewards or expected rewards and performance must be mediated by

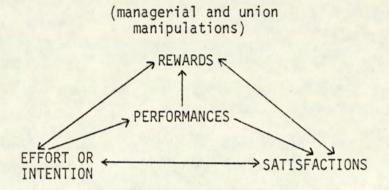
effort. Effort rather than satisfaction is seen as determining

behaviour at work. Their model can be depicted as a triangle with

the variables (satisfactions, effort and rewards) at the three corners.

Each of the variables can causally influence any of the others either in isolation or together with one or both of the others. Performance is placed in the centre of the triangle, and although it has a causal effect on rewards and satisfactions, the only variable to influence performance directly is effort (Figure 3).

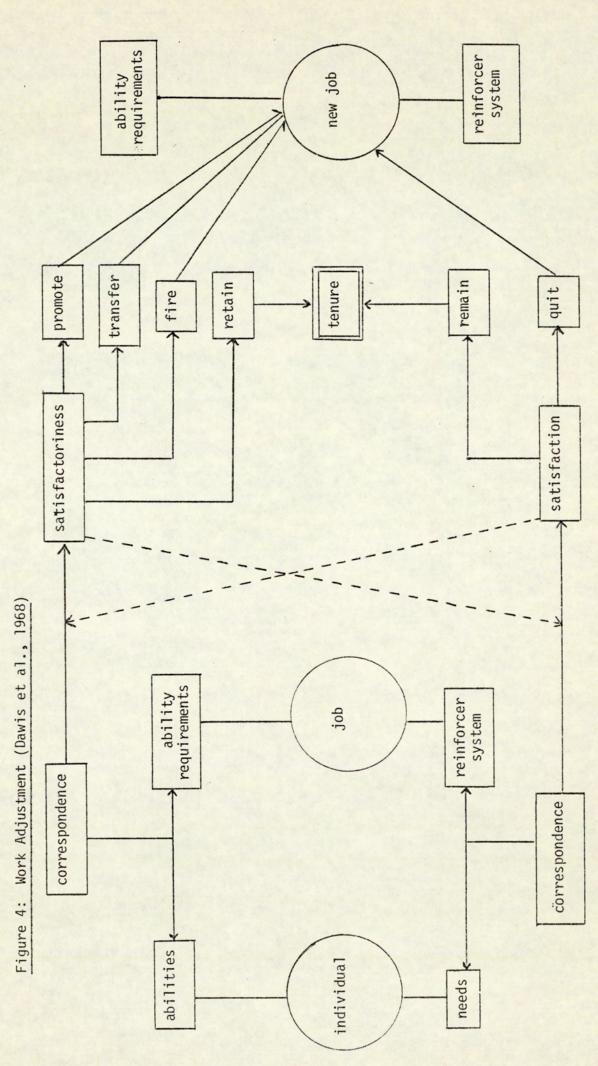
Figure 3: Interrelationships among dimensions of work behaviour and attitudes (Smith & Cranny, 1968)



Another theoretical approach to worker attitudes and behaviour is the Theory of Work Adjustment developed at the Industrial Relations Center of the Univeristy of Minnesota (Dawis et al, 1968; Lofquist & Dawis, 1969; Weiss, 1969). This was originally developed to provide a conceptual framework and theoretical basis for vocational counselling and rehabilitation. It has a wider function than this, however, and is based on the premise that there must be an individual-environmental correspondence or 'fit' if an individual is to 'survive' in his environment. Another person-job congruence model has been developed by Morse (1975) who demonstrated that congruence enables an individual to achieve a sense of competence which allows him to adjust to the requirements of the job. Over time the sense of competence expands and facilitates personality growth and individual development.

The Minnesota team defined work adjustment as 'the continuous and dynamic process by which an individual seeks to achieve and maintain correspondence with his work environment'. (Dawis et al, 1968, p.5). The model assumes that man seeks to achieve and maintain this correspondence as these are basic human motives. This correspondence can predict both satisfaction, an internal indicator of the degree to which the worker sees his requirements being met by the work environment, and satisfactoriness, an external indicator of the extent to which the individual fulfils the requirements of the job. Thus, as satisfaction and satisfactoriness combined can predict job tenure, the 'work personality-work environment' correspondence can also predict tenure. The fundamental 'fit' principle of the Work Adjustment Theory can be traced back to the classic Lewinian configuration, that behaviour is an interactive function of both the characteristics of the individual and the characteristics of his environment (Porter, Lawler & Hackman, 1975; Farr, 1977).

Figure 4 (Dawis et al., 1968, p.12) shows a diagramatic representation of the Theory of Work Adjustment. Satisfaction moderates the prediction of satisfactoriness (correspondence between the abilities of the individual and the requirements of the job) (Carlson et al., 1968); and satisfactoriness moderates the prediction of satisfaction (correspondence between the individual's needs and the reinforcer or reward system of the work environment). The job dimensions included in the satisfaction scales conform to an intrinsic-extrinsic dichotomy and individual scores are provided for each scale as well as for a combined general satisfaction scale. It is, however, acknowledged that definitions of the intrinsic-extrinsic concept are inconsistent and confusing (Dyer & Parker, 1975).



The multidimensional nature of job satisfaction supported by Herzberg (1966) and Smith and her colleagues (1969) is implicit within the Theory of Work Adjustment.

The individual-environment 'fit' of the Work Adjustment Theory is dependent on four components:

- a) 'the work personality of the individual', defined by his abilities and his needs.
- b) 'the work environment' defined by the ability requirements of the job and the reinforcers or rewards that the job provides.
- c) 'measured work adjustment', that is, job satisfaction and satisfactoriness.
- d) 'work adjustment outcomes', as measured by job tenure (Weiss, 1969).

The Minnesota team has developed its own instruments to put the Theory of Work Adjustment into operation, except in the measurement of abilities, for which they use standardized American tools (The General Aptitude Test Battery and the Occupational Aptitude Patterns measure). Satisfactoriness is measured with the Minnesota Satisfactoriness Scales (MSS) (Gibson et al., 1970); job satisfaction with the Minnesota Satisfaction Questionnaire (MSQ), of which there are long and short forms (Weiss et al., 1967); vocational needs with the Minnesota Importance Questionnaire (MIQ), of which there is a paired-comparison form and a multiple rank order form (Gay et al., 1971), and

Occupational Reinforcer Patterns (ORPs) developed by using the Minnesota Job Description Questionnaire (MJDQ) (Borgen et al., 1968).

Another job-fit approach was made by Hackman and Oldham (1976) who developed a 'job characteristics' model which attempted to synthesise the relationships between the characteristics of the job and individual responses to work. They identified five 'core job dimensions' (skill variety, task identity, task significance, autonomy and feedback) which led to 'critical psychological states' (work meaningfulness, experienced responsibility for outcomes, knowledge of results). These in turn promoted outcomes such as high work motivation, high quality performance, work satisfaction and low absence and wastage from the job. Subsequent testing with employees from a wide range of occupations found support for the model.

Clearly, a massive amount of research has been done in the area of motivation and job satisfaction, and the array of theories which has developed require assimilation and integration.

Furthermore, several concepts such as motivation, satisfaction, needs and values have been introduced which have frequently been used interchangeably in the literature with subsequent confusion for the reader. It is necessary, therefore, to attempt to clarify conceptual confusions and to classify, as far as possible, those models of motivation and satisfaction which share common characteristics.

This confusing conceptual state of affairs has been neatly expressed by Kats & Van Maanen (1977):

'There is perhaps no area in the social sciences fraught with more ambiguity, conflicting opinion, or methodological

nuance than that of work satisfaction. Yet, paradoxically, there are few areas more researched. Even a casual glance at the voluminous literature should be enough to convince the most hardened generalist that work satisfaction is indeed a complex, cumbersome and many-sided concept for which simple schemes do not exist.' (p.469)

The concept of job satisfaction adopted in the present study follows closely the approach described by Locke (1969): 'Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing.' (p.316). Locke described the three 'elements' involved: the perception of a particular job aspect, the presence of a 'value standard' which may be implicit or explicit, and an evaluation of the correspondence (or discrepancy) between perception and value. This is similar to the approach of the theory of Work Adjustment, in which satisfaction is regarded as 'a function of the correspondence between the reinforcer system of the work environment and the individual's needs'. (Lofquist & Dawis, 1969, p.65). Locke, however, specified 'values', and Lofquist and Dawis employed 'needs'. Locke and others (e.g. Taylor, 1977) have emphasised the importance of distinguishing needs from values. A need denotes a state of objective deprivation and requires fulfilment in order to sustain the life and well-being of an organism, whereas a value is something a person consciously desires or wants, and so is subjective and may not necessarily be beneficial to the individual (see Wallis & Cope, 1977 for further discussion on this point). Lofquist and Dawis emphasised, however, that the needs referred to in the Theory of Work Adjustment are

psychological needs and do not necessarily refer to life threatening deprivation. These needs implicit in the Theory of Work Adjustment are considered by the present author to be synonymous with Locke's values because they refer to the individual's <u>preferences</u> for certain environmental (or 'reinforcer') conditions:

'Our operationalization of the <u>vocational</u> needs concept is quite straight forward. In essence, we ask the individual to "draw us a verbal picture" of the kind of job he would <u>most like</u> to have, or the job in which he would be most satisfied. We call this his 'ideal' job.'

(Weiss, 1969, p.7. Emphasis added)

The insistence of the Minnesota team in using 'needs' rather than 'values' is considered by this author to be unfortunate, since even though they specified that they were referring to vocational needs, the inevitable ambiguity with the physiological and psychological deprivation concept is confusing. Because the scales used in the Theory of Work Adjustment have been adopted in the present study, the term needs rather than values has been retained, but these have been regarded as synonymous with values as defined by Locke, and have been described as vocational or occupational needs in order to distinguish them from those which refer to the objective requirements for life.

Motivation and satisfaction have similarly been used interchangeably in the early literature with resultant confusion. Herzberg regarded the two terms as synonymous since he referred to the job content factors as motivators as well as satisfiers. However, the terms do not have the same meaning and have been

distinguished by Cameron (1973): '...satisfaction is what results from need fulfilment, while motivation is a term covering instigation and direction of behaviour aimed at satisfying the need.' (p.23) Many motivation studies are really job satisfaction studies (Bowles, 1976). Bowles referred to work by Lodahl (1964) who perceived the existence of a motivational hierarchy in which job satisfaction was merely one level. Concepts which occupied other levels in the hierarchy were frustration, tension, conflict, involvement, etc.

Cameron reviewed the literature on job satisfaction and motivation and classified the numerous theories into broad categories.

These have been summarised by Wallis & Cope (1977)

and Cope (1979), into discrepancy theories, equity theories and expectancy theories. They are presented very briefly here simply to illustrate how the numerous theories have been integrated into manageable categories.

Discrepancy Theories

These examine the individual's occupational needs (or wants, preferences or values) and the extent to which features of the environment are perceived to satisfy those needs.

Theories in this group include those developed by Maslow (1943), Schaffer (1953), Herzberg (1966), Locke (1969), the Work Adjustment theory (Lofquist & Dawis, 1969), Alderfer (1969), Porter (1961, 1962), Morse (1975), Mumford (1972).

These theories have identified a large number of variables that influence satisfaction, but they do not explain how a need or

value becomes translated into a certain behaviour, or what the nature of the behaviour will be. Nor do they allow for the 'distorting' effects of social comparison (Wallis & Cope, 1977).

Equity Theories

Social comparison is the central theme of this group, which suggests that the individual is satisfied or dissatisfied with his job depending on the extent to which the ratio of inputs to outcomes corresponds to those of significant others. If the comparison with the other person is considered to be unfavourable, then dissatisfaction results. As Wallis & Cope pointed out, comparison of one's lot with another person's is intuitively appealing, but the method of selecting a 'comparison other' is not specified, and if inequity can be reduced by shifting comparison to an alternative 'other', then why it ever occurs at all is mystifying. Considerable criticism of equity theories has emerged (see Bowles, 1976)

Expectancy Theories

The early work by Vroom (1964) has given rise to a number of subsequent models (see the review by Lawler & Suttle, 1973), and these are among the most complex models developed. The central issue in expectancy theory is performance, and it attempts to explain the type of performance which will occur according to the individual's perception of the attractiveness of the outcome, the expectation of the likelihood that effort will produce the intended behaviour, and the expectation that certain outcomes will follow that behaviour. Expectancy theory is a theory of motivation

rather than satisfaction alone, since it emphasises the '...instigation and direction of behaviour aimed at satisfying a need.' (Cameron, 1973). It can describe what behaviours are likely to occur but cannot provide explanations for these behaviours, and like the discrepancy theories, it does not take social comparison into account (Wallis & Cope, 1977).

One of the difficulties with employing the concept of job satisfaction is that most people say, when asked, that they are satisfied with their jobs, yet manifestations of employee frustration and alienation (as measured by increasing short term absence, strikes and sabotage of plant and equipment) are apparently increasing (Taylor, 1977). It may be that some employees expect to have a low quality of working life in their jobs and so job satisfaction represents merely the individual's present state of adaptation to his work or job environment (Cope, 1979). It seems essential, therefore, to find out what individuals mean by satisfaction at work by giving them the opportunity to discuss their experiences and perceptions in depth as well as computing scores from job satisfaction scales.

The discrepancy, equity and expectancy theories are not necessarily incompatible since they together describe wants, social comparison processes and motivation. It should be possible, therefore, to combine the advantages of each into a comprehensive model of motivation and satisfaction (Cope, 1979). The model outlined earlier (p 29) by Burack (1975) attempted such a synthesis, and Wallis and Cope at the University of Wales Institute of Science and Technology have described a comprehensive integrated

(MOTIVATION)
REDUCTION OF
DISCREPANCY
OR TENSION OUTCOMES (REWARDS) PERFORMANCE NEED/WANT DISCREPANCY OR TENSION BALANCE WANTS/ GOALS JOB SATISFACTION/
JOB DISSATISFACTION

Figure 5: Pluralistic Model of Job Satisfaction (Cope, 1979)

'pluralistic' model which is reproduced in Figure 5. Cope

(1979) described it as follows: if the individual's needs

or wants are not fulfilled, then a discrepancy exists which leads

to tension. This tension stimulates motivation to reduce it

which leads to certain performance and outcomes which are

designed to reduce the tension. The 'balance function' involves

social comparison and ensures that the expectations implicit in

the individual's needs or wants are realistic. Job satisfaction

or dissatisfaction follows from the degree of tension which arises

from the needs/wants discrepancy.

The exciting point is that this model is based on the researcher's current work with nurses in Wales. May be it will develop into a theory of motivation and job satisfaction which is sufficiently comprehensive to describe behaviours that are likely to occur and why, and so will incorporate both description and explanation.

2.1.2 The Measurement of Job Satisfaction

As with job satisfaction theories, there is an abundance of operational definitions of the concept and instruments used to measure it. An attempt is made here to describe some of the problems concerned with measurement, and this is followed by a description of the satisfaction scales used in the present study together with evidence for their reliability and validity.

First, operational definitions of job satisfaction. The major distinction divides those researchers who regard the concept as unidimensional and have measured overall satisfaction (e.g. Brayfield

& Rothe, 1951) from those who have disagreed with this traditional view, have emphasised its multidimensional nature, and measured satisfaction with particular 'facets' of the job (e.g. Porter, 1961; Weiss et al., 1967; Smith et al., 1969; Kraut, 1975; Kraut & Ronan, 1975). Wanous & Lawler (1972) identified nine, and Bowles (1976) described fourteen operational definitions of job satisfaction from the literature, and they conducted studies to determine whether or not they were all measuring the same thing. Job satisfaction is seen, for example, as the sum of job facet satisfaction (e.g. Ewen, 1967); as the weighted sum of facet satisfaction, the satisfaction score on each facet being multiplied by the importance rating for that facet score (e.g. Ewen, 1967; Mikes & Hulin, 1968); as the degree to which the individual's needs are fulfilled when summed across job facets (e.g. Porter, 1961; Alderfer, 1969); as a combination of the perceived degree to which a job aspect exists and its importance (e.g. Vroom, 1964); and as the discrepancy between how much of a job aspect there is now and how much there should be (Porter, 1961), and how much there is now and how much an individual would like (Lofquist & Dawis, 1969).

Wanous and Lawler found that job satisfaction scores do vary as a function of the method used, the rating of satisfaction on a single scale producing a different score from that derived from the discrepancy between ratings on two scales. Bowles(1976), too, found very little equivalence between his measures. Kalleberg (1974) agreed with this and suggested that the problem of operationalizing the concept may account for the conflicting results in the literature relating education and occupational status to satisfaction. With reference to withdrawal, only the discrepancy satisfaction scores

(Importance - Is Now, Should Be - Is Now, and Would Like - is Now) correlated significantly with absenteeism (Wanous & Lawler, 1972).

Costello & Lee (1974) used Porter's (1961) needs-satisfaction format to analyse professional employees' needs and their perceived importance. They calculated six scores for each individual: need satisfaction, perceived importance of need, weighted need satisfaction, need deficiency, weighted need deficiency, and overall job satisfaction. They found that the most effective predictive model was the need satisfaction one weighted by importance, closely followed by the need deficiency model. The authors stressed the importance of assessing satisfaction through deficiency and importance ratings rather than through global satisfaction indices.

Cameron (1973) advised that both global and facet satisfaction measures should be used because it is likely that some elements of job behaviour will be predicted from one type of measure but not from both. Furthermore, respondents tend to be less satisfied with specific aspects of the job than with the job as a whole, probably because it is more difficult to express dissatisfaction about a composite of factors (Thurman, 1977).

In conclusion, there does seem to be general agreement that facet or deficiency scores are the measures of choice compared with global measures (Hulin & Smith, 1965; Wood & LeBold, 1970; Wanous & Lawler, 1972; Costello & Lee, 1974; Kraut, 1975; Kraut & Ronen 1975; Portigal, 1976; Waters & Roach, 1976; Taylor, 1977). However, the popular use of additive weighted facet scores may be parsimonious but they are not necessarily superior in predictive power than non-linear alternatives (Aldag & Brief, 1978).

The reports on the significance of ratings weighted by importance are conflicting. Fewer authors have considered importance to be significant (eg Costello & Lee, 1974), compared with the large number who have maintained that importance does not improve the prediction of overall satisfaction because it is implicit in the facet and facet discrepancy ratings (Ewen, 1967; Mikes & Hulin, 1968; Locke, 1969; Blood 1971; Wanous & Lawler, 1972; Cameron, 1973; Kraut & Ronen, 1975).

The emphasis on developing operational definitions of a complex concept like job satisfaction is understandable, but they should not precede the conceptual definition which is a necessary prerequisite before measurement is contemplated. Locke (1969) has pinpointed this problem:

'The procedure of operational definitions reverses this sequence and tells the scientist to measure the phenomenon first and then to formulate his definition of it.

Just how he is supposed to decide what to measure, how to measure it, and what to call what that (sic) he has measured is never specified.' (p.314 Emphasis in original)

Before moving on to describe the satisfaction scales adopted in the present study, mention is made of some of the existing global and faceted measures, and research which has been conducted to compare the predictive ability of different instruments. Examples of global measures are the Brayfield-Rothe Index (1951), Kunin's Faces Scale (1955), and Lyons' global satisfaction index (1971). Facet satisfaction scales include

the Job Descriptive Index (Smith et al, 1969), the Worker Opinion Survey (Cross, 1973), Porter's need satisfaction questionnaire (1961, 1962), and the Minnesota Satisfaction Questionnaire which belongs to the Theory of Work Adjustment (Weiss et al., 1967).

Bowles (1976) reviewed the literature concerned with equivalence of the measures, and the picture is one of criticism in that correlations between measures have been low, and they do not appear to have measured the same thing. Bowles confirmed these findings in empirical studies with 14 measures, amd Imparato (1972) reported only moderate correlations (- .36 to - .60) between the total score from Porter's need satisfaction scale and each of the JDI scales. The multiple correlation was .69.

In a recent study by Dunham et al (1977) four facet satisfaction measures were found to have acceptable convergent and discriminant validity although there may have been some sample specificity. The four measures were the JDI, the Faces Scale, the Minnesota Satisfaction Questionnaire (MSQ), and the Index of Organizational Reactions (IOR). The MSQ was highest on convergent validity and the JDI the lowest, and the IOR provided the strongest discriminant validity and the JDI and Faces the least.

The work of Dunham and his colleagues has provided support for the decision to use the JDI and the MSQ in the present study. There is considerable evidence for the reliability and validity of both these measures, and the existence of norms for both indicates that validation has been relatively extensive. The JDI is described briefly here, but in pilot work it was found to be unsuitable for hospital CNs, because they were unable to generalise their responses

across the colleague and work items, or to force these responses into the three alternative categories provided.

A brief description of the JDI will make this clear. It was designed to measure satisfaction with dimensions relating to work, pay, promotion prospects, supervision and co-workers.

Each scale consists of a list of adjectives or descriptive phrases and the respondent indicates whether or not these describe that work dimension. The response categories are 'yes', 'no', and '?' if undecided, and scores on each dimension are obtained by summing across weighted items. The work done by Smith and her colleagues into the reliability and validity of the JDI suggests that it is an instrument of choice in the measurement of job satisfaction (Robinson et al., 1969).

In the present study satisfaction with facets of the job was measured with the MSQ, and discrepancy scores were derived by computing the difference between scores obtained with the Minnesota Importance Questionnaire (MIQ) and the extent to which these existed as 'rewards' as rated by the nurses' supervisors. These scales form part of the operationalization of the Theory of Work Adjustment.

The Minnesota Satisfaction Questionnaire

The MSQ is available in two forms, long and short. The long form consists of 20 scales each containing 5 items, and the short form has 20 items, one representing each of the long form's scales. The 20 short form items can be reduced to 3 scales by summing scores on the relevant items:

- i. intrinsic satisfaction: 12 items labelled ability utilization, activity, achievement, authority, creativity, independence, moral values, responsibility, security, social service, social status, variety.
- ii. extrinsic satisfaction: 6 items labelled advancement, company policies and practices, compensation, recognition, supervision - human relations, supervision - technical.
- iii. general satisfaction: all the items in the other two scales plus co-workers and working conditions.

(For a copy of the MSQ short form, see Appendix 1)

Although it has been shown that dichotomising items into intrinsic and extrinsic satisfaction categories is relatively arbitrary and unreliable (Dyer & Parker, 1975), the classification made by the Minnesota researchers seems on an intuitive level to be realistic.

The responses are scored on a 5-point Likert-type scale:

very dissatisfied, with a score of 1; dissatisfied (2); neither

dissatisfied nor satisfied (3); satisfied (4); and very

satisfied (5). They indicate the perceived situation 'as it is now'.

There is now a long form MSQ in which the response categories have

been altered to control for the 'ceiling effect' which is likely

to occur; that is, scale score distributions tend to be skewed

towards the maximum score. The neutral category has been discarded,

and responses range from not satisfied, with a scoring weight of 1,

through only slightly satisfied, satisfied, very satisfied, to

extremely satisfied with a weight of 5. Unfortunately, this improved response format was not available for the short form, and so the 'ceiling effect' is likely to emerge.

Normative data are available for the long form MSQ for 25 occupational groups which include practical nurses, full-time registered nurses, part-time registered nurses, supervisor nurses and nursing assistants. The norms available for the short form are less extensive and exist for 7 occupational groups none of which is nurses. Comparing the responses of British nurses with American norms is in any case less than ideal, and the present study is concerned more with relative satisfaction in two hospitals than with the comparison of scores with American norms.

Reliability and validity

More work has been carried out on the long form MSQ, but the short form has also been accepted as a reliable and relatively valid instrument (Weiss et al., 1967).

Internal consistency of the long form is evident from high
Hoyt reliability coefficients obtained from 6 occupational groups.
The coefficients ranged from .84 to .91 with a median of .86 on
the intrinsic satisfaction scale; .77 to .82, median .80 on the
extrinsic satisfaction scale; and from .87 to .92, median .90
for general satisfaction. It is possible to infer stability on
the general satisfaction scale of the short form MSQ from the same
scale in the long form, since the same items are used in both scales.
The test-retest correlation coefficients on the long form general
satisfaction scale were .89 for a one week period and .70 over a

one year period. Scale intercorrelations for the short form were rather higher than one would wish, being .60 between the intrinsic and extrinsic scales for 6 occupational groups.

Validity of the scales can to some extent be inferred from the long form MSQ since the short form contained a selection of the same items. Evidence for construct validity of the long form is available from studies with the MSQ and the Minnesota Importance Questionnaire (MIQ), which uses the same set of items and is described below. Concurrent validity of the long form is apparent since the differences between the means and variances among 25 occupational groups were significant at the p < .001 level for all the MSQ scales (Weiss et al., 1967), which demonstrates that the MSQ differentiates between occupational groups. Factor analysis provided evidence for content validity of the long form. Two factors were extracted for each of eight occupational groups including supervisor nurses and full-time nurses. These factors represented intrinsic and extrinsic satisfaction and the proportion of common variance attributable to the first factor, intrinsic satisfaction, was .57 for supervisor nurses and .59 for full-time nurses (Weiss et al., 1967).

Some evidence for concurrent validity of the short form MSQ is available since the mean satisfaction scores were significantly different for each of the three scales in seven occupational groups, and a certain degree of construct validity was found from data which showed the MSQ and the Minnesota Satisfactoriness Scales (MSS) to be independent (Weiss et al., 1967).

The Minnesota Importance Questionnaire (MIQ), multiple rank order form

The MIQ multiple rank order form is a new version of the MIQ paired-comparison form and has not yet been fully validated. The items included in both forms represented 21 vocational needs and were similar to those in the MSQ, with one more, 'autonomy', added. The individual indicates whether or not each item is important to him/her in his/her ideal job. In the paired-comparison version the respondent makes comparative judgements between pairs of items, and then absolute judgement about each item. This technique is long and tedious, and so the multiple rank order form was developed which is considerably shorter. This can be seen in Appendix 2. The items are presented in 21 blocks of 5 items each and the respondent is required to rank each block of 5 items in terms of their importance to him/her in his/her ideal job. The additional item was required in the multiple rank order form so that there were equal numbers in each block. Absolute judgements are also required as in the paired-comparison form, and the individual indicates whether or not each of the 21 statements is personally important.

The MIQ is scored by computer at the University of Minnesota because the computer program has not been released for use in this country. The scoring service provides individual need score profiles and a list of occupations in which satisfaction and dissatisfaction is predicted. The MIQ profile is compared with the Organizational Reinforcer Pattern (ORP) for an appropriate occupation, and an ORP is available for the American professional nurse (Borgen et al., 1968).

Reliability and validity

Information concerning the reliability and validity of the MIQ paired-comparison form can be found in the MIQ manual (Gay et al., 1971). The paired-comparison scales demonstrated adequate internal consistency, since the median Hoyt reliability coefficients for nine occupational groups ranged from .77 to .81. Test-retest correlation coefficients showed adequate stability of the scale scores, the median coefficients ranging from .53 for a 10 month interval to .89 for an immediate retest. The MIQ profile stability coefficients were also high, the medians ranging from .87 for the 10 month interval to .95 for the immediate retest. Stability of scores from the paired-comparison form and the multiple rank order form were similar and two-thirds of the subjects in a comparative study preferred the ranked form (Rounds & Dawis, 1975).

The intercorrelations of the paired-comparison form were subjected to factor analysis and common elements emerged in some of the scales, indicating that a smaller number of underlying factors may be present:

management: supervision-human relations, supervision-

technical, company policies and practices.

autonomy: responsibility, creativity, authority.

conditions of work: security, working conditions, activity, independence, variety.

altruism: moral values, co-workers, social service.

achievement: achievement, ability utilization.

recognition: authority, recognition, social status.

advancement: from the management, achievement and recognition factor items.

The earlier forms of the MIQ have adequate construct, discriminant and convergent validity (Gay et al., 1971). They discriminated between disabled and non-disabled workers, between different occupational groups, between student and employed groups, and between men and women. Further evidence showed that satisfaction scores varied significantly more for high need than for low need individuals: a high need - high reinforcement group had higher average satisfaction that a high need - low reinforcement group; a high need - low reinforcement group had significantly lower average satisfaction than a low need - low reinforcement group; and a low need - high reinforcement group had higher average satisfaction than a low need - low reinforcement group.

These findings support the proposition in the Theory of Work Adjustment that satisfaction is a function of the correspondence between the occupational needs that the individual brings and the rewards that the organization provides. MIQ scores have also predicted satisfaction in one occupational group where the job reinforcers were held constant. Validity studies of the later versions of the MIQ are in progress and evidence suggests that it functions as intended, and provides a valid measure of vocational needs as defined in the Theory of Work Adjustment (Gay et al., 1971).

The Minnesota Organizational Reinforcer Pattern (ORP)

ORPs were developed by the Minnesota researchers in order to identify the extent to which certain rewards or 'reinforcers' exist in the working environment. A large number of ORPs have been

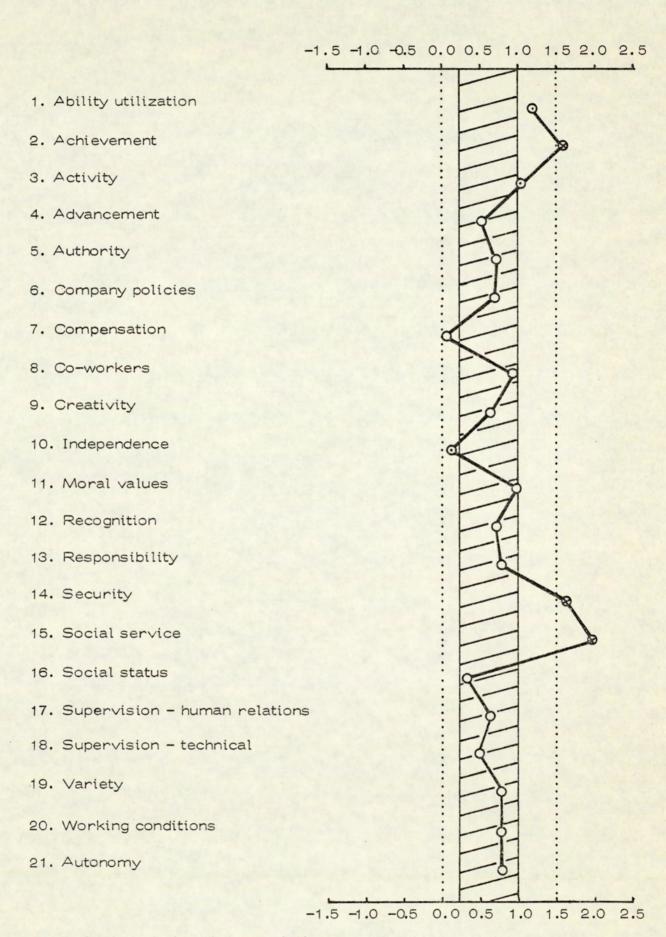
developed based on the combined ratings of supervisors in each of several occupations. If an individual's occupational needs correspond with the appropriate ORP, then satisfaction is predicted, and if the correspondence is low, dissatisfaction is predicted (Borgen et al., 1972). The supervisors rate the job using the Minnesota Job Description Questionnaire, which uses the same 21 statements as in the MIQ.

An ORP exists for the American professional nurse based on the combined ratings of 32 supervisors (Figure 6). The rewards which emerged as highly descriptive of the professional nurse's job are achievement, security and social service. Moderately descriptive characteristics are ability utilization and activity. Compensation and independence were negative descriptors in that they were seen as relatively unimportant.

Reliability and validity

The reliability of the ORPs has been calculated by splitting the ratings from each occupational sample into two halves and correlating them with each other. These split-half correlations ranged from .78 to .98, median .91, whereas the median correlation between profiles from different occupations was .55 (Borgen et al., 1968).

Evidence for concurrent validity was provided by analysis of variance between the mean scale scores for 81 occupational groups (Borgen et al., 1968). The results were highly significant for all the scales (p < .001) which suggests strongly that the scales for each occupation have different amounts of relative reinforcement. Cluster analysis gave further support for the



- highly descriptive characteristics
- o moderately descriptive characteristics

ORPs' validity. Nine clusters emerged which accounted for 59 of the 81 jobs, and which had large differences between mean scores. The authors argued that since the 9 clusters appeared to represent meaningful occupational groupings (Technical Occupations; Professional, which included Service Occupations and Social-Educational; Manual Occupations, i.e. Manufacturing, etc.) the cluster analysis provided further evidence for the ORPs' validity.

Global Satisfaction Index

Although the literature suggests that, on balance, multidimensional measures of job satisfaction are preferable to global,
or uni-dimensional, measures, a global index was used in this study
as recommended by Cameron (1973). She suggested that
relationships between job aspects and global satisfaction may not
be the same as those with facet satisfaction scores. The global
measure selected is a two-item index which refers to general
satisfaction with the hospital as a place to work, and with the
job as a whole. Responses to the first item are made on a
7-point scale, and to the second on a 5-point scale (see items
18 and 19 in Appendix 3). This measure was selected because it
was used by Lyons (1971) with American registered nurses and so
comparisons, albeit cross-cultural ones, could be made.

Lyons reported a correlation of .44 between the two items. In an earlier study with registered nurses (1968), Lyons used a three-item measure which contained the same two items and 'how satisfied are you with your immediate superior?'. The Pearson's

correlation coefficients between the three items were .37, .34 and .42 (all p <.01). These coefficients were not high, but Lyons argued that this was likely to occur because respondents would have differentiated between the satisfactions, and so the measure was not necessarily unreliable. He did, however, treat the items separately in his 1968 study.

2.1.3 Empirical studies of job satisfaction and behaviour

The literature on job satisfaction is massive. The number of studies published in the psychological literature nearly ten years ago probably exceeded 5,000 (Lawler, 1970). Most of the research has been confined to industrial workers, and the reader is referred to several reviews of the literature (Fournet et al., 1966; Cummings & ElSalmi, 1968; Smith & Cranny, 1968; Lawler, 1970; Bowles, 1976; Portigal, 1976; Murrell, 1978). The review here is confined to research with nurses, but as pointed out by White & Maguire (1973), there is plenty of published opinion but, in comparison with other occupational groups, little research on job satisfaction and dissatisfaction in nurses. Furthermore, much of what does exist refers to American nurses.

Several studies have related Maslow's or Herzberg's theories to nursing practice (Benton & White, 1972; Slocum et al., 1972; Lysaught, 1972; Welch, 1975; White & Maguire, 1973; McClosky, 1974; Munson & Heda, 1974; Bowman, 1975; Everly & Falcione, 1976; Cronin-Stubbs, 1977). According to Lysaught (1972), most nurses' needs above the security level are rarely satisfied: 'If we are to escape an endless cycle of personnel shortage, frustration, failure and conflict, we must take basic, sweeping changes in the reward

systems for nursing - both intrinsic and extrinsic.' (p 50).

Lysaught pointed to the importance of fulfilling self-actualization needs, particularly in those nurses with direct patient contact, and for the acceptance by nurse administrators of the need for change.

Benton and White (1972) used Porter's need satisfaction questionnaire (PNSQ) with registered nurses and found that safety and security needs were perceived as the most important, followed by social, esteem and self-actualization needs, and pay and personnel policies were the least important. These importance ratings followed Maslow's hierarchy fairly closely but the dissatisfaction scores did not. Highest deficiency on dissatisfaction scores emerged for 'pay differential for experience' (allocated to a 'non-specific' need category), followed by 'adequate personnel for shift' (safety and security need), 'inservice training programs' (self-actualization need), 'promotion opportunities' (selfactualization need), and 'pay differential for education' (nonspecific need category). The discrepancy scores were categorised by specialty, and paediatric nurses expressed the most dissatisfaction followed by medical and surgical nurses, intensive care, obstetric nurses, and administrative nurses were the most satisfied. There was some indication that dissatisfaction correlated negatively with importance, because the administrators provided the highest and the paediatric nurses the second lowest importance ratings.

Slocum et al. (1972) used the PNSQ with 39 professional (head nurses, assistant head nurses and graduate staff nurses) and 41 paraprofessional (licensed practical nurses, nurse aides and floor clerks) employees in a Pennsylvanian hospital. Lower deficiency scores emerged for the professional nurses for all the need levels although the differences between the two groups were significant on

three only: the security, esteem and autonomy needs. The authors also found that in the professional group, self-actualization needs were significantly less satisfied than each of the other needs except for autonomy, whereas for the paraprofessionals, the only significant difference to emerge was between self-actualization and social needs. The importance of nurse administrators reducing all need deficiencies, with particular emphasis on self-actualization needs, was emphasised. Encouraging nurses to achieve their potential on career growth, development and self-fulfilment would enable them to meet the challenges of their work. The authors suggested that job enlargement which encouraged greater use of skills and abilities and greater participation in health care decision-making might increase satisfaction.

Support was found for Herzberg's two-factor theory with nurses (White & Maguire, 1973). White & Maguire commented on the paucity of satisfaction research into grades of nurse above staff nurse, and used Herzberg's critical incident technique with a sample of nurse supervisors. They hoped that by supporting the theory, their findings would enable hospital administrators to implement change within the work environment and so increase satisfaction, reduce turnover and absenteeism, and indirectly improve the quality of patient care. The authors found support for the theory in that 'work itself', 'possibility for growth', and 'recognition' factors appeared significantly more frequently in accounts relating satisfying incidents, and a 'supervision-technical' factor appeared more frequently in dissatisfying accounts. However, a factor termed 'competence-commitment - contentment of allied personnel' was mentioned equally in satisfying and dissatisfying accounts, and

was classified as a 'mogiene' factor. This was excluded from the analysis and so the authors were unable to determine whether or not it refuted the theory. The nurse supervisors included 'motivators' in their accounts more frequently than 'hygiene factors', suggesting their greater concern for job content rather than job context. In spite of methodological weaknesses which the authors acknowledged, the study has implications for nursing management, particularly in the need for more effective communications and optimum workloads, two factors which were frequently discussed in the dissatisfaction accounts.

Cronin-Stubbs (1977) attempted to replicate White & Maguire's findings with 30 new graduate staff nurses. Achievement was mentioned most frequently and appeared in both satisfying and dissatisfying accounts. Seeing the result of good nursing care was an example of achievement leading to satisfaction, and failure to complete a task successfully was a typical source of dissatisfaction. Only one factor, recognition, was included significantly more often in satisfying than dissatisfying accounts whereas four (working conditions, responsibility, competence-commitment-contentment of allied personnel, and interpersonal relations - subordinate) occurred significantly more often in dissatisfying accounts. On 9 factors, there was no significant difference in the proportion of accounts allocated to one or other category. Thus there was not much evidence for the two-factor theory in this study.

A study with nurse teachers showed that intrinsic factors such as responsibility, achievement, academic freedom and autonomy were more important for job satisfaction than extrinsic factors like the eating and recreational facilities (Marriner & Craigie, 1977).

The authors also found that satisfaction was more closely related to an 'open' organizational climate than to a 'closed' one.

Little support for the two-factor theory was found in a study conducted with 144 American registered staff nurses (Everly & Falcione, 1976). They did not use the critical incident technique but selected 18 satisfaction items to which the nurse responded on a 7-point scale. The data were committed to factor analysis and four independent factors emerged which together accounted for 59% of the variance. The four factors, which the authors suggested went '... beyond the traditional intrinsic versus extrinsic dichotomy', were:

- Factor 1: 'Relationship Orientation ' relations with fellow workers, immediate supervisor, supervisory personnel.
- Factor II: 'Internal Work Rewards' good working conditions,
 enjoyment of work, opportunity to develop new skills
 and abilities, and enjoyment in using one's skills
 and abilities.
- Factor III: 'External Work Rewards' opportunity for advancement, pay, employee benefits.
- Factor IV: 'Administrative Policies' hospital policy and recognition of past service.

The Internal Work Rewards factor was very similar to an intrinsic satisfaction dimension even though it contained 'good working conditions'.

The authors suggested that the nurses might have perceived these as satisfying because they provided an opportunity for the nurses to develop and use appropriate skills in their work. The other three factors would have been classified by Herzberg's advocates as hygiene factors, and yet they made a substantial contribution to the variance in total satisfaction, with the Relationship factor emerging as the dominant one since it accounted for 24% of the variance.

A study of Nigerian nurses showed that professional nurses were more satisfied than student nurses on perceived authority, participation in decision-making, colleague cooperation, workload, physical working conditions, relations with doctors and receiving information about new developments (Ogwuegbu & Ogundeyin, 1977). Some of these would have been classified by Herzberg as hygiene factors and they contributed to satisfaction in this sample.

A review of studies of job satisfaction in nurses (Archibald, 1971) emphasised the problem of generalization because of contradictory findings. On the whole, however, colleague relations and good pay led to satisfaction, and poor pay, hours and supervisory relations encouraged dissatisfaction. The typical most satisfying aspect was caring for the patients, but when given the opportunity to spend more time with the patients, nurses tended not to take advantage of it.

There is some evidence that the level of job satisfaction is greater in nurses who have 'extended' roles or who can practise 'total patient care'. Bullough (1974) found significant differences

in the levels of intrinsic satisfaction between 'extended role' nurses, who included paediatric nurses, and a group of registered However, the paediatric nurses were less certain than the registered nurses about choosing to nurse given the opportunity to make their career decision again. Harrington & Theis (1968) compared the perceptions of staff nurses with baccalaureate degrees working in 'typical' hospitals with the traditional task-centred nursing approach with a group who worked in the Loeb Medical Center, which had a unique type of nursing organization claimed to be '...patient-centred and where nurses are self-directing'. (p.235) The findings suggested that the nurses in the 'typical' hospital were frustrated, passive and unchallenged whereas the Loeb Center nurses were more satisfied, enthusiastic and responsible for their The authors concluded that satisfaction of the staff own decisions. nurse depends on the opportunities provided by the working environment for her to use her knowledge and skills, and the degree of congruence between her concept of nursing and actual experience on This 'reality shock' which emerges from the mismatch' between the ideal, professional orientation and actual service experience found in newly qualified baccalaureate degree nurses has been well documented (Corwin, 1961; Kramer, 1966, 1968a, 1968b, 1969, 1974).

In a recent study of professional nurses (Alutto & Vredenburgh, 1977), 75% were found to be 'decisionally deprived', the extent to which they wished to participate in decision making being exceeded by the expressed degree of actual participation. This group was compared with an 'equilibrium' group, in which desires matched actual participation in decision making, and those in the deprived group

experienced significantly higher tension and dissatisfaction than the equilibrium group. The types of decisions in which these nurses wanted to be involved were in the planning and designing of facilities for nursing care, and in deciding how nursing practices should be carried out.

The ability of two individual-job fit models to predict job satisfaction in nurses has been examined recently by MacEachron (1977). Both models employed the concept of 'normatively positive' work, used to describe actual or required job characteristics like task complexity, autonomy, responsibility, pay and authority. These are said to have a positive effect on job attitudes and behaviours. The 'symmetrical interaction' model predicts high satisfaction when preferences for 'normatively positive' work match the corresponding job characteristic, and low satisfaction when these do not match. The 'asymetrical interaction' model makes the high/low satisfaction prediction only for those who prefer 'normatively positive' work. Where there was no preference for 'normatively positive' work, the effect on job satisfaction in situations where such work characteristics either did or did not exist, would be neutral. The aims of the study were to replicate the positive correlational hypothesis between job level and job satisfaction found in earlier work, and to relate this job level/satisfaction hypothesis to the symmetrical and asymmetrical models. The moderating variable of field dependence/ independence (Witkin, 1965) was included since previous research had suggested that individuals with a field independent cognitive style were more attracted to and more satisfied with 'normatively positive' work than field dependent workers.

The job levels included ranged from supervisory and head nurse to nurse aide, and a positive correlation between job level and only one JDI dimension, satisfaction with pay, emerged. However, field independence was found to be a significant moderator since the job level - JDI correlations were all positive and significant for field independent nurses, but only one (satisfaction with coworkers) was significant, and negative, for field dependent workers. The literature cited by MacEachron suggested that field dependent individuals would be less attracted than field independent individuals to 'normatively positive' work, and would be more satisfied at lower job levels. Thus, the insignificant correlations between job level and four of the JDI dimensions in the field dependent group supported the asymmetrical model's prediction that increasing the job level has no effect on satisfaction for field dependent workers. The conclusion reached by MacEachron was that both models were necessary for a parsimonious explanation of job satisfaction in nurses. Satisfaction with work, pay, promotion and supervision was accounted for by the asymmetrical model, and the symmetrical model accounted for co-worker satisfaction.

One of the few British studies which has been concerned in part with the satisfactions of hospital staff, is Revans' (1964) work.

The main emphasis was on wastage in student nurses but he included all grades of nurse in his survey as well as domestic staff. In all the hospitals surveyed staff dissatisfaction was centred on two areas.

One concerned staffing, pay, hours, living conditions, training, promotion and complaints about matters for which machinery existed to deal with them; and the other involved more intangible aspects such as communications, social relations and personal security.

A major conclusion was that 'the hospital is an organism characterized by anxiety', which is self-perpetuating, anxiety leading to uncertainty, communication blockage and further anxiety.

A similar conclusion was reached in a psychoanalytic hospital case study (Menzies, 1961).

The General Nursing Council (1975) conducted a survey of nurse teachers and found that 73% of those in schools of nursing were satisfied with their jobs compared with 22% who were dissatisfied. There was a strong positive relationship between satisfaction and age. The most frequently mentioned satisfying aspects of their jobs included teaching itself and student contact, administration, control of teaching methods, contributing to high professional standards, patient contact, colleague contact, the congenial working environment, and the challenge of the job. The most dissatisfying aspects included education-service conflict, pressure of work, inadequate definition of responsibility, inadequate recognition, staff shortages and too much paper work. Clinical teachers, particularly, thought their work was inadequately recognised and the promotion prospects were poor. The most important dissatisfier for the tutors was the conflict which occurred between the professional orientation provided by the educators and the service requirements of the clinical areas.

Although very little research has been carried out into job satisfaction of qualified British nurses, the available work does suggest that, like most workers, nurses say that they are moderately or very satisfied with their work (Social Community Planning Research, 1971; General Nursing Council, 1975; Hockey, 1976). This is not to say, however, that there are no dissatisfactions, since these tend to emerge on closer questionning of the nurse during an informal interview, rather than in response to a questionnaire with forced choice response categories.

Job satisfaction and performance

The traditional belief that satisfaction causes high productivity has not found much support in the research literature. In fact, it is more likely that satisfaction is contingent upon performance rather than the other way round (Lawler & Porter, 1967; Locke, 1970). However, Organ (1977) argued that the results of empirical research have not yet been sufficiently conclusive to bury the satisfaction-causes-performance hypothesis. Greene (1972) questioned both models since, although the satisfaction-causes-performance hypothesis has been rejected by recent research, only moderate support has been found for the performance-causes-satisfaction hypothesis.

One of the principal problems has been that most of the research studies have used static correlational analyses and so no causal relationships can be inferred. For example, Slocum et al. (1972) found a positive correlation between performance and fulfilment of self-actualization and social needs in graduate nurses, but not in paraprofessional hospital workers. Brief & Aldag (1976) found minimal correlations between performance and satisfaction with work or satisfaction with supervision, in a sample of nurse aides. London & Klimoski (1975) found support for the activation hypothesis since self-ratings of performance and satisfaction with work and coworkers were highest in registered nurses performing jobs of moderate complexity compared with very low or very highly complex jobs. In general, however, the research with nurses has made no substantial contribution to solving the satisfaction - performance dilemma.

Job satisfaction and absence

Although previous research has shown that the correlation between job satisfaction and absence has usually been negative, the widespread belief that dissatisfaction causes absence is questionable. Indeed, there is some evidence that satisfaction is contingent upon absence (Nicholson, 1973). Two recent reviews (Nicholson et al., 1976; Redfern, 1978) emphasised that no definite conclusions can be drawn on the nature of the relationship because much of the previous research has been methodologically inconsistent. Previous research with workers other than nurses has tended to find a negative correlation between absence and satisfaction with the work itself, but the association with other job dimensions has been either negative (Nicholson et al, 1977) or zero (Muchinsky, 1977; Ilgen & Hollenback, 1977). With nurses, too, Lyons (1968) found that absence spells correlated significantly with dissatisfaction with the job generally but not with dissatisfaction with the hospital or the supervisor; and Newman (1974) reported significant correlations with the work itself and global satisfaction, but not with the other satisfaction dimensions. Thus, the general picture, with nurses and other workers, is that there is little evidence for a causal relationship between absence and satisfaction, and, except for the negative association with the work itself and global satisfaction, the correlations between absence and other satisfaction dimensions have been equivocal.

Job satisfaction and wastage

The relationship between satisfaction and wastage has been widely researched and several fairly recent reviews are available

(Pettman, 1973; Porter & Steers, 1973; Huber, 1974; Nicholson et al., 1977; Redfern, 1978). As with the satisfaction-absence research, the results of previous work are conflicting and inconsistent because of methodological weaknesses. However, dissatisfaction with the work itself has emerged as a relatively powerful predictor of leaving intentions (Nicholson et al., 1977).

A relationship between job satisfaction and withdrawal was found by Hulin (1966) who used the JDI to predict wastage in women clerical workers. He 'matched' the leavers with the stayers on demographic variables, and found that mean satisfaction scores were significantly higher for the stayers. He concluded that the JDI could successfully predict subsequent leavers if administered up to twelve months before termination, at least in his sample. ·He repeated this study (Hulin, 1968) after a period during which the organization's management had introduced changes designed to increase the level of satisfaction. The earlier results were confirmed although the level of satisfaction had increased and wastage had decreased as a result of the changes made. Later studies have reported similar findings and have shown that satisfaction is a predictor of wastage (e.g. Mikes & Hulin, 1968; Taylor & Weiss, 1969; Waters & Roach, 1973). Kraut & Ronen (1975) found that satisfaction with the challenge of the work and relations with the manager were the most important predictors of salesmen's intent to stay in the job. These two job aspects also predicted intent to stay in repairmen, but opportunity for higher earnings and being able to use one's skills were more powerful predictors for this 'lower level' group of workers. Kraut (1975) suggested that expressed intention to remain might be a more powerful predictor of wastage than job satisfaction.

More recent research with occupational groups other than nurses, has on the whole supported negative correlations between either actual or intended termination and some job satisfaction facets, but it is dissatisfaction with the work itself which has been a consistently successful predictor of withdrawal (Waters et al., 1976; Nicholson et al., 1977; Koch & Steers, 1978). Some studies, however, have reported zero relationships, for example, in managers (Hamner & Tosi, 1974), or positive relationships, as in a sample of school teachers (Paul, 1974).

Even though most research suggests that a dissatisfied individual is likely to leave the organization, this does not explain why he decides to leave, nor does it give the organization ideas as to how to retain him. Porter and Steers (1973) examined studies which have identified organizational variables which could account for the decision to leave, such as pay and promotion policies, organizational size, supervisory style and peer group interaction. Low pay and poor promotion opportunities can lead to withdrawal (e.g. Saleh et al., 1965; Hulin, 1968; Hellriegel & White, 1973). How pay affects withdrawal has been explained by expectancy theory (Porter & Lawler, 1968), which demonstrated that two factors could be responsible, the perceived inequity between rewards received and effort expended, and the expectation or anticipation that only minimal rewards will follow continued participation.

Knowles (1975) demonstrated how the interrelationship of organizational variables can produce functional or dysfunctional behaviour in different work groups. He examined the interrelationships of ten variables including job satisfaction, work anxiety, absence and

turnover, of employees in fourteen work sections of a British light engineering company. Each section was ranked on every variable and clear interrelationships between variables within the sections were observed, which Knowles termed 'the interdependence phenomenon of organizational behaviour'. For example, one group of sections demonstrated a high level of performance, stability and satisfaction, whereas another group was low on output, dissatisfied and unstable, with resultant high levels of absence, accidents, turnover and labour unrest. Knowles emphasised the difficulty of understanding the relevance of any single variable when it is considered in isolation rather than against the total background of behaviour at work.

Path analytic approaches which demonstrate direct or indirect associations between a dependent variable and several independent variables, have been used in an attempt to understand the complex interrelationships involved in labour turnover, and to understand the job satisfaction-tenure relationship (e.g. Gow, Clark & Dossett, 1974). Gow and his colleagues obtained attitudinal data from two groups of London advertising salesgirls, one stayers and the other leavers. The aim was to study the determinants of length of service. Hierarchical linkage analysis revealed the existence of six main variables (higher order needs, management and supervision, pressure, job evaluation, social integration and challenge), which were then subjected to path analysis. It was found that optimal challenge and social integration were the only two variables to have a direct effect on length of service, and the others had an indirect effect through one or both of these two. All the variables except higher order needs and management and supervision discriminated between stayers and leavers, and the authors suggested that this was a useful analytic method by

which the complex interrelationships between satisfaction and turnover can be unravelled.

Porter & Steers (1973) pointed out that researchers imply that turnover is undesirable at all costs. Apart from wanting to lose unsatisfactory employees, one would imagine that organizations would welcome a level of turnover which would ensure high productivity, innovation, workgroup cohesion, etc., and yet would avoid stagnation.

Turning to the satisfaction - wastage relationship in nurses, a review of early research concluded that, although there was some evidence that satisfaction was higher in stayers than leavers, this was not the case in all the studies reviewed, and so job satisfaction cannot be accepted as a reliable predictor of termination (Archibald, 1971). However, Nichols (1971) found satisfaction was significantly higher in army nurse stayers compared with leavers, although those in both groups who scored highest on satisfaction scored lowest on ease of movement. Nichols did point out, however, that there were many leavers who were satisfied and some stayers who were dissatisfied. Negative correlations between satisfaction and leaving intent have been reported in nurse teachers (Marriner & Craigie, 1977) and registered staff nurses (Lyons, 1968, 1970). However, Newman (1974) found that only the Faces scale and not the JDI correlated significantly with actual termination in a sample of registered nurses, licensed practical nurses, and nurse aides.

McCloskey (1975) argued that 69% of the staff nurses in her sample who left may have stayed if they had been offered certain rewards, such as the opportunity to attend educational courses, the possibility of career advancement above the head nurse level, and

more recognition from supervisors and peers. On the other hand, those who were unlikely to have been influenced by rewards left for 'unavoidable' reasons like spouse moving, retirement, illness, and travelling difficulties.

Intrinsic work needs and persistence at work were found to be significantly and positively correlated in five female occupational groups: dentists, registered nurses, policewomen, social workers and youth counsellors (Meir, 1972). However, the relationship with extrinsic needs was significant only for the dentists (negative correlation) and the policewomen (positive correlation).

In the British study of nurse teachers (General Nursing Council, 1975), 90% of the teachers in schools of nursing who were very satisfied with their jobs intended to stay, whereas 76% of those who were very dissatisfied intended to leave. The teachers were asked to specify the most likely reasons that would encourage them to leave teaching, and education - service conflict, poor promotion prospects, low status and pressure of work emerged as the most frequently mentioned reasons.

In summary, the empirical research on job satisfaction has employed almost exclusively either single global items or standardised satisfaction scales in a questionnaire format. The outcome of this has been that, even though there is evidence of experienced dissatisfaction, the distribution of responses is always positively skewed. Nurses are no exception in this, which might lead one to question the value of satisfaction scales.

As Murrell (1978) has said, 'Reporting satisfaction and being satisfied are very different things.' (p.44, emphasis in original). The advantages of using such scales are that some have been developed into relatively valid and reliable instruments, and they produce data which can be quantified. But the researcher is unlikely to discover very much about the satisfactions and dissatisfactions of an individual unless, as well as administering the questionnaire, he gives the employee the opportunity to discuss his job in an informal, non-threatening interview.

The relationship between satisfaction and performance is uncertain although there is more evidence to support the performance - causes satisfaction hypothesis than the other way round. Stronger conclusions can be reached with absence and wastage, since most of the relationships reported have been negative. But the evidence for a dissatisfaction - causes - absence relationship is weak and cannot be accepted without more research. Rather more evidence exists for a causal relationship between dissatisfaction and wastage since a considerable number of studies have demonstrated a higher level of dissatisfaction in leavers compared with 'matched' stayers. This is not to say, however, that dissatisfaction is a sufficient or necessary reason for leaving a job, nor that there are no dissatisfied stayers or satisfied leavers.

2.2 Role Stress: Perceived Role Conflict and Ambiguity

2.2.1 Theories and measurement

In complex organizations like hospitals, individuals are continuously exposed to numerous different expectations from their colleagues and themselves. Two theoretical approaches have been concerned with role conflict and ambiguity (Rizzo et al., 1970). Classical organization theory employs the principles of chain of command and unity of command to ensure effective control of employee performance and the achievement of organizational goals. The hierarchical, single line functioning of the chain of command principle should produce a clear line of authority and communications structure, and the principle of unity of command, in which each employee receives direct orders from one supervisor only, should ensure compatible orders and expectations for the employee, and hence increase job clarity and satisfaction.

Rizzo et al. (1970) reviewed previous research on the relation of unity of command, role conflict and role ambiguity to employee satisfaction and performance. They saw hospitals as organizations with multiple lines of authority in which nurses are frequently caught between the medical and administrative hierarchies;
'....the evidence indicates that multiple lines of authority are accompanied by role conflict and dissatisfaction for the members and loss of organizational efficiency and effectiveness' (p.152).

The model of role stress developed by Kahn and his colleagues (1964) provides the second approach to role conflict and ambiguity. The model focusses on the interaction between the 'focal person' and his 'role senders' (other people in his 'role set'), and if

this produces experienced conflict and ambiguity, the focal person will respond with some kind of coping behaviour which may be dysfunctional. Organizational factors (e.g. size, number of status levels), personality factors (e.g. motives, habits, values) and interpersonal relations influence this focal person-role sender intereaction. Kahn et al. found from their extensive research that experienced role conflict and role ambiguity were extremely common. Their respondents frequently reported that they were torn between two conflicting factors, one of which usually involved their superiors; and role overload was found to be a dominant form of role conflict. The costs of role conflict were low job satisfaction, low confidence in the organization and high job tension. The most frequent coping strategy used was withdrawal or avoidance of the sources of conflict (e.g. the supervisor) which, far from alleviating the situation, served to increase conflict by reducing effective communication.

Reported role ambiguity was equally disturbing, four types frequently being experienced: uncertainty about the supervisor's evaluation of their work, about advancement opportunities, about the scope of their responsibilities, and about others' expectations of their performance. The individual consequences of role ambiguity were similar to those of role conflict: low job satisfaction, high futility, low self confidence and high tension. In those instances where the coping strategy employed involves complete withdrawal from the organization, the individual has removed himself from the source of stress, but if he does not leave and remains under pressure, then the risk of a breakdown in health is a real one (see Murrell's review, 1978).

It is important to clarify the concepts of role, role stress, conflict and ambiguity. A role '... is most typically defined as a set of expectations about behavior for a position in a social structure'. (Rizzo et al., 1970 p.155). Expectations are standards against which each behaviour is evaluated, and are influenced by previous experiences, knowledge and values.

Role stress as defined by Kahn and his colleagues (Kahn, 1973) does not correspond to Selye's (1974) notion of stress as '... the non-specific response of the body to any demand made upon it' (p.27). Rather, Kahn et al have adopted the engineering analogy of Lazarus (1966), which regards stress as any force applied to an object and strain as the effect or change in the object which results from that stress. In particular, the stress examined by Kahn et al. and subsequent researchers have focussed on specific environmental stresses and the effect of these upon individuals.

Role conflict '...is defined as the degree of incongruity or incompatibility of expectations associated with a role' (Miles, 1975 p 335). So, experienced role conflicts arise when different members of the role set have different expectations about how the focal person should behave, and he therefore experiences psychological conflict. Several kinds of experienced role conflict have been described (Kahn et al., 1964):

- (a) person-role conflict, in which there is conflict between a person's own standards or values and prescribed behaviour.
- (b) inter-role conflict, where role pressures associated with membership of one role set conflict with those of another set.

- (c) inter-sender conflict, where pressures from one role sender conflict with those from another.
- (d) intra-sender conflict, in which incompatible messages, orders etc. are sent to the role encumbent from the same role sender.

All these role conflicts can together upset the focal person's equilibrium and result in role overload because of lack of coordination and agreement from the role senders.

Role ambiguity is defined as '...the lack of clarity of role expectations and the degree of uncertainty regarding the outcomes of one's role performance' (Miles, 1975 p 335). It occurs when the individual does not have the right kinds of information at his disposal to perform his job properly. Thus, ambiguity is the lack of clear, consistent information about various aspects of the job, such as financial security, opportunities for promotion, the kind of behaviour that will lead to reward or punishment. The required material may not exist, or it may exist, but not be communicated to the individual. Kahn et al. agreed that tension and anxiety are directly related to experienced role ambiguity, and that people differ in their tolerance of ambiguity, some requiring much more clarity and structure in their jobs than others.

In the present study the concepts of role conflict and ambiguity are regarded as elements of role stress which may have undesirable effects (dissatisfactions) and outcomes (absence, propensity to leave, leaving the job altogether) for the individual. Stress is viewed as an antecedent of strain in the employee, and not as an effect or an outcome. The word 'stress' has been used in the literature to convey so many meanings that

it has become extremely ambiguous. Murrell (1978) has described this semantic confusion:

'... the time has come for new terms to be adopted so that we can get out of the semantic mess in which we now find ourselves. There are three phases in what is being called occupational stress, a cause, an effect and an outcome; the word-'stress' has been applied to all three of them. Moreover, the presence of stress (as a cause) is, as often as not, inferred from the alleged occurrence of stress (as an effect) which in turn is claimed to have been the result of the existence of the stress (as a cause); either may be blamed for the creation of stress (as a consequence). To avoid all this confusion, I have called the three phases 'pressure', 'strain' and 'consequences'. Both pressure and strain are used in the literature in the sense in which I use them, but no one seems to have developed a collective term to describe what happens as a result of strain other than grossly to misuse the word stress.' (p.74)

In this study role stress is regarded as synonymous with Murrell's 'pressure'.

Kahn and his associates developed a scale to measure role pressure which they termed the Job Related Tension (JRT) index. This consisted of 15 role conflict, ambiguity and overload items, and responses were recorded on a 5-point scale ranging from never (1) to nearly all the time (5). The respondents were asked to indicate how often they

felt bothered by each item, e.g. 'feeling that you have too heavy a workload, one that you cannot possibly finish during an ordinary workday'; 'thinking that you'll not be able to satisfy the conflicting demands of various people over you' (Kahn et al., 1964).

Rizzo et al. (1970) employed factor analysis to demonstrate that role conflict and ambiguity are independent dimensions. This is not to say, however, that they are empirically unrelated (Sell et al., 1976). Conflict and ambiguity correlated negatively in the Rizzo study, with measures of need fulfilment and direct supervision, and positively, though weakly, with anxiety and propensity to leave the organization. A higher negative correlation was found between role ambiguity and the satisfaction variables compared with role conflict. Investigators from the same team have since developed and tested a model of organizational behaviour based on a study with supervisory and managerial employees of a heavy manufacturing firm (House & Rizzo, 1972). The dependent variables consisted of job satisfaction, perceived organizational effectiveness, anxiety and propensity to leave, and organizational and leadership practices were used as predictors. Role clarity and ambiguity were predictor, intervening and dependent variables. On the whole, the authors' hypotheses were supported: employeecentred supervision and organizational practices correlated positively with job satisfaction and negatively with perceptions of organizational problems, anxiety and propensity to leave; role conflict and ambiguity were negative functions of formal organizational practices and taskoriented leadership; and role conflict and ambiguity correlated negatively with perceptions of organizational effectiveness and satisfaction, and positively with anxiety and propensity to leave.

Role ambiguity was a more powerful predictor of satisfaction and a more powerful intervening variable than role conflict, which supported the previous findings (Rizzo et al., 1970). However the conclusions on this are not altogether consistent (Keller, 1975; Schuler, 1975; Schuler et al., 1977). Keller found that neither role ambiguity nor role conflict was more powerful, but they were both related to different dimensions of job satisfaction. Role conflict correlated negatively with the extrinsic dimensions of satisfaction with pay, promotion and supervision, whereas role ambiguity correlated negatively with the intrinsic dimension, work itself.

The possibility that organizational level could provide the solution to the conflicting reports on the relationship between role conflict and ambiguity and satisfaction and performance, was tested by Schuler (1975). He hypothesised that role ambiguity would have a stronger negative relationship than role conflict to job satisfaction and performance for employees at higher levels of the organization, and that role conflict would have the stronger negative relationship with satisfaction and performance for employees at lower levels. The results confirmed the hypotheses for satisfaction but not for performance, which the author explained in terms of an ability/adaptability phenomenon.

Burke & Belcourt (1974) used an occupational stress measure which contained some items similar to those used by Rizzo and his colleagues, and factor analysis revealed two factors which they called Role Ambiguity and Role Overload. These two factors resembled quite closely the role ambiguity and conflict described

by Rizzo et al., and the psychometric value of the Rizzo scales has been confirmed more recently by Szilagyi et al (1976) and Schuler et al (1977).

Much of the more recent research into occupational stress has employed the Rizzo et al. conflict and ambiguity scales in preference to the JRT of Kahn and his associates because of the demonstrated factorial independence of the former. Principal components analysis has recently been applied to the JRT (MacKinnon, 1978) which revealed a weak general factor. Subsequent rotation produced four factors described as work overload, and three ambiguity factors, and this illustrates the multidimensional nature of the JRT. MacKinnon suggested that several homogenous subscales should be developed, one for each factor: work overload; ambiguity relating to task performance and 'socioemotional consequences of the work setting'; feelings of inadequacy regarding self-competence; and ambiguity concerning responsibility, authority and advancement opportunities. Thus, the suspected complex nature of the JRT has been confirmed and the decision made by recent researchers to use the Rizzo et al. scales in preference is supported. Sell et al. (1976) pointed out that very little research has been done to determine the extent to which there is agreement between different measures but this may be relatively unimportant now that more use is being made of the Rizzo et al. scales.

Three role stress measures were used in the present study:

Lyons' (1971) 9-item modification of Kahn et al's JRT, Lyon's role

clarity index, and the Rizzo et al role conflict and ambiguity scales.

The Job-Related Tension Index

In the JRT the respondent indicates on a 5-point scale how much she (or he) feels bothered by items which could be perceived as evoking ambiguity or conflict in her work role. Five role ambiguity items refer to the scope and responsibilities of the job, opportunities for advancement, feedback from the immediate superior, information needed to carry out the job and knowing what the co-workers' expectations are. Four role conflict items include heaviness of workload, having to do things against one's better judgement, and having to satisfy the conflicting demands of senior personnel. (A copy of the scale is in Appendix 3, items 1 to 9.) It was identical to the scale used by Lyons except for minor alterations: 'Nursing Officer' was substituted for 'superior' in item 3 (not knowing what your superior thinks of you, how she or he evaluates your performance) because the nurse senior to the CN varies according to the grade of the CN and it was important that all the CNs referred to the same 'superior'. The second change was in item 6 (feeling that you have too heavy a workload, one that you can't possibly finish during an ordinary working day). Since night CNs were involved in the study, the words 'or night' were added to the end of the sentence.

Lyons (1971) used this index with American registered staff nurses and reported a median intercorrelation coefficient of .36, a median item-index coefficient of .59, and the split-half reliability coefficient was .70. In his earlier study with nurses (1968) Lyons included a four-item 'overload tension' index which contained two of the items used in the present study. The Pearson's

inter-item correlation coefficients are shown in Table 8.

Table 8: Intercorrelations between four overload tension items (Lyons, 1968)

		2	3	4
1.	unreasonable pressure	.25	.46	.36
2.	superior expects too much		.21	.20
3.	feel I can't finish			.62
4.	feel amount of work interferes with quality			

All coefficients were significant at the p < .01 level (n = 205-215)

Even though Lyons found all coefficients to be significant, they were sufficiently varied to indicate that the concepts of both job-related tension and overload tension were fairly heterogeneous and so items should be considered separately as well as in the form of indices. This supports the multidimensional nature of the JRT found in previous research.

The Role Clarity Index

This index consists of four items which are concerned with the perceived existing clarity on limits of authority, how and what to do on the job, and the policies, rules and regulations of the hospital (see Appendix 3, items 10 to 13). The median inter-item correlation coefficient was .36 for Lyons' (1971) nurses, and the split-half reliability was .70. In his 1968 study, Lyons used 3 role clarity items which were adopted, with slightly different wording, in his 1971 study. The item correlations ranged from .14 to .44, significant at p<.05 or better, and the median was .37.

The Need for Clarity Index

Lyons (1971) used need for clarity as a moderating variable and his Need for Clarity Index was employed in the present study so that comparisons could be made. Although need for clarity is an occupational need or value and so really should be described in the section of this report devoted to the measurement of the individual's 'work personality' (p50), it is included here because the items in the Index correspond closely to those in the Role Clarity Index. The Need for Clarity Index includes three items concerned with the need for clarity on limits of authority and how and what to do on the job, and the fourth item asks the respondent to indicate how important feedback on her progress is (see Appendix 3, items 14 to 17). The median inter-item correlation in Lyons' (1971) study was .38 and the split-half reliability coefficient .82.

The Role Conflict and Ambiguity Scales (see Appendix 4)

The Role Conflict scale consists of 8 items:

doing things that should be done differently.

receiving an assignment without the manpower to complete it.

having to bend rules or policies in order to carry out

an assignment.

working with two or more groups who operate differently.

receiving incompatible requests from two or more people.

doing things that are accepted by one person and not by others.

receiving an assignment without adequate resources and

materials to execute it.

working on unnecessary things.

The Role Ambiguity scale contains 6 items:

clear, planned goals and objectives for my job.

knowing that I have divided my time properly.

knowing what my responsibilities are.

knowing exactly what is expected of me.

feeling certain about how much authority I have.

explanation is clear of what has to be done.

Two further role conflict items were included by Rizzo and colleagues which were not part of the Role Conflict scale:

I don't have much say or influence with my co-workers.

I don't have much say or influence with higher management.

Each item is rated on a 7-point scale anchored with verbal statements at either end. Two ratings are given for each statement: in the first the respondent rates how true the characteristic is of his/her job, and in the second he/she rates the desirability of the characteristic. The sum of the 'how true' ratings provides an index of 'objective' perceived role stress, and high scores on this index indicate high perceived role conflict. The ambiguity items are reverse scored, with high scores indicating low perceived ambiguity, or high perceived clarity. The author has termed these ratings 'objective' because the assumption is that high scores on the Conflict scale do indicate high role conflict, and low scores on the Ambiguity scale, high role ambiguity. Calculating the difference between the 'how true' and 'desirability' ratings, however, and summing these, provides an index of 'subjective' role conflict and ambiguity.

Inclusion of the 'desirability' rating indicates how conflicting or ambiguous each item is to the individual, and so allows for individual differences. For example, the item 'I work with two or more groups who operate quite differently' may be scored as extremely true (7) yet extremely desirable (7) because the individual does not regard this as a conflict but a challenge. In this case the objective role conflict score would be high (7), but subjective role conflict would be zero (7-7).

No work has been published by Rizzo and his associates or subsequent authors on the 'desirability' rating, although there is a growing literature which has made use of the 'how true' scale. In this study, both ratings were collected so that estimates of objective and subjective role conflict and ambiguity could be made.

Reliability and validity

Rizzo, House & Lirtzmann (1970) showed the Role Conflict and Ambiguity scales to have adequate reliability and validity. Both demonstrated internal consistency (Kuder Richardson correlations with the Spearman Brown correction), which was .82 for Role Conflict with two samples, and .78 and .81 for Role Ambiguity.

Intercorrelations between the Role Conflict and Ambiguity scales were low (.25 and .01 for two samples), demonstrating relative independence.

Both the scales were tested for construct validity and found to correlate consistently with several measures, such as organizational structure, climate and leader behaviour. Rizzo and his colleagues

found that two factors emerged from factor analysis which accounted for 56% of the common variance from 30 items, which indicates that they are factorially independent. The authors concluded that the two factors '... strongly parallel the two theoretical concepts of role conflict and ambiguity; therefore, the unexamined yet often presumed separation of the two constructs seems warranted ...' (Rizzo et al., 1970, p.160).

The Job-related Tension Index was included in the present study as well as the Role Conflict and Ambiguity scales, because it (the JRT) has been used with registered nurses, albeit American (Lyons, 1971) and was found to be an appropriate and acceptable tool by the CNs in the pilot study. It also contains items on promotion prospects (Appendix 3, item 2), feedback from the nursing officer (item 3) and workload (items 6 and 7) which the Conflict and Ambiguity scales do not include. The JRT would, though, provide somewhat similar data to that of the Conflict and Ambiguity scales, and so would be of value should the administration of the more refined scales have been difficult. Rizzo and his colleagues included the 'desirability' rating in their scales, but since they have not referred to this rating in their published work, problems may have emerged with its administration. The present author did indeed experience difficulties in the administration of the 'desirability' rating (see p. 121), but was able to overcome them with the result that scores have been obtained on all three scales.

The similarities between the JRT and the Conflict and Ambiguity scales are in the following items:

- i. JRT item 1: being unclear on just what the scope and responsibilities of your job are?
 Role Ambiguity item 5: I know what my responsibilities are.
- ii. JRT item 4: the fact that you can't get information needed to carry out your job?
 Role Ambiguity item 13: explanation is clear of what has to be done.
- iii. JRT item 5: not knowing just what people you work with
 expect of you?
 Role Ambiguity item 8: I know exactly what is expected
 of me.
- iv. JRT item 6: feeling that you have too heavy a workload, one that you can't possibly finish during an ordinary working day or night? Role Conflict item 4: I receive an assignment without the manpower to complete it.
- v. JRT item 8: feeling that you have to do things on the job that are against your better judgement? Role Conflict item 2: I have to do things that should be done differently.
- vi. JRT item 9: thinking you will not be able to satisfy the conflicting demands of various people over you?

 Role Conflict item 9: I receive incompatible requests from two or more people.

There were also similarities between two of the Role Clarity Index items and two in the Rizzo et al. Ambiguity scale:

How clear are you about the limits of your authority in your present job? (Role Ambiguity scale item 10: I feel certain about how much authority I have).

Do you feel you are always as clear as you would like to be about what you have to do in your job? (Role Ambiguity scale item 13: explanation is clear of what has to be done).

Also, one of the Role Clarity items (how clear are you about the limits of your authority in your present job?) is very similar to the first JRT item (being unclear on just what the scope and responsibilities of your job are?), which indicates that these two indices do not measure independent concepts. The items were retained, however, in the original form so that direct comparison could be made with Lyons' findings.

2.2.2 Empirical studies of role stress

The empirical work on role stress has been summarised in several reviews, which have included some studies with nurses (Sell et al., 1976; Schuler et al., 1977; Murrell, 1978). Generally, role conflict and ambiguity have been found to be related to negatively valued states, such as high tension, dissatisfaction, low job involvement, low expectations from the job, physical and mental ill-health, high absence and high rates of propensity to leave and actually leaving the job.

Not all stresses are necessarily negatively related to satisfaction with the job, however, and some might in fact result in high levels of satisfaction. Burke (1976) found a statistically significant negative correlation between overall measures of occupational stress and satisfaction, but when the correlations were examined between specific stress and satisfaction items, some were significant and positive. These stress items were concerned with a demanding and challenging job, and high expectations of the employee, and Burke suggested that jobs that are enlarged and enriched may provide greater satisfaction but also more role pressures.

Generalization from previous research is difficult because of methodological variation, and causal inference is impossible because of mainly static correlational designs. Some studies, however, do permit causal inference. For example, Miles (1975) collected data from the same employees at two periods with an interval of four months between them so that a causal analysis could be used. His results showed that both conflict and ambiguity were causally related to job satisfaction, job tension and attitudes towards role senders, but the direction of causality could be inferred only for the relationships between ambiguity and job satisfaction and attitudes towards role senders. That is, experienced role ambiguity led to job dissatisfaction and unfavourable attitudes towards role senders rather than the other way round.

Many variables have been found to moderate the relationship between perceived role stress and outcomes. Examples of these are occupational status, organizational level, autonomy, perceived

purposefulness of behaviour, and group cohesiveness; and individual differences such as high need for clarity, need for achievement, need for cognition, locus of control, type A personality and anxiety level (Sell et al., 1976). Such moderating influences tend to produce inconclusive results because, as Murrell (1978) has put it, '... what may be one man's intolerable pressure may be another man's challenge' (p.80). This emphasises the need for correct employee selection and training, as well as a sensitive organization, and tolerable working conditions.

Empirical work into role stress and its relationship to attitudinal and behavioural outcomes in nurses is much less extensive than in other occupational groups. Kahn et al's JRT was administered to a sample of nursing directors in California (Arndt & Laeger, 1970a. 1970b), and to doctors, nurses and administrators in Australian hospitals (Bates & Moore, 1974). Arndt & Laeger found that the director's role encompassed a 'diversified role set' and is subject to experienced role conflict and ambiguity, particularly since the role senders may have different goals than the director, and these are not all under her/his authority. The authors maintained that over 60% of their sample scored 'high' on many of the role conflict, role overload and role ambiguity items. However, a 'high' tension score was interpreted as including all those who responded that they were rarely, sometimes, rather often or always worried about a particular item. The findings would have been more acceptable if the rarely and less often responses had been classified as low tension, and the sometimes and more often responses as high tension.

A considerable amount of research has been concerned with the different role orientations of American students and qualified nurses

and the deprivation and conflict which is experienced if there is much discrepancy between the two (Corwin, 1961; Corwin et al., 1961; Kramer, 1966, 1967, 1968a & b, 1969, 1974; Williamson, 1972). Because of the nature of their courses, diploma students (who follow an apprentice-style, hospital based training course) developed a largely 'bureaucratic' role conception, and degree students (whose courses are university based) developed a 'professional' orientation (Corwin, 1961). After graduation, those nurses who had both high bureaucratic and high professional role conceptions experienced the greatest discrepancy between their ideals and the perceived opportunity to fulfil them. The nurses who experienced the greatest conflict were graduates from degree programmes who attempted to develop the high bureaucratic conceptions required by the hospital at the same time as retaining their professional ideals. These nurses were liable to experience 'professional disillusionment' in their subsequent nursing practice (Corwin et al., 1961).

Aramer administered Corwin's professional bureaucratic and service role conception scales to collegiate nurses before and after graduation and after a short period of initial employment.

She found that, as nurse graduates moved from the professionally oriented model of the school to the bureaucratically oriented hospital their role orientation became increasingly more bureaucratic. Role deprivation was greater for those who attempted to retain their professional orientation than those who moved to the work centred model. The baccalaureate nurse graduate was caught between two conflicting ideas, the patient centred, ideal, creative, educational environment and the task-centred, technically proficient, realistic, bureaucratic setting of the hospital ward. Hospitals in which nurses had lower role deprivation scores (higher satisfaction),

had decentralised decision-making structures and a dual promotional system, one administrative, and the other clinical, culminating in a clinical nurse specialist. 'Collegiate nurses seemed much happier, more job-satisfied, and less role-deprived when working in organizations where they were not bound down by rules and regulations, where they were permitted and encouraged to make individualised patient care decisions and where they were rewarded for nursing rather than managing.' (Kramer, 1969, p209)

Williamson (1972) administered Corwin's professional bureaucratic scale to registered staff nurses and their directors of nursing services in large and small USA hospitals. hypothesised that the job satisfaction of both grades of nurse would be directly related to their type of role orientation; that satisfaction in the staff nurses would be directly related to the extent to which the role orientations of the two groups matched, and that the satisfaction of both groups would be an inverse function of the degree of incongruency between the expected and perceived role. However, none of the hypotheses was supported. Job satisfaction was not related to one role orientation more than the other, but a high role orientation (either professional or bureaucratic) correlated positively and significantly with satisfaction. Job satisfaction in the staff nurses was relatively high regardless of the orientation of the directors, and satisfaction was not related to the degree of role deprivation (incongruency between expected and perceived role). These results therefore cast doubt on the assumption in Kramer's work that a high role deprivation score is equivalent to low satisfaction.

Work on role stress in British nurses is virtually non-existent, although a start was made by Menzies (1961) and Revans (1964). Both these studies were concerned mainly with student nurses and they identified the hospital environment as being responsible for the high levels of anxiety, absence and wastage in the nurses. relatively high levels of role conflict and low levels of job satisfaction in professional nurses found by Szilagyi (1977) was thought to originate from the 'dual-hierarchy' in hospitals of nurse managers and doctors. Szilagyi concluded that since such a system of organizational structure is a permanent feature of hospitals, role conflict in the professional nurse will persist. In their earlier study which included nurses, Szilagyi and his colleagues (1976) attributed perceptions of role conflict and ambiguity more to environmental features inherent in a dual-hierarchy than to personality characteristics (locus of control) in the individual.

To summarise, results of empirical research in nurses has found significant relationships in the expected direction between indices of role stress and attitudinal and behavioural outcomes such as satisfaction, tension, anxiety, propensity to leave, and termination. However, there are contradictory findings, and the results are much more equivocal for the relationships with absence and performance. A more extensive review of the empirical research findings is provided in the discussion section following the correlational analysis (p 297), and so no further expansion is included here.

2.3 Withdrawal from Work: Absence and Wastage

An account of the theories, measurement and empirical research on absence and wastage is not included here because a review of the literature was prepared by the author for the Department of Health and Social Security. Three papers were published as a result of that review, and copies of these are included with this thesis.

Some of the research into job satisfaction and withdrawal from work in nurses is, however, discussed in this report (p (7))

A description of the withdrawal measures used in this study is included here. Lyons' (1971) Propensity to Leave Index was used consisting of three items which referred to the respondent's intention to stay in or leave the organization. Two more items, one added to the Propensity to Leave Index and the other an open-ended question, were included to obtain more information on potential mobility. (All five items have been reproduced in Appendix 3, items 20 to 24.) In his 1971 study Lyons reported inter-item correlation coefficients of .75, .59 and .54, and in his earlier study (1968) these were .75, .58 and .50. The item-index correlations were .92, .88 and .78 (Lyons, 1968), but these may have been artificially high since it is not clear whether the appropriate item scores were removed from the total index score when calculating each item-index correlation. The coefficients reported by Lyons were sufficiently high to indicate internal consistency of the scale.

A record was kept of those CNs who left their jobs during the 18 months following questionnaire administration, and they were

asked to outline their reason(s) for leaving. A copy of the letter sent to them is in Appendix 5. The leavers were matched as far as possible with a sample of 'stayers' on marital status, hours worked, age, tenure and, if possible, sex and type of ward. Scores for each sample were then compared to see if they differed significantly on the dimensions measured (propensity to leave, absence, job satisfaction, satisfactoriness, role conflict and ambiguity, etc).

Absence was measured by counting the number of spells taken by each CN during the two years preceding questionnaire administration. Where CNs had not been in post for the two years, a crude estimate of their absence rate for two years was made based on the number of spells taken during the time they had been in the job*. A frequency of absence spells measure was used in preference to a duration measure because it is much more reliable over time than an index of time lost, and is the measure of choice if one is concerned with short term and incidental absence rather than longer term sickness (Chadwick-Jones et al., 1971; Clark & Redfern, 1978).

Two absence frequency measures were calculated in the leavers and the 'matched' stayers. The first was the measure just described and was called 'past' absence. The second was 'current' absence, the number of spells taken during the 6 months before and the 6 months after questionnaire administration, and this was corrected for tenure less than 12 months. This measure was included to provide a more up-to-date indication of the CNs absence rate prior to her leaving

number of absence spells taken X 24 number of months in post

^{*} absence was estimated with the following formula:

her job. A higher rate of absence in the leavers compared to the stayers would not have been revealed by the 'past' absence measure except in those CNs who left soon after questionnaire administration.

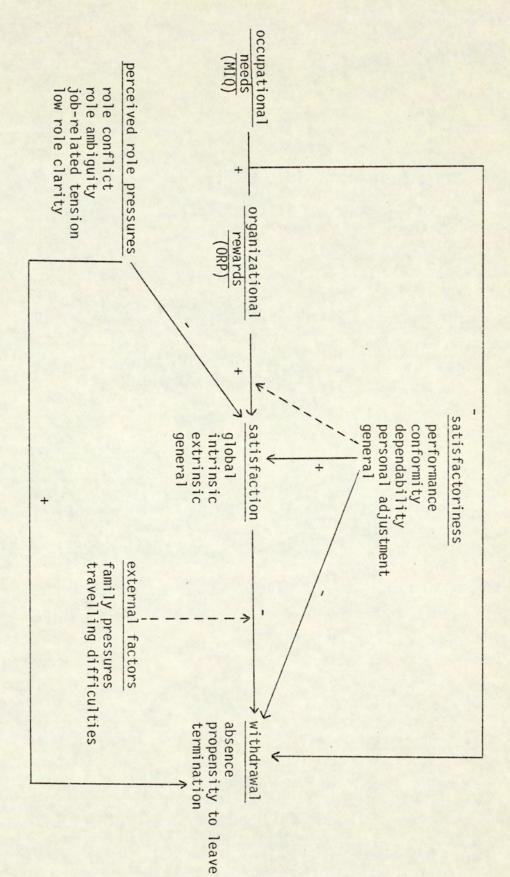
2.4 The Theoretical Framework of the Study

The purpose of this research was to increase our understanding of the ways in which hospital CNs gained satisfaction from their work, how this was affected by their attitudes to the job and by their perceptions of the conditions under which they were working. It was hoped that a greater understanding of what was actually happening in our hospitals would provide a firm basis from which to develop realistic policies for increasing well-being at work and reducing excessive rates of turnover and absence. More technically, the aim in general was to develop a model of organizational behaviour of hospital CNs with reference to their work attitudes and occupational stability. In particular, to describe the extent to which individual values corresponded with the demands of the job and to determine the relationship that various perceived work-related variables had to satisfactions with the job and to withdrawal behaviour (absence, propensity to leave, actual leaving).

The theoretical basis for the main study has its origins in the Theory of Work Adjustment developed by the research team from the University of Minnesota (Lofquist & Dawis, 1969). It was adopted as the basis for the present study because it combines the appropriate variables of occupational needs, job rewards, satisfaction and satisfactoriness, which taken together can predict job stability. This is a more appropriate framework than that of the JDI from which to study job satisfaction in CNs because the pilot study showed the JDI to be unworkable, and it was not part of such a comprehensive person-work environment model. However, the Work Adjustment Theory does not include some of the factors which emerged from pilot work

as being important in the study of CNs' attitudes and perceptions of their jobs: role pressures (role conflict, ambiguity and tension), propensity to leave and absence, external factors (family pressures, travelling difficulties), organizational support, and other factors which are important to CNs' well-being at work (caring for patients, teaching learner nurses, facilities for caring for nurses' health, welfare and career development, etc.). With these considerations in mind, elements of the Theory of Work Adjustment, perceived role stress theory, and items which emerged as important from the pilot studies, have been incorporated into a descriptive 'model' (Figure 7). This is merely a diagram which summarises and clarifies the variables involved and illustrates some of the expected relationships between them. A general description is given here and specific hypotheses have been described in the appropriate results sections. The solid arrows in Figure 7 indicate the expected direction of the relationships, and dotted lines represent moderating effects. A plus sign suggests a positive relationship and a minus sign a negative one. The model suggests that a close correspondence between the occupational needs of the individual and the rewards of the organization is positively related to job satisfaction and negatively related to withdrawal (absence, propensity to leave, and termination). Withdrawal is a function of dissatisfaction, perceived role pressures and lack of satisfactoriness; and satisfaction is negatively related to role pressures and positively related to satisfactoriness. Satisfactoriness moderates the relationship between the needs - rewards correspondence and satisfaction; and external factors (family pressures and travelling difficulties) will affect the withdrawal decision.

Figure 7: Diagram of the principal variables and their hypothesised relationships



One problem of a cross-sectional study of this kind is that it presents a static picture of what may be a continuously changing set of interrelationships. Ratings of levels of job satisfaction, perceived role pressures, individual values etc. have been collected during one time period only, and no account has been taken of the dynamic nature of person - environment relationships, nor of changes within individuals over time.

Questionnaires, interviews and personal records were used to collect the information required. Existing relatively valid and reliable scales have been adopted, and additional items have been included based on the pilot interviews. All but one of the scales used have already been described in the literature review above, and details of the exception, the Minnesota Satisfactoriness Scales (MSS), is included here.

The Minnesota Satisfactoriness Scales

The MSS was selected as a measure of CN satisfactoriness because it is part of the Work Adjustment Theory and is considered to demonstrate reasonable reliability and validity. It consists of 28 items and was administered to the nursing officers to rate the satisfactoriness of each of their CNs relative to that of other CNs doing similar work. The questionnaire consists of 5 scales each of which contains a number of items (see Appendix 6 for a copy of the questionnaire):

(a) Performance: 9 items which refer to responsibility, adaptability, quality and quantity of work, promotional worth and overall competence (items 4, 5, 11 to 16, 28)

- (b) Conformity: 7 items which refer to adherence to company policies and practices, and ability to work with superiors and co-workers. (items 1 to 3, 6 to 8, 10)
- (c) Dependability: 4 items which refer to attendance, discipline and attention. (items 17, 20, 21, 26)
- (d) Personal Adjustment: 7 items which refer to physical and emotional stability (items 18, 19, 22 to 25, 27)
- (e) General Satisfactoriness: 28 items which included all those in the other four scales plus ability to cope with repetitive tasks (item 9).

Three response alternatives enabled the CNs to be rated better than, about the same as, or not as good as their peers. The final item provides four response alternatives to indicate where the individual stands on overall satisfactoriness in relation to others in her peer group. Scoring weights of 1, 2 and 3 (and 4 for the final item) are given with higher scores indicating greater satisfactoriness, and scores are summed across items in each scale to provide index scores. American norms are available for 'workers-in-general' which includes practical nurses, but their use would be meaningless with British CNs.

Reliability and validity

Internal consistency of the MSS has been demonstrated by adequate Hoyt reliability coefficients ranging from .69 to .95, with a median of .87, in 5 occupational groups (Gibson et al., 1970).

In each group the internal consistency of the General Satisfactoriness scale was the highest, and that of the Dependability scale the lowest. A two-year test-retest examination of stability revealed a median correlation of .50 (range .40 to .68) for 5 occupational groups.

Scale intercorrelations revealed coefficients ranging from .74 to .90 between the specific scales and the General Satisfactoriness scale, and coefficients from .45 to .75, median .58, between the 4 specific scales. The authors pointed to a possible 'halo effect' in the raters.

Some evidence for validity of the MSS exists and work is continuing at Minnesota to validate it against criteria of satisfactoriness such as promotion, salary increases, various achievement indicators (e.g. sales volume in salesmen). The ultimate criterion, according to Gibson et al (1970) is job tenure, but it is difficult to identify and locate employees who left their jobs through dismissal, and employee satisfaction is a complicating variable. Furthermore, although CNs would be dismissed from their jobs if guilty of gross negligence or malpractice, it is much less likely that they would be fired for persistently unsatisfactory work.

Age is another validation criterion, in that one might expect satisfactoriness to increase with age up to the late thirties, and then decrease (Gibson et al., 1970). Gibson and his colleagues confirmed this for all the MSS scales except Dependability, which continued to increase with age up to 50 years and above.

The three scales of the MSQ short form had low correlations with the four subscales of the MSS demonstrating independence

between the scales. The maximum amount of common variance between any MSQ and MSS scale was about 5%, and when the scales were combined, the MSS had only about 2% variance in common with the MSQ. The low correlation between satisfaction as measured with the MSQ and satisfactoriness as measured with the MSS indicates construct validity of both scales (Gibson et al., 1970).

This completes the description of the theoretical background and the framework adopted in this study. The scales used, together with details of additional questionnaire and interview items, are summarised in the methodology section below (p 199).

3. THE METHODOLOGY

3.1 The Pilot Study

The aims of the pilot study were to examine the feasibility of using questionnaire and interview techniques with busy CNs during their working time, to assess the suitability of the questionnaire, and to identify questions which would enable CNs to reveal aspects of the job which bring them satisfaction and dissatisfaction.

The pilot work was carried out during July 1975 with 23 CNs who worked in the general nursing division of a district general hospital in the West Midlands, which was similar to the hospitals in the main study. Questionnaires were given to the CNs and unstructured interviews were held with 17 of them and 7 nursing officers. The following scales were included:

Global satisfaction index (Lyons, 1971)

Job Descriptive Index (Smith et al., 1969)

Job-related tension index (Lyons, 1971)

Role clarity index (Lyons, 1971)

Need for clarity index (Lyons, 1971)

Coordination index (Georgopoulos & Mann, 1962; Lyons, 1968)

Communication (Georgopoulos & Mann, 1962; Price, 1972)

Propensity to leave (Lyons, 1971)

Biographical items such as year qualified, marital status, number of children, breaks in nursing, educational qualifications were

included, and the CNs' personal files were checked for age, length of service and number of absence spells. The interview was conducted to check through the questionnaires with the respondent in order to establish whether she had had any difficulty in completing them, and to invite comments and criticisms. Also, to obtain further information on her opinions and attitudes towards the job and hospital and to determine her career aspirations, if any. The interview was unstructured but the CN was encouraged to discuss the extent to which facilities existed in the hospital for promotion, career growth and health and welfare of the staff. The interview lasted an hour and notes were made during it or immediately afterwards.

Details of the findings are not given here but they did suggest that it is feasible to assess the perceptions and attitudes of CNs working in general hospitals. The results and comments of the CNs, however, led to considerable modification of the design for the main study. The five JDI scales were discarded because many of the CNs were unable to complete two of them (satisfaction with work and with co-workers). Their jobs were so varied that it was impossible to generalise their opinions across the items, or to force their answers into the dichotomous response categories. The conclusion was that the JDI is not suitable for use with professional nurses whose work is complex and varied.

The Same kind of problem emerged with the Coordination Index.

The CNs were asked to indicate the extent to which other personnel and departments cooperated with them in providing patient care.

The CNs found that cooperation from different departments varied

and it was impossible to make generalizations. In view of this, the questions were altered for the main study so that reference could be made to each of several departments, and greater opportunity was made during the interview for discussion of organizational cooperation. Most of the items on communication were also discarded. These referred to the adequacy of communications with the nursing officer, and they increased the length of the already bulky questionnaire without adding much useful information. The questions on organizational cooperation intended for inclusion in the interview of the main study would, it was thought, tap the kind of information required rather more successfully.

The remaining scales posed no problems and so were retained for the main study. The aims of the pilot study were achieved and the CNs were willing to give the investigator their time, and were interested in the study and eager to discuss their jobs in considerable detail.

3.2 The Main Study

3.2.1 Samples and sites

The samples were drawn from six 'client selected' health districts in the West Midlands region. The main sample consisted of all the CNs employed in the general nursing division (excluding geriatric) of two hospitals drawn from these districts. The geriatric section of the general nursing division was excluded because, although general hospitals usually contain some geriatric wards, most of these beds are located in small peripheral hospitals, or in a separate large hospital or purpose-built unit. The time constraint limited the study to the largest general hospital in each of the two health districts and so, rather than include part of the geriatric section, the whole of it was omitted.

The sample from hospital A was small (42 CNs) and from hospital B, large (110 CNs). Both hospitals draw nurses from a similar catchment area although hospital A is further from the centre of Birmingham than hospital B. Hospitals of different sizes were selected at the start of the study (in 1974) to see if size was related to CN wastage. Since wastage decreased over subsequent years, the size hypothesis became less important, but differences between the hospitals have been examined.

A subsidiary sample included all the nursing officers immediately senior to the CNs, 5 in hospital A and 10 in hospital B. They rated their CNs' levels of satisfactoriness on the job.

Finally, a sample of 24 nursing officers responded to the request to develop a British version of the Minnesota Organizational Reinforcer Pattern. This profile of the American professional nurse's job indicates the extent to which certain 'rewards' exist in the job. A description of the Minnesota ORP is given above (p 62), and the instrument used to develop a British version is described below. The nursing officers all worked in the general nursing division, and 4 came from hospital A, 15 came from the health district containing hospital B, and 5 came from another health district. A sample of 20 supervisors was considered by the Minnesota group to be the minimum necessary to achieve a stable ORP (Borgen et al., 1968).

3.2.2 The measures

Most of the measures used have been identified in Figure 7 (p 100). A summary list is given here, and those which have not yet been described are given fuller attention below. These are the questions and items included in addition to the scales adopted from previous work. Each of these scales has been described in some detail in the literature review, except for the British'ORP' which is described below.

The Scales

Minnesota Satisfaction Questionnaire (MSQ), short form: provides 3 scales, intrinsic, extrinsic and general satisfaction (p 46, and Appendix 1)*

^{*} a description of the scale can be found at the page number indicated, and the scale is reproduced in the relevant Appendix.

Minnesota Importance Questionnaire (MIQ), multiple rank order form. (p 50 and Appendix 2)

Minnesota Occupational Reinforcer Pattern (ORP) for the professional nurse (p 51). A British 'ORP' was developed for comparison and is described below.

Global Satisfaction Index: a 2-item measure developed by Lyons (1971). (p 55 and Appendix 3, items 18 and 19)

Job-Related Tension Index (JRT): Lyons' (1971) modification of the Kahn et al. (1964) JRT (p 92 and Appendix 3, items 1 to 9)

Role Clarity Index: developed by Lyons (1971). (p 83 and Appendix 3, items 10 to 13)

Need for Clarity Index: developed by Lyons (1971) (p &4 and Appendix 3, items 14 to 17)

Role Conflict Scale: developed by Rizzo et al. (1970)

(p &4 and Appendix 4, items 2, 4, 6, 7, 9, 11, 12, 14.)

Also, 2 more conflict items used in addition to the scale

(p &5 and Appendix 4, items 15 and 16)

Role Ambiguity Scale: developed by Rizzo et al. (1970) (p 85 and Appendix 4, items 1, 3, 5, 8, 10, 13)

Propensity to Leave Index: modified from Lyons (1971) (p 95 and Appendix 3, items 20 to 24) Minnesota Satisfactoriness Scale (MSS): provides 5 scales, performance, conformity, dependability, personal adjustment, general satisfactoriness (p 101 and Appendix 6).

Other measures (these are described below unless indicated)

Follow up of leavers (p 95 and Appendix 5).

Absence frequency (spells): 'past' absence estimated for all the CNs, and 'current' absence calculated for the leavers and 'matched' stayers (p 96). This information was collected from the CNs' personal files.

Perceived organizational support.

Interview items.

Biographical information.

The British 'ORP'

Since the Minnesota ORP is an American profile and describes the 'professional nurse', it cannot be used with confidence to compare British CNs' occupational need profiles without some kind of comparative validation. Consequently, an attempt was made to develop a British 'ORP'. The American ORP was derived from the Minnesota Job Description Questionnaire (MJDQ) and, as it was not possible to obtain this for the present study, an alternative was designed. This was based on the same 21 MIQ statements included in the MJDQ,

and the CNs' supervisors (nursing officers) responded to these on a 7-point scale. The nursing officers indicated the extent to which each statement was descriptive of the GN's job. (A copy of this scale is in Appendix 7.)

Comparison was made between the Minnesota ORP and the median profile derived from the nursing officers' ratings, and if the two matched fairly closely, it was considered legitimate to accept the American ORP as a relatively valid representation of the job's characteristics.

Perceived organizational support

The Co-ordination Index (Georgopoulos & Mann, 1962) used in the pilot study was unsuitable for use with hospital CNs because they found it impossible to generalise their responses across the many individuals and departments with whom they had contact. The Index was therefore abandoned and one item substituted which was designed to overcome this difficulty. The CN was asked to indicate how well people from different departments co-operated with her in her work, and the individuals and departments were itemised separately (Appendix 3, item 25). Responses were made on a 5-point scale.

Two communication questions were retained from the pilot study questionnaire which concerned accessibility of the hospital's policies, rules and regulations, and adequacy of communication from the nursing officer (Appendix 3, items 26 and 27). The other communication items used in the pilot study were dropped because they increased the

questionnaire to an unacceptable length and they dealt with questions which would be more amenable to an interview discussion than a questionnaire format. Opportunity was provided in the main study interview for CNs to discuss the kind of working relationship they had with their nursing officers.

The interview

Individual semi-structured tape-recorded interviews lasting about one hour were conducted with each CN in the sample. The items were selected on the basis of the findings which emerged from the pilot studies and can be grouped into the following categories (see Appendix 8 for a copy of the interview schedule).

- a) The job itself: opportunity for basic nursing care and teaching the learners, perceived quality of care, staffing levels (Appendix 8, items 1 to 4, 29, 30).
- b) Organizational support: reactions to the 'Salmon' senior nursing staff structure (Report of the Committee on Senior Nursing Staff Structure, 1966), perceived cooperation from groups of 'significant others' in the CN's 'role set'. These items enabled the CN to expand on item 25 in the questionnaire (Appendix 8, items 5 to 21, 24).

Considerable reference is made in this study to the 'Salmon' structure, and so a brief description is necessary. The 'Salmon' Committee was appointed in 1963 to advise on the structure of hospital nursing staff from the grade of ward sister to the

matron of a large hospital. The Committee was required to describe the functions of each grade of senior nurse and to recommend how they should be prepared to carry out these functions. The previous organization consisted of ward sisters, assistant and deputy matrons, and matrons.

Considerable confusion existed because nurses with the title of matron or assistant or deputy matron were responsible for such a wide range of functions that their titles did not necessarily give a true indication of their status. For example, an assistant or deputy matron in a large hospital might have carried more responsibility than a matron of a small hospital, but she was not accorded the same status or prestige.

The new staffing structure divided the senior nursing hierarchy into three levels. Top management consisted of the Chief

Nursing Officer (grade 10) and Principal Nursing Officer (grade 9) and their function was to assist in formulating policy for a division (e.g. the general nursing division). Since reorganization of the Health Service these titles have been changed again, with the District Nursing Officer taking the place of the Chief Nursing Officer, and the Principal Nursing Officer now replaced by the Divisional Nursing Officer.

Middle management consists of the Senior Nursing Officer (grade 8) and the Nursing Officer (grade 7), and their main responsibility is a programming function, in that procedures for applying the policies for a particular area or unit are formulated. The first-line management level consists of the Charge Nurse (grade 6) and the Staff Nurse (grade 5), and the function of these nurses is an executive one with responsibility for carrying out a programme

of work in <u>sections</u> of units (usually wards). The 'Salmon' Committee thought that this 'pyramid' would provide an efficient organization and an attractive career structure.

The job of the CN is seen as principally one of organization and control of the work of others and she is directly responsible to the unit nursing officer who has structural authority over her. The CN is also accountable to the medical staff who have sapiental authority over her as far as medical treatment is concerned. The 'Salmon' Committee recommended that the CN should be relieved of some of her non-nursing duties by introducing ward clerks, domestic supervisors and a 'topping-up' service for equipment and supplies.

The nursing officer is responsible for a group of wards or sections which form a unit, and her functions were classified by the 'Salmon' Committee as professional, administrative and personnel. The professional function includes acting as a nursing consultant in the unit, supporting and training the nursing staff and advising on nursing problems in general.

The administrative function includes organization and deployment of nursing staff within the unit and acting as a key communicator both up and down the hierarchy. The personnel function involves supporting, guiding and counselling nurses working in the unit and helping them to develop their professional and managerial skills.

Two kinds of non-teaching nursing officer posts were envisaged by the 'Salmon' Committee. The nursing officer in charge of a specialist unit (theatres, accident and emergency department, etc.), and the one in charge of non-specialized units (e.g. general

medical or general surgical wards). Promotion to nursing officer was seen as a new and attractive step for the CN who wished to advance in her career and yet retain close patient contact and continue to expand her professional clinical expertise. How the CNs perceived the 'Salmon' structure and whether their perceptions corresponded to the scheme as envisaged by the 'Salmon' Committee was one area with which this study was concerned.

- c) Careers and personal development: perceived opportunities for career progression provided by 'Salmon', performance appraisal, opportunities for course secondment, future plans (Appendix 8, items 22, 23, 25 to 28, 32 to 36).
- d) Other organizational provisions: perceived health and welfare facilities (Appendix 8, item 31).

Most of the items required the respondent to select an appropriate response category from 5 alternatives. Many items were paired conforming to Porter's (1961) format ('How much do you have now?' and 'How much more would you like, if any?'), and so can provide an estimate of satisfaction. The CNs were encouraged to enlarge on their answers so that qualitative, anecdotal data as well as quantitative, analysable data were obtained.

Biographical information

Items 28 to 45 of the questionnaire (Appendix 3) consisted of biographical questions: the year SRN was obtained, jobs prior to nursing, hours and shift worked, occupational status, marital status, number of children, occupation of spouse, nationality, breaks in nursing service,

travelling distance to work, educational and professional qualifications, and finally, 'If you could go back to when you were at school, would you still choose nursing as a career?' The CN's age was obtained from personal files. Table 9 provides a summary of all the measures used.

Table 9: Summary of the measures

variable	instrument
occupational needs organizational rewards	Minnesota Importance Questionnaire (MIQ) Need for Clarity Minnesota Organizational Reinforcer British 'ORP' Pattern (ORP)
global satisfaction intrinsic satisfaction extrinsic satisfaction general satisfaction	Global Satisfaction Index))Minnesota Satisfaction Questionnaire (MSQ))
perceived role pressures: job related tension role clarity role conflict role ambiguity	Job Related Tension Index Role Clarity Index Role Conflict Scale Role Ambiguity Scale
performance conformity dependability personal adjustment general satisfactoriness))Minnesota Satisfactoriness Scale (MSS))
withdrawal: absence propensity to leave termination	frequency of absence spells ('past' and 'current') Propensity to Leave Index Count and follow up of leavers by letter
other job perceptions: organizational support the job itself career & personal development other organizational provisions	semi-structured questionnaire and interview schedule
biographical information	from questionnaire and personal records

3.2.3 Procedure

The following Trades Unions were informed about the study and their approval requested:

Royal College of Nursing

National Union of Public Employees

Confederation of Health Service Employees

National and Local Government Officers' Association

No objections were raised by the Unions. The representatives of the Rcn and NUPE showed considerable interest in the study, much more so than COHSE and NALGO.

Preliminary discussions with the District or Area Nursing Officers and the Divisional Nursing Officers of both hospitals elicited enthusiasm for the study and complete cooperation. The assistance of a nursing officer was provided in each hospital to act as a liaison officer between the researcher and the CNs. Initial meetings were arranged with groups of day and night CNs to explain the purpose and objectives of the study, describe the procedure, assure complete confidentiality and feedback, and to answer any questions that might emerge. The CNs were under no compulsion to take part. An introductory letter (see Appendix 9) which summarised the main points was distributed to CNs at the meetings and via the liaison officer to those who had not been able to attend.

A private room was provided for the interviews which were conducted during the CNs'working time. The most suitable time for most of the day CNs was during the afternoon staff overlap period between 1.30 p.m.

and 4.30 p.m., and for the night CNs between about 10.30 p.m. and 12.30 a.m. Each CN took part in an interview lasting about an hour and took the questionnaires away to complete during her own time. A date was arranged for the researcher to collect the completed questionnaires from each CN. The interviews were conducted before questionnaire completion for half the respondents and after questionnaire completion for the other half in order to minimise the effect of 'contagion' on either the interview or questionnaire responses. Thus, each CN was seen at least twice. Most of them were able to attend the interview on the date planned, but inevitably some alterations had to be made because of staff absence and off-duty changes. In nearly every case the CNs talked openly and at length about their work and appeared to welcome the opportunity to air their views, knowing that no individual would be identified to the nursing management. Nearly all of them allowed the conversation to be recorded on a tape cassette.

The items included in the interview can be seen in Appendix 8.

In many cases, the CN was required to select a response from a 5-point scale and response cards were provided for this. The CNs were encouraged to expand on the structured answers and many took the opportunity to discuss the item at length. These replies were later transcribed and content analysed.

Administration and completion of the questionnaire scales were relatively straightforward except for the following difficulties:

1. <u>Minnesota Satisfactoriness Scale (MSS)</u>

In hospital A, the first hospital studied, the nursing officers were asked to complete the MSS on each of their

CNs without the CNs being informed of this request. This strategy was adopted because other studies (e.g. Steers, 1975) have obtained performance ratings from the supervisors of employees at first line management level without the employees' knowledge and with acceptable response rates. The number of MSS completed would have been greater had all the nursing officers (5) agreed to comply with the request, than if consent from each CN had been sought, because it was likely that some would have refused. In the event, this was a mistaken strategy since only 3 of the 5 nursing officers in hospital A agreed to complete the MSS on each of their CNs, so that satisfactoriness ratings were available for only 16 CNs (43%, N = 37). These were in the surgical and outpatient departments and on night duty, but none was available for medical and theatre CNs. The nursing officers would have been willing to complete the MSS if the CNs had been informed and had given their permission.

In hospital B each CN was asked at the end of her interview if she would allow the researcher to ask her nursing officer to complete the MSS. A copy of the MSS was available for the CNs to examine. Most of them had no objection to this, but a few agreed on condition that they could read the completed MSS. The researcher subsequently approached the nursing officer concerned and if she agreed to complete it knowing that the CN's consent had been obtained, she was asked to show it to those CNs who had requested this before it was returned to the researcher. If the nursing officer could not agree to the CN seeing it then it was not completed for that CN. It is possible therefore that those

CNs regarded as unsatisfactory workers by their nursing officers were not included in the MSS ratings but such cases were very few. This strategy was much more successful than that used in hospital A and 10 nursing officers completed 85 MSS ratings, a response rate of 88% (N = 97).

2. The Role Conflict and Ambiguity Scales

The CNs in both hospitals had difficulty in completing one of the ratings ('desirability') of the Conflict and Ambiguity scales. The CN was presented with a set of 16 job characteristics and asked to rate (a) 'how true' and (b) 'how desirable' each was for her job (see Appendix 4 for a copy of the scales). The ratings were made using the following scales:

Definitely not true of my job	1	2	3	4	5	6	7	Extremely true of my job
Extremely undesirable condition	1	2	3	4	5	6	7	Extremely desirable condition

The CNs had no problems with the 'true' ratings and it is only these that have been used in previously published work. The difficulties lay in selecting a desirability rating for the role conflict items which were all specified in a negative direction (e.g. 'I have an assignment without the manpower to complete it'). The ambiguity items were all positively stated (e.g. 'I know exactly what is expected of me'). This negative orientation of the conflict items complicated the understanding of the 'desirability' rating to such an extent that many CNs

mistakenly selected a number from the 'wrong' end of the scale. To illustrate this point more clearly, the reader is referred to the Role Conflict and Ambiguity item examples in Table 10.

Table 10: Two items from the Role Conflict and Role Ambiguity
Scale (Rizzo et al., 1970)

	How True?	Desirability	
I have to do things that should be done differently (conflict)			
Explanation is clear of what has to be done (ambiguity)			

Completion of the 'desirability' rating is much easier in the case of the ambiguity item than the conflict one. What happened was that many CNs felt that the conflict item was extremely undesirable, yet they inserted a rating of 7 instead of 1. It became apparent to the author that this was happening when she observed that several CNs recorded the 'true' rating for a conflict item as 7 and the 'desirability' rating also as 7. Furthermore, two additional conflict items (15 and 16, Appendix 4) which were not included in the Conflict scale, presented the greatest problems because the 'desirability' rating often required the CN to 'think in double negatives'. For example, if she wanted to record that it was extremely undesirable not to have much say or influence with higher management', she should have selected 1 on the 'desirability' rating. Any questionnaire item which involves the respondent conceptualising double negatives reflects poor design.

The researcher could have done what Rizzo and his colleagues and all subsequent authors have apparently done, that is,

accept the 'true' ratings as the only index of role conflict. However, this rating provides a measure of 'objective' role conflict in that it is assumed that high scores reflect high conflict. This is useful in itself but it cannot reflect the degree of conflict as perceived by the individual. The 'subjective' conflict must be derived by computing the difference between the 'true' and 'desirability' ratings, a process which may reduce the total role conflict score. For example, a 'how true?' score of 7 for 'I work with two or more groups who operate quite differently' would denote a high degree of objective conflict, but if the 'desirability' rating was also 7, the subjective conflict score would be 0. The respondent scoring thus may be of the opinion that it is highly desirable to work with several groups who operate . differently because this gives them a challenge, 'keeps them on their toes', and prevents boredom.

The researcher ensured that she had received the ratings that the CNs intended by administering the role conflict and ambiguity scales with them individually. Those who had already completed the scales on their own with apparent errors were visited individually and asked to check through their replies. In nearly every case they reversed their 'desirability' ratings and were surprised that they had made such errors. It is appreciated that the researcher could have inadvertently persuaded the respondent to record what she (the researcher) thought was correct. This, however, was unlikely to have been so because the CN was asked to check her ratings to all the items, and it was only those in which she herself spotted an error which were altered.

The author wrote to one of Professor Rizzo's colleagues,

Professor House, describing the difficulties encountered and
asked for his advice. He replied that he could not help
because he had not made use of the 'desirability' ratings
in his own work. Why he had not done so remained unexplained.

The conclusions reached by this author are that the 'true'
score provides a relatively simple, unambiguous rating of
objective role conflict, and an accurate subjective rating,
which takes account of individual differences, can be obtained
only if the 'desirability' scale is administered to each
respondent individually.

Analysis techniques and hypotheses

The Statistical Package for the Social Sciences (SPSS) (Nie et al., 1970) was used and the strategy for analysis is outlined toegether with specific hypotheses in the appropriate results sections. Throughout the analysis comparisons were made for each hospital separately as well as the total sample. Where tests of significance have been employed these have been 2-tail tests unless otherwise stated.

The CN response rates

Of the total of 42 CNs in hospital A, 37 took part in the study, a response rate of 88%. In hospital B, 97 of the 110 in post participated, an identical response rate (88%). Some CNs, however, did not complete all the questionnaire items or answer all the interview questions; either through refusal or lack of time. This number was small but in the results sections of this report, the actual sample size is indicated.

4. DESCRIPTIVE RESULTS

4.1 Sample Characteristics

Information on biographical characteristics of the CNs enabled a profile to emerge which described the background and individual characteristics of the 'typical' CN.

4.1.1 Personal characteristics

Table 11 shows the age distribution of the CNs in the two hospitals separately and combined.

Table 11: Age distributions of CNs in hospitals A and B, and the combined sample

Age			Difference					
bands	А	+ B		А	В		between Hospitals	
(yrs)	freq	%1	freq	%	freq	%	(ANOVA) 2	
20 - 29	69	51.5	13	35.1	56	57.8		
30 - 39	38	28.3	15	40.5	23	23.7	F = 3.47	
40 - 49	20	14.7	7	18.9	13	13.4	ns	
50+	7	5.1	2	5.4	5	5.1		
	134		37		97			

In hospital A the greatest proportion (41%) of CNs were in the 30-39 age band whereas in hospital B the CNs were younger, 58% being in the 20-29 age band. The mean age in hospital A was 34.22 yrs ($s^3 = 8.23$), in hospital B, 31.08 yrs. (s = 8.87), and in both hospitals

In this and subsequent tables percentages may not sum to 100, due to rounding.

² ANOVA = one way analysis of variance.

³ s = standard deviation.

combined, 31.95 yrs. (s = 8.78). The ages ranged from 23 to 51 in hospital A and from 22 to 63 in hospital B. The difference between the hospitals was not significant. With skewed distributions such as these, the median is a rather more representative 'average' than the mean. In hospital A the median was 32 years, in B it was 28 years, and in the combined sample, 29 years. Nearly all the CNs were women, the number of men being 4 (11%) in hospital A and 4 (4%) in B. Table 12 shows the distributions of the year the CNs qualified as state registered nurses (SRNs).

Table 12: Year qualified as SRN in hospitals A and B, and the combined sample

Year		Difference					
qualified	A + B		А	А		В	between Hospitals
	freq	%	freq	%	freq	%	(ANOVA)
before 1956	15	11.5	5	13.5	10	10.7	
1956 - 1960	18	13.8	7	18.9	11	11.7	F = 5.09
1961 - 1965	12	9.2	7	18.9	5	5.4	p < .05
1966 - 1970	35	26.6	10	27.0	25	26.7	p 1.00
1971 & later	51	39.0	8	21.6	43	45.6	
	131		37		94		

The mean year qualified in hospital A was 1963 (s = 7.24 yrs.), in hospital B, 1967 (s = 7.70 yrs.), and in the combined sample, 1966 (s = 7.69 yrs.). The ranges were 1949 to 1974 in A and 1938 to 1976 in B. The median year in the combined sample was 1970. A greater proportion of CNs qualified after 1970 in B (46%) compared with A (39%) and the difference between the distributions was significant (p < .05).

The length of service in present post in shown in Table 13.

Table 13: Tenure in present post in hospitals A and B, and the combined sample

Tenure			Hosp	itals			Difference
(months)	А	+ B		А		В	between Hospitals
	freq	%	freq	%	freq	%	(ANOVA)
6 or less	31	23.1	5	13.5	26	26.8	
7 - 12	18	13.4	6	16.2	12	12.4	
13 - 24	25	18.7	9	24.3	16	16.5	F = 3.26
25 - 48	27	21.2	6	16.2	21	21.7	ns
49 - 84	20	14.9	4	10.8	16	16.5	
85 +	13	9.7	7	18.9	6	6.2	
	134		37		97		

Although the mean length of service was longer in hospital A $(\bar{x}=42.54 \text{ mths}, s=50.25)$ than in hospital B $(\bar{x}=29.58, s=30.87)$, the difference between the distributions was not significant. Both distributions were skewed towards short tenure as is reflected in the median values (A = 22 mths, range = 2-240; B = 18 mths, range 0.5-182; A + B = 20 mths, range 0.5-240). In view of the skewed distributions, a Chi-squared(χ^2) test is more appropriate than the ANOVA test, and this also showed no difference between the two hospitals ($\chi^2=8.67$, df = 5). Although a minority of CNs had been in their present jobs for more than 7 years (A = 7, 19%; B = 6, 6%), over half the sample in both hospitals had 2 years' tenure or less (A = 20, 54%; B = 54, 56%).

The CNs were asked if they had had any full-time job(s) before starting their nursing training. This was to establish the proportion who had entered nursing straight from school and those who had experience of other work. (Table 14).

Table 14: Number of CNs in hospital A, hospital B and the combined sample who had taken and had not taken a full-time job(s) prior to nursing

Any job(s) before nursing			Difference				
	A + B			А		В	between hospitals
	freq	%	freq	%	freq	%	Hospitals
yes	55	42.0	18	48.6	37	39.4	$\frac{2}{2} = 0.94$ $df = 1$ ns
no	76	58.0	19	51.4	57	60.6	
	131		37		94		

A greater proportion of CNs in hospital A (49%) had had jobs before nursing compared with hospital B (39%) but the difference was not significant. The range of jobs taken before nursing is shown in Table 15:

Table 15: Type and frequency of jobs taken by the CNs before commencing SRN training, hospitals A and B

Type of job	hospi	tal A	hospital B		
	freq	. %	freq	%	
clerical/secretarial	10	41.7	17	41.5	
nursing	4	16.7	7	17.1	
shop assistant	2	8.3	9	22.0	
domestic/catering	4	16.7	0	-	
other	4	16.7	8	19.5	
	24		41		

The nursing jobs included nursery nursing, midwifery and auxiliary nursing. Cadet nursing experience has been excluded because many CNs who had been cadets did not record this as a previous job because they regarded it as part of their general nurse training. The 'other' category included laboratory and factory workers, doctors' and

dentists' receptionists, a teacher, a bus conductor, a road haulage worker and national service. The proportions of previous jobs which were of a clerical/secretarial or nursing nature in each hospital were almost identical.

The nationality of the CNs in the two hospitals varied (Table 16), a higher proportion than would be expected by chance in hospital B being non-British compared with hospital A ($\chi^2 = 4.97$, p<.05).

Table 16: Nationality of CNs in hospitals A and B, and the combined sample

			Difference					
Nationality	A + B		А		В		between	
	freq	%	freq	%	freq	%	Hospitals	
British	107	81.8	35	94.6	72	75.8	$\chi^2 = 4.97$	
Irish + other	25	18.9	2	5.4	23	24.2	df = 1 p < .05	
	132		37		95			

The British category included those Indians, Chinese and a Bermudan who had British nationality, and the remainder were Irish, Indian, Chinese, Malaysian, Mauritian, Jamaican, West Indian, Nigerian and Barbadian.

Tables 17 and 18 give details of the educational qualifications of the CNs.

Table 17: Number of CNs holding specified numbers of GCE '0' levels, CSEs, general matriculation, or equivalent in hospitals A and B, and the combined sample

Number of GCE 'O' levels, CSE or general									
	A + B			А		В	Difference between		
matriculation*	freq	%	freq	%	freq	%	Hospitals		
none	40	29.9	15	40.5	25	25.8	0.2		
1 - 3	22	16.4	5	13.5	17	17.6	$\chi^2 = 6.64$		
4 - 5	31	23.2	11	29.7	20	20.6	df = 3		
6 +	41	30.6	6	16.2	35	36.0	115		
	134		37		97				

Although more of the CNs from hospital A had no '0' levels or equivalent, and more from hospital B had 6 or more, the difference between the hospitals was not significant. The number of CNs holding any GCE 'A' levels or their equivalent was very small (Table 18).

Table 18: Number of CNs holding GCE 'A' levels or equivalent in hospitals A and B and the combined sample

	Number of GCE 'A' levels or equivalent	Hospitals									
		А	+ B		А	В					
	equivalent	freq	%	freq	%	freq	%				
	none 1 or more	125 9	93.3 6.7	37 0	100.0	88 9	90.7				
		134		37		97					

^{*} Those holding the general matriculation certificate were considered to hold the equivalent of 5 '0' levels.

4.1.2 Family characteristics

Table 19 shows how the CNs in each hospital differed on marital status, there being a greater number of single CNs in hospital B than would be expected by chance ($\chi^2 = 6.86$, p<.01).

Table 19: Marital Status of CNs in hospitals A and B and both combined

			Di fference				
Marital status	А	+ B	1	4	E	3	between Hospitals
	freq	%	freq	%	freq	%	Hospitais
single married and other*	51 83	38.0	7 30	18.9	44 53	45.4 54.6	$\chi^2 = 6.86$ df = 1 p < .01
	134		37		97		

^{*} includes those co-habiting, widowed, divorced and separated.

These findings support the impression that the majority of female CNs working today are married. The number of CNs with children varied significantly between the hospitals, as shown in Table 20.

Table 20: Number of CNs with and without children in hospitals

A and B, and both samples combined

Number of							
	A + B		А		В		Difference between
children	n freq % freq % freq	freq	%	Hospitals			
none 1 or more	87 47	64.9 35.1	18 19	48.6	69 28	71.1	2 = 5.00 df = 1 p < .05
1 01 11101 0	134	33.1	37	31.4	97	20.3	p 4.00

Half (51%) the CNs in hospital A had one or more children compared with 29% in hospital B. The ages of the children are shown in Table 21.

Table 21: Age distribution of children of CNs in hospitals A and B

Age band of children	Hospi	tal A	Hospital B		
or chirdren	freq	%	freq	%	
less than 6 mths	0	-	2	3.9	
6 - 12 mths	1	2.6	2	3.9	
13 mths - 4 yrs	7	18.4	8	15.7	
5 - 9 yrs	8	21.1	12	23.5	
10 - 14 yrs	11	28.9	12	23.5	
15 - 19 yrs	5	13.2	10	19.6	
20 years +	6	15.8	5	9.8	
	38		51		

Most (hospital A = 50%, B = 47%) of the children were in the 5 - 14 years age band and so out at school all day except during the school holidays. Approximately one quarter were either under 5 years old (hospital A = 21%, B = 24%) or aged 15 or older (A = 29%, B = 29%). Those who had very young children had on the whole elected to work on night duty or part-time on day duty, or they were men with wives at home full-time or who worked part-time.

Closely related to marital status and number of children is the number of breaks taken by the CNs during their nursing careers. Table 22 shows the number who had taken no breaks, or one or more, and the difference between the hospitals was significant, more CNs having taken breaks in hospital A than would be expected by chance $(\chi^2 = 4.74, p < .05)$.

Table 22: Number of CNs who had taken breaks in their nursing careers in hospitals A and B, and the combined sample

Number			Difference					
of breaks	A + B		А		В		between Hospitals	
	freq	%	freq	%	freq	%		
none	94	71.8	21	56.8	73	77.7	$\chi^2 = 4.74$	
1 or more	37	28.2	16	43.2	21	22.3	df = 1 p < .05	
	131		37		94			

The reasons for taking breaks in nursing are shown in Table 23, with 'starting a family' being the most frequent reason given.

Table 23: Frequency with which reasons for taking breaks in nursing were endorsed by CNs in hospitals A and B and the combined sample

	Hospitals							
Reason for break	A+B (r	= 37)	A (n = 16)		B (n = 21)			
	freq	%	freq	%	freq	%		
getting married	2	5.4	1	6.3	1	4.8		
starting a family	34	91.9	16	100.0	18	85.7		
husband/wife moving	2	5.4	2	12.5	0	-		
wanted a rest from work	1	2.7	0	-	1	4.8		
disliked nursing work	0	-	0	-	0	-		
disliked nursing pay	2	5.4	1	6.3	1	4.8		
wanted to get out of nursing	1	2.7	0	-	1	4.8		
travel	2	5.4	0	-	2	9.5		

Those CNs who had taken breaks were asked to give reasons why they returned to nursing, and these are shown in Table 24.

Table 24: Frequency with which reasons for returning to nursing after a break(s) were endorsed by CNs in hospitals A and B and the combined sample

	Hospitals								
Reason for returning	A+B (n=37)	A (n	=16)	B (n=21)				
	freq	%	freq	%	freq	%			
wanted to make use of nursing training	30	81.1	13	81.3	17	81.0			
able to leave family	23	62.2	11	68.8	12	57.1			
wanted a stimulating job	21	56.8	8	50.0	13	61.9			
needed the money	16	43.2	10	62.5	6	28.6			
wanted independence	15	40.5	7	43.8	8	38.1			
to make friends	8	21.6	4	25.0	4	19.0			
family/own health improved	1	2.7	0	-	1	4.8			
other	5	13.5	2	12.5	3	14.3			

Wanting to make use of their nursing training was the most frequently cited reason in both hospitals, followed by being able to leave the family and needing the money in hospital A, and wanting a stimulating job and being able to leave the family in hospital B.

The final family characteristic recorded was the occupation of the CN's spouse (Table 25).

Table 25: Number of CNs' spouses in specified categories of occupation, hospitals A and B and total sample

Occupation category			0:55				
	A + B		A		В		Difference between
ca cegor y	freq	%	freq	%	freq	%	hospitals
managerial/ professional	51	64.6	91	61.4	32	66.6	$\chi^2 = 1.47$
non-manual	13	16.5	. 7	22.6	6	12.5	df = 2 ns
manual	15	19.0	5	16.1	10	20.9	
	79		31		48		

The number of CNs responding to this question does not quite correspond with those in the 'married and other' category (see Table 19 above). Five CNs in hospital B did not complete this question, because they were not prepared to divulge such confidential information when they could not appreciate its significance to the study, and one in hospital A included her fiancee's occupation but endorsed the 'single' category under marital status.

The spouse's occupation was initially classified according to the Department of Employment's CODOT scheme (1972), following which the categories were reduced to 'managerial/professional', 'non-manual' and 'manual'. In both hospitals the greatest proportion of occupations was in the managerial/professional group (A = 61%, B = 67%), and the difference between the hospitals for all the spouses' occupations was not significant.

4.1.3 Job characteristics

The number of professional qualifications other than SRN held by the CNs are shown in Table 26.

Table 26: Number of CNs holding professional qualifications other than SRN in hospitals A and B and the combined sample

Additional professional qualifications		Hospitals								
	A	A + B		A		В				
qualifications	freq	%	freq	%	freq	%				
none	68	50.7	21	56.8	47	48.5				
1	44	32.8	10	27.0	34	35.1				
2	16	11.9	4	10.8	12	12.4				
3+	6	4.4	2	5.4	4	4.1				
	134	_	37		97					

Over half (57%) of the CNs in hospital A and nearly half (49%) in B had no additional qualifications. Since the expected frequencies in 3 of the cells were less than 5, the difference between the hospitals was examined by reducing the table to those who had no additional qualifications and those who had 1 or more, and this was not significant (χ^2 = 0.60, df = 1). The nature and frequency of additional qualifications held can be seen in Table 27.

Table 27: Nature and frequency of professional qualifications other than SRN held by CNs, hospitals A and B

Qualifications	Hospital A	Hospital B
midwifery; SCM, CMB(1), OC, PBC, NN	7	29
RSCN	1.	7
RMN, RNMS	1	4
OND	4	4
ENT Dip.	2	3
ITU/CCU	2	6
Dip. N.	1	6
other nursing: SEN, RFN, BTA, ST, DN, NNC	4	8
shorthand and/or typing	3	2
Total	25	69

SCM	=	state certified midwife	ENT dip.	=	ear, nose & throat
CMB(1)) =	Central Midwives Board pt.1.	TTII / 0011		diploma
00	=	obstetric certificate	ITU/CCU	=	intensive & coronary care certificate
PBC	=	premature baby certificate	Dip.N.	=	diploma in nursing
NN	=	nursery nurse certificate	SEN	=	state enrolled nurse
RSCN	=	registered sick children's nurse	RFN		registered fever nurse
110011		regrottred brok our run en britanet	BTA	=	British tuberculosis
RMN	=	registered mental nurse			asscn. certificate
RNMS	=	registered nurse for the	ST	=	stoma therapist
		mentally subnormal	DN	=	district nurse
OND	=	orthopaedic nursing diploma	NNC	=	neurological nursing certificate

It is relatively common in general hospitals today for two CNs, a senior and a junior, to be employed in each ward. Table 28 shows the number of CNs in each grade in both hospitals, and the proportions were very similar.

Table 28: Number of senior and junior CNs in hospitals A and B and the combined sample

	- 115		Hospi	tals		
CN grade	А	+ B		A		В
	freq	%	freq	%	freq	%
senior	84	62.7	25	67.6	59	60.8
junior	50	37.3	12	32.4	38	39.2
	134		37		97	

The number of hours worked per week for full-time work is 40, and anything less than that is classified as part-time. Table 29 shows the distribution of hours worked.

Table 29: Number of CNs working for specified hours in hospitals A and B, and the combined sample

			Hospi	tals		
hours per week	А	+ B		A		В
	freq	%	freq	%	freq	%
8 - 30	24	17.9	6	16.2	18	18.6
31 - 39	8	6.0	6	16.2	2	2.1
40 +	102	76.1	25	67.6	77	79.4
	134		37		97	

Most of the CNs worked full-time (A = 68%, B = 79%) and when the full-timers and part-timers were compared, there was no difference between the hospitals (χ^2 = 1.46, df = 1).

The distribution of CNs working certain shifts is shown in Table 30.

Table 30: Numbers of CNs working on specified shifts in hospitals

A and B, and the combined sample

			Hospi	tals			Difference		
Shift worked	А	+ B		A		В	between		
	freq	%	freq	%	freq	%	hospitals		
early & late, other*	89	66.4	23	62.2	66	68.0	≈ 2- n os		
approx 8.30 am - 5.00 pm	19	14.2	7	18.9	12	12.4	x 2= 0.96 df= 2 ns		
night	26	19.4	7	18.9	19	19.6			
	134		37		97				

^{*} early = morning and afternoon, late = afternoon and evening.
'Other' included a few CNs who worked only on early or late shifts and those who included 'split' shifts (morning and evening) with the early and late category.

The greatest number of CNs worked during the day on the early and late shifts (62% in A, 68% in B). Those who worked a conventional day (A = 19%, B = 12%) were employed in the outpatient department. The proportion working different shifts was similar in each hospital and the differences did not reach significance.

The CNs were asked how far they lived from the hospital and whether travelling to work was easy or difficult (see Tables 31 and 32).

Table 31: Number of CNs living specified distances from the hospital in samples A and B, and the combined sample

Distance lives			Hospi	tals			Difference			
from hospital (miles)	А	+ B		A		В	between			
(mrres)	freq	%	freq	%	freq	%	hospitals			
< 5	77	58.8	24	64.9	53	56.3	$\chi^2 = 0.82$			
5 - 9	32	24.4	8	21.6	24	25.5	df = 2			
10 +	22	16.8	5	13.5	17	18.1	112			
	131		37		94					

Most of the CNs lived within 5 miles of the hospital (A = 65%, B = 56%) but a minority (A = 14%, B = 18%) lived 10 miles or more away. The differences between the two hospitals were not significant. Very few found travelling to work difficult and those who did complained about the poor bus service to hospital A generally, and to both hospitals on Sundays.

Table 32: Number of CNs who found travelling to work easy or difficult in samples A and B, and the combined sample

			Hospi	tals			Difference		
Travelling	А	+ B		А		В	between hospitals		
	freq	%	freq	%	freq	%			
easy/ fairly easy	120	90.0	31	83.8	89	93.7	$\chi^{2} = 2.07$		
difficult	12	9.1	6	16.2	6	6.3	ns		
	132		37		95				

4.1.4 Summary and discussion

Differences between the hospitals were examined on each variable measured and these are summarised in Tables 33 and 34.

Table 33: Comparisons between hospitals A and B of biographical variables: analysis of variance summary table (2-tail tests)

Variable	Source	Degrees of Freedom	Sums of Squares	Mean Squares	F- ratio	р
age	between groups within groups total	1 132 133	263.03 9993.61 10256.63	263.03 75.71	3.47	ns
year qualified as SRN	between groups within groups total	1 129 130	291.93 7404.25 7696.18	291.93 57.40	5.09	<.05
tenure in present post	between groups within groups total		4500.85 182373.86 186874.71	4500.85 1381.62	3.26	ns

Table 34: Comparisons between hospital A and B of biographical variables: chi-squared summary table (2-tail tests)

Variable	Degrees of freedom	× 2	р
jobs prior to nursing	1	0.94	ns
nationality	1	4.97	<.05
number of GCE 'O' levels	3	6.64	ns
marital status	1	6.86	<.01
number of children	1	5.00	<.05
number of breaks in nursing	1	4.74	< .05
occupation of spouse	2	1.47	ns
professional qualifications other than SRN	1	0.60	ns
hours	1	1.46	ns
shift	2	0.96	ns
distance lives from work	2	0.82	ns
ease of travelling to work	1	2.07	ns

Of the 17 comparisons, only 5 were significantly different: the year qualified as SRN, nationality, marital status, number of children and number of breaks in nursing. It was therefore considered legitimate to combine the samples for analysis as well as to examine them separately.

Some of the biographical characteristics of the CNs have been compared with those reported in earlier studies. Over half (52%) the CNs were aged 20 to 29 years, and this supports the Report of the Committee on Senior Nursing Staff Structure (the 'Salmon' Report) (1966) which found that more female CNs were aged 20-29 years than any other 5 year age group. Few male CNs, however, were under 30 years, and most were aged 50 to 54 years. This reflects the inclusion in the 'Salmon' Report of psychiatric CNs, many of whom are men.

The age distribution of female scottish CNs and teachers reported by Hockey (1976) was older than that of the present study. 26% (27) of her sample were in the 20 to 29 age group, 34% (36) were aged 30 to 39 compared with 28% (38) in the present study, 22% (23) of Hockey's sample were aged 40 to 49 compared with 15% (20), and 19% (20) were 50 years or more compared with 5% (7). Hockey did not distinguish between the CNs and teachers on age and so the older age distribution might have been the result of the inclusion of teachers, or Scottish CNs might be generally older than English ones. The 'Salmon' Report, however, included Scotland with England and Wales in its sample, which suggests that it was the teachers in Hockey's sample who were responsible for the older distribution.

The number of male CNs in the present study was 8 (6%) which is roughly comparable to the 9% of all trained nurses at "ward level"

(i.e. CNs, staff nurses, enrolled nurses) in district general hospitals in West Yorkshire (Mercer and Mould, 1976).

The CNs' length of service in their current post is compared with the Yorkshire study's findings (Mercer and Mould, 1976) in Table 35.

Table 35: Length of service in current post in CNs in the present study compared with CNs in the Yorkshire study

Tenure (months)	CNs in present study	CNs in Yorkshire study
6 or less	23	12
7 - 12	13	15
13 - 24	19	22
25 - 48	21	21
49 - 84	15	12
85 +	10	18
Sample size .	. 134	618

Considerably more CNs in the present study compared with the Yorkshire study had been in their current post for 6 months or less, and fewer had tenure of more than 7 years. The mean length of service was 2.8 years (s = 3.1) in the present study which was much less than the mean of 4.0 years (s = 5.0) reported by Mercer and Mould. Their observation that the distribution was skewed towards short tenure was supported in the present study as illustrated by comparing the mean with the median statistics. In the present study, the median tenure for the total sample was 20 months, and in the Yorkshire study this was 2 years. Hockey (1976) found that 30 (29%) of the CNs and teachers in her sample had less than 12 months' tenure in their present post which was similar to the Yorkshire study (27%) but lower than the present study (36%).

Forty two percent of the CNs in the present study had had full-time jobs before starting to train as nurses. In her study of all grades of female nurses in hospitals and the community in Scotland, Hockey (1976) found that 78% of the 'early entrants' (aged under 19 years) had taken a pre-nursing job compared with 22% who had done 'nothing'. Thirty five percent of her 'early entrants' had done some kind of nursing work, such as auxiliary or nursery nursing, and most of the remainder had worked in shops or offices. In the present study, 17% of the CNs who had worked before nursing had done nursing-related jobs and 58% had been in clerical/secretarial or shop assistant jobs. The number of nursing-related jobs will be an underestimate, however, because the CNs who had been cadet nurses before starting SRN training did not include this as a pre-nursing job. The Social and Community Planning Research survey (1971) found that only 9% of the 1062 CNs from a sample which included all kinds of NHS hospital, had taken a nursing related job before starting nurse training, and 30% had been in clerical/secretarial or shop assistant work. Thirty seven percent of the CNs in the SCPR Survey had not worked before nursing compared with 58% in the present study.

Most (62%) of the CNs in the present study were married (or cohabiting, widowed, divorced, separated) compared with 48% of Hockey's (1976) sample of Scottish CNs and teachers. Thirty five percent of the present study's CNs had one or more children and of the total number (89) of children belonging to them, 22% were under 5 years old, 48% were aged between 5 and 14 years, and 29% were 15 years or older.

Seventy two percent of the CNs had had no breaks during their nursing careers, and 28% had taken at least one break. The primary reason for the break(s) was pregnancy. In the West Yorkshire study (Mercer & Mould, 1976),

66% of all the nurses sampled (CNs, staff nurses and enrolled nurses) had never left nursing since qualifying, and 34% had had one or more breaks from the NHS which lasted 6 months or more. Nearly half the nurses of all grades in Hockey's study had taken a break of three months or more, and the main reasons for these breaks, for married women, were marriage and pregnancy, and for single women, was to travel abroad. The main reason specified by the CNs in the present study for returning to nursing after a break was to make use of their nursing training (81%), able to leave the family (62%), wanted a stimulating job (57%), needed the money (43%), and they wanted independence (41%). In Hockey's study, the reasons given by all the nurses combined were that they were 'specifically motivated to return' (37%), they were able to return because they had come home from abroad or they could leave the family (33%), nursing in the NHS was better than getting bored at home (26%), and they needed the income (20%). Knowledge of the number and length of breaks in nursing taken by qualified nurses is of particular interest to manpower planners and forecasters. The Scottish survey of the movements of qualified hospital nursing staff (SHHD, 1975) concluded that the familiar picture of the young nurse leaving the service for a fairly well defined period of time to raise children, and then returning to nursing part-time, is oversimplified since the evidence suggests that the range of lengths of breaks is wide.

A rough idea of the socio-economic class and circumstances of the CNs in the present study was gained by classifying the occupation of the spouse of married CNs. The 51 (38%) unmarried CNs, therefore, were not included. Nearly two-thirds of the spouses came from managerial and professional occupations compared with 17% from non-manual (clerical, sales, security, catering etc.) and 19% from manual occupations.

In contrast, nearly half the CNs and teachers in Hockey's (1976) study had spouses in manual occupations, as had 67% of the married nurses (all grades) in the SCPR (1971) survey.

The present study showed that half (51%) the CNs had no professional qualifications other than SRN, 33% had one additional qualification, 12% had two, and 4% had three or more. In contrast, Hockey (1976) found that only 24% (23) of her female CNs had just a single nursing qualification, 48% (47) had one additional qualification, 23% (22) had two, and 3% (3) had three.

Most (76%) of the CNs in the present study worked a full-time 40-hour week compared with 24% who worked part-time. In the four hospitals in the West Yorkshire study (Mercer and Mould, 1976) which employed part-time CNs, staff nurses and enrolled nurses, 56% were employed full-time and 44% part-time. In Scotland, 87% of the female CNs and teachers worked full-time compared with 13% of part-timers (Hockey, 1976). This higher rate of full-timers in Hockey's survey compared with the present study is probably related to the lower proportion (48%) of married CNs and teachers in the Scottish sample compared with the 62% of CNs in the present study who were married.

Travelling to work was relatively easy for 90% of the CNs and 59% lived within 5 miles of their hospital, 24% lived 5 to 9 miles from it, and 17% lived 10 or more miles away. Both Hockey (1976) and the SCPR survey (1971) recorded the time taken to travel to work rather than the mileage. Fifty six percent of Hockey's CNs and teachers took 15 minutes or less, 26% took 16 to 30 minutes, and 18% took more than half an hour.

Interestingly, these proportions are very similar to those relating to miles in the present study. The SCPR study did not distinguish between

the grades of nurse or the work setting (hospital or community), but found that 36% took 20 minutes or less, 18% took 21 to 30 minutes, and 26% took over half an hour. All those in the SCPR study who travelled to work were asked about the quality of the bus service, irrespective of whether or not they used it. Forty percent of the sample thought the bus service quite or very good, but 53% thought it not very good or poor. There was some criticism in the present study, of the bus service to both hospitals on Sundays and to hospital A on week days as well. The Report of the Committee on Nursing (1972) also examined public transport facilities and noted that all hospital authorities could approve assisted travel schemes if necessary. In fact, the Report emphasised the '... urgent need for expansion of this provision to meet the needs of all grades, particularly in those areas where public transport arrangements do not fit working hours.' (p. 182).

The characteristics of the sample of CNs from hospitals A and B can be summarised by drawing a profile of the 'average' CN. It should be appreciated, however, that this is of limited value because the variation between individuals working in this post is considerable, some being young, relatively inexperienced and potentially mobile, and others being older, experienced and settled in their jobs. Bearing in mind, therefore, the range of individual differences, the 'average' CN was about 29 years old, female and British. She qualified in 1970, having obtained about 4 '0' levels at school, and had given the hospital approximately 20 months' service in her present post. She probably had not had a full-time job between leaving school and starting her nursing training. She was married to a managerial or professional worker and if she worked in hospital B, she had no children nor had she had any breaks in her nursing career. However, if she worked in

hospital A, she was more likely to have one or more children and to have had breaks in her career. She was a senior CN working full-time on day duty, and had no professional qualifications other than state registration. She lived less than 5 miles away from the hospital and found travelling to work relatively easy.

In the following section, the wastage and absence rates which emerged over four years are outlined and discussed with reference to earlier work.

4.2 Wastage and Absence in Two Hospitals over Four Years

Comparisons were made of wastage and absence rates between five general hospitals in the West Midlands. The comparisons were restricted to one year only, 1974, and the findings have been detailed in The Manpower Picture, p 5. Two of these hospitals, A and B, were those in the main study, and wastage and absence in CNs over the years 1974 to 1977 are presented here. The aim was to establish whether or not wastage had decreased since 1974 as had been suggested, and the relationship, if any, to it of absence.

4.2.1 Wastage

Table 36 shows the wastage and stability rates in hospitals A and B for 1974 to 1977, together with the data used to compute the indices. In both hospitals, wastage decreased between 1974 and 1976 and rose slightly in 1977. For each year the rate was higher in hospital B (ranging from 23 - 36%) than hospital A (13 - 28%), but comparisons between the hospitals of the number of leavers in the four years showed that the differences were not significant ($\chi^2 = 1.59$, df = 3). The number of CNs who left during each of the four years was examined in each hospital separately to see if the differences observed between the years was significant, but in both hospitals this was not so $(A: \chi^2 = 4.94, df = 3, 1-tail test; B: \chi^2 = 4.55, df = 3, 1-tail test).$ However, when paired comparisons were made between the years, one comparison in each hospital showed a significant difference; that is, the number of CNs who left in 1976 was significantly less than in 1974 (hospital A: χ^2 = 2.88, df = 1, p<.05, 1-tail test; hospital B: χ^2 = 2.95, df = 1, p<.05, 1-tail test). The stability rates in each hospital were 65% or higher which indicates that, even if rather more

Wastage and stability of CNs in hospitals A and B, 1974 - 1977 Table 36.

		Hospital	4			Hospital	al B	
	1974	1975	1976	1977	1974	1975	1976	1977
number employed at beginning of period	44	34	40	39	98	94	100	109
entrants during period i. from outside ii. SN ² → CN internal promotions	15	47	3	4 7	20	21	18	24 16
P	26	16	4	11	32	34	33	40
leavers during period i. left hospital/division ii. transfer/promotion within hospital/division	13	10	5	9 1.	36	27	24	26
S	14	10	5	7	36	28	24	28
number employed with 12 months' service or more (in present post) at end of period	30	24	35	32	29	99	89	81
labour force at end of period	56	40	39	43	94	100	109	121
wastage %	28.00	27.03	12.66	17.07	35.64	28.86	22.97	24.35
stability % $\frac{a-c}{a} \times 100$	68.18	70.59	87.50	82.05	65.05	70.21	68.00	74.31

1 - includes CNs working in the geriatric wards of hospital A and the theatres of a neighbouring hospital, but exact numbers unknown.

2 - SN - staff nurse.

CNs left their jobs in some years, those who stayed provided a substantial core of stable CNs since they had been in their jobs for at least a year.

4.2.2 Absence

Tables 37 and 38 show the number of absence spells of specified duration taken in each hospital over the four years 1974 - 1977.

About half the spells taken in each hospital in each year were of one day's duration, and the proportion of short-term absence spells

(1, 2 and 3 day spells) in each year in both hospitals was over 70%.

Table 37: Frequency of absence spells of specified duration in hospital A, 1974-1977

Absence				Hospi	ital A			
duration	1	974	1	975	1	976 .	1	977
(days)	freq	%	freq	%	freq	%	freq	%
1	36	53.7	47	47.0	41	46.6	38	48.1
2	9	13.4	21	21.0	24	27.3	19	24.1
3	3	4.5	4	4.0	3	3.4	9	11.4
4 - 7	7	10.5	11	11.0	10	11.4	6	7.6
8 - 14	6	9.0	10	10.0	5	5.7	3	3.8
15 +	6	9.0	7	7.0	5	5.7	4	5.1
Total	67		100		88		79	

The total number of absence spells in each of the four years was compared between hospitals and revealed no significant difference (χ^2 = 2.52, df = 3). However, when comparisons were made between the hospitals of one-day, two-day, and total absence spells, significant

Table 38: Frequency of absence spells of specified duration in hospital B, 1974-1977

	Hospital B								
Absence duration	1	1974		1975		1976		977	
(days)	freq	%	freq	%	freq	%	freq	%	
1	110	48.5	161	52.6	164	54.1	104	49.5	
2	51	22.5	54	17.7	56	18.5	46	21.9	
3	.11	4.9	21	6.9	16	5.3	15	7.1	
4 - 7	23	10.1	36	11.7	36	11.9	12	5.7	
8 - 14	14	6.2	14	4.6	19	6.3	18	8.6	
15 +	18	7.9	20	6.5	12	4.0	15	7.1	
Total	227		306		303		210		

differences were found in 1974. Fewer two-day, one and two-day and total spells were taken by CNs in hospital A and more in hospital B than would be expected by chance (Table 39).

Table 39: Comparisons between hospitals A and B of absence frequencies of specified duration (x2, 2-tail tests)

Duration of absence spells	1974	1975	1976	1977
1 day	ns	ns	ns	ns
2 day	p < .01	ns	ns	ns
1 + 2 days	p < .01	ns	ns	ns
total spells	p < .01	ns	ns	ns

Taking each hospital separately, calculations were made to establish whether the differences observed in the total number of absence spells taken over the four years were significant. In hospital A the 2-tail test just failed to reach significance ($\chi^2 = 6.90$, df = 3, p < .10)

whereas it was highly significant in hospital B (χ^2 = 39.55, df = 3, p <.001). Further examination between years of short-term and total absence spells in each hospital yielded the results shown in Table 40.

Table 40: Comparisons between years of absence spells of specified duration in hospitals A and B $(\chi^2, 2$ -tail tests)

Hospital	Duration	1974	1974	1974	1975	1975	1976
	of absence	with	with	with	with	with	with
	spells	1975	1976	1977	1976	1977	1977
А	1 day	ns	ns	ns	ns	ns	ns
	2 days	p<.05	p<.01	ns	ns	ns	ns
	1 + 2 days total spells	ns p<.05	p<.05	ns ns	ns ns	ns ns	ns ns
В	1 day 2 days 1 + 2 days total spells	ns ns ns	ns ns ns	p<.01 p<.02 p<.001 p<.001	ns ns ns	p<.001 ns p<.001 p<.001	ns p<.001

In those comparisons that were significantly different in Hospital A there were fewer absence spells in the earlier year and more in the later year than would be expected by chance, but in hospital B the reverse was true, there being fewer spells in the later year and more in the earlier year than would be expected.

The number of absence spells per CN per year is shown in Table 41.

Table 41: Number of absence spells per CN per year in hospitals

A and B			1974	1975	1976	1977
Number of absence spells:	hospital A hospital B		67 227	100 306	88 303	79 210
Average number of staff in post:	hospital A hospital B	1	45.0 101.0	37.0 97.0	39.5 104.5	41.0 115.0
Number of spells per CN:	hospital A hospital B		1.5	2.7	2.2	1.9

In both hospitals the trend was similar, rising to the highest level in 1975 and falling over the next two years. The mean number of spells per CN per year was 2.1 in hospital A and 2.5 in hospital B.

4.2.3 The relationship between absence and wastage

The absence frequency and wastage rates for 1974 to 1977 are shown in Table 42 and in Figure 8.

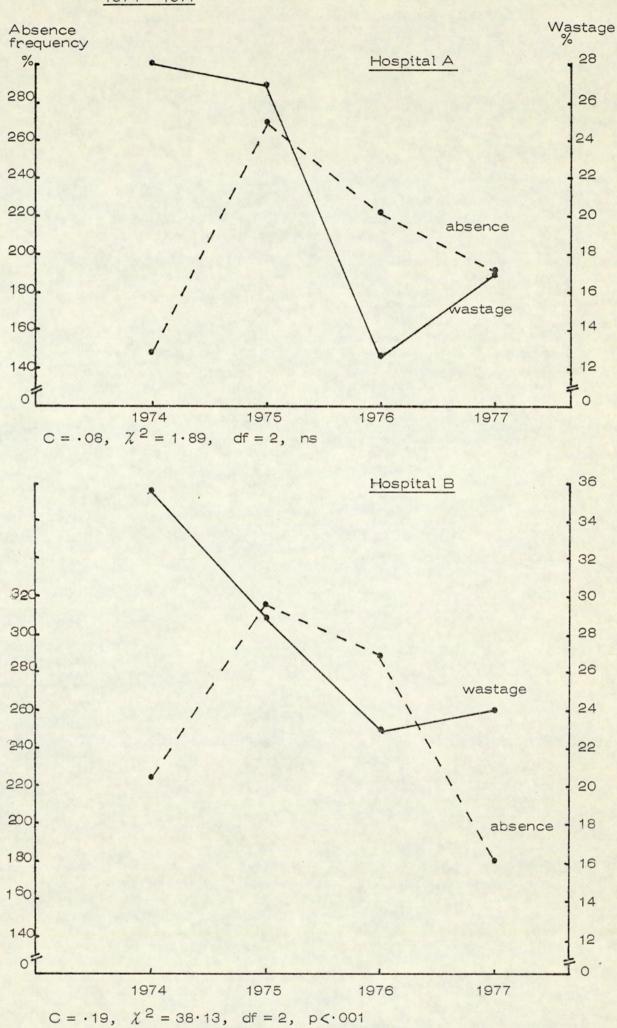
Table 42: Absence and wastage rates in CNs in two hospitals, 1974-1977

	absence f	requency %	wastage %		
	hosp	ital	hospital		
	А	В	А	В	
1974	149	225	28.0	35.6	
1975	270	316	27.0	28.9	
1976	223	290	12.7	23.0	
1977	193	183	17.1	24.0	

absence frequency % =
$$\frac{\text{no. spells started in period}}{\text{average number employed in period}} \times \frac{100}{\text{average number employed in period}}$$
wastage % = $\frac{\text{no. leavers in period}}{\text{average number employed in period}} \times \frac{100}{\text{average number employed in period}}$

In 1974, wastage was relatively high in both hospitals (A = 28%, B = 36%) and absence was relatively low (A = 149%, B = 225%). In 1975, wastage had decreased slightly in hospital A (27%) but had dropped considerably in hospital B (29%), and absence increased sharply in both hospitals (A = 270%, B = 316%). In 1976, there was a large drop in wastage in hospital A (13%) and the decreasing trend continued in hospital B (23%),

Figure 8. Absence and wastage rates in CNs in two hospitals, 1974 - 1977



but absence also dropped in both hospitals (A = 223%, B = 290%). In 1977, wastage rose somewhat in hospital A (17%) and rose slightly in hospital B (24%), and absence continued to drop in both hospitals (A = 193%, B = 183%), the decrease being particularly large in hospital B.

It is difficult to see from these results whether absence and wastage were associated, and if so, the direction of the relationship. The 1974 figures suggested a negative relationship in both hospitals, in that absence was high when wastage was low but the trend was much less clear in subsequent years. The contingency coefficient (Siegel, 1956) was used to examine the relationship between the number of absence spells taken by leavers and stayers over three years (1975 to 1977). 1974 could not be included because the information required to categorise the total number of absence spells taken by leavers and stayers was not available. A difficulty arose in that those CNs who left in a specified year and those who joined the staff during the year had shorter tenure than those who had been in post all year. Consequently, the number of opportunities for going absent was fewer for the leavers and the joiners compared with the longer term stayers. This was resolved by estimating how many absence spells the CN would have taken had she been exposed to the job for the whole year. That is, her absence spells were corrected for tenure with the following formula:

The corrected number of absence spells for leavers and stayers in both hospitals are detailed in Table 43.

Table 43: Number of absence spells (corrected) taken by leavers and stayers in hospitals A and B, 1975 - 1977

		number of absence spells						
	1.975		1976		1977			
	А	В	А	В	А	В		
leavers during year	30.91	161.56	24.95	56.96	14.86	78.66		
stayers: joiners during year: in post during the whole of the specified year:	34.88 65	52 . 76	6.00	45.47 235	7.20 68	20.63		
total	130.79	438.32	106.95	337.43	90.06	247.29		

Using the contingency coefficient, the correlation between number of absence spells in leavers and stayers during 1975 - 1977 approached zero in hospital A (C = 0.08, χ^2 = 1.89, df = 2, ns). In hospital B the correlation was slightly higher (C = 0.19) but this was highly significant (χ^2 = 38.13, df = 2, p<.001). Therefore, although the difference between absence spells taken by leavers and stayers in hospital B over the three years was highly significant, the correlation was low because the relationship was a non-linear one (see Tables 44 and 45 for the observed and expected frequencies of absence spells in hospitals A and B).

Table 44: Number of observed and expected absence spells (corrected for tenure) in leavers and stayers in hospital A, 1975-1977

.,	abse	absence spells (corrected)				
Year	leavers stayers		Total			
A Report	observed	expected	observed	expected		
1975	30.91	28.22	99.88	102.57	130.79	
1976	24.95	23.07	82.00	83.88	106.95	
1977	14.86	19.43	75.20	70.63	90.06	

Table 45: Number of observed and expected absence spells (corrected for tenure) in leavers and stayers in hospital B, 1975 - 1977

	abs	absence spells (corrected)				
Year	leavers		stayers		Total	
	observed	expected	observed	expected		
1975	161.56	127.33	276.76	310.99	438.32	
1976	56.96	98.02	280.47	239.41	337.43	
1977	78.66	71.83	168.63	175.46	247.29	

In hospital B more absence spells were taken by leavers and fewer by stayers in 1975 than expected by chance, fewer spells taken by leavers and more by stayers in 1976 than expected, and in 1977 the number of spells taken by both leavers and stayers was very close to chance expectation. In hospital A the observed and expected frequencies were similar in each year.

4.2.4 Summary and discussion

Wastage in the CNs was lower in each year examined in hospital A (range 13 - 28%) than in hospital B (range 23 - 36%), although the difference between the hospitals was not significant. The wastage rate in 1976 was significantly less than in 1974 in both hospitals, the only paired year comparison that showed a significant difference. The rates fell between 1974 and 1976 but increased slightly in 1977, a trend which has apparently followed the economic recession and depressed job market.

It is difficult to make comparisons with other research on wastage in trained nurses in general and CNs in particular because of the

paucity of both previous research and comparable methods of calculating wastage (Redfern, 1978). The Report of the Committee on Nursing (1972) concluded that CNs represented a stable core of nurses, since 71% had '...been in continuous service with their present hospital or hospital group since before 1968.' (para. 422).

Depending on when that information was collected, the suggestion is that most CNs had been employed by the same employer continuously for about three years, but whether they remained in the same job, or moved about within the same hospital group, is not clear.

The Scottish survey (SHHD, 1975), which included qualified nurses from all NHS hospitals in Scotland (N = 21, 286), found that, during the year July 1972 to June 1973, the wastage rate was about 33%, which consisted of 20% who were 'losses' from the Scottish service, and 14% who were 'movers out' to other Scottish health service hospitals.

Since staff nurses are a mobile group and so likely to have contributed to most of the Scottish wastage rate, it is likely that the rate of leaving of CNs in the present study was higher than the rate of their counterparts in Scotland. Of all the Scottish trained nurses who had left their jobs, 36% had completed two years' service, and less than half had completed 18 months' service.

A local study (Buckley, personal communication) was carried out in 1973 in a hospital group in the West Midlands. The wastage rate of all nurses except learners was calculated by grade of nurse during a period of six months. Eleven out of 76 CNs left, a wastage rate of 14%, 15 staff nurses and midwives left (33%), and 28 enrolled nurses left (28%). Although the length of time covered in Buckley's study was only six months, the results are of interest to the present study

because hospital A was in Buckley's hospital group, and the wastage rate of 14% in CNs referred to those working in the general nursing division only. If the 14% were doubled, albeit tentatively, the wastage rate is identical to the 28% calculated in hospital A for 1974. This lends credence to the validity of the 1974 figure in hospital A, because the exact number of CNs in post in the general nursing division was uncertain.

The most useful piece of research for comparison with the present study, is the survey of qualified 'ward based' nurses in 14 district general hospitals in West Yorkshire (Mercer and Mould, 1976; Mercer and Long, 1977). Labour turnover in CNs, staff nurses and enrolled nurses was studied during 1975/76, and several turnover measures were used to highlight the limited value of the crude wastage (or separation) rate. This rate does not account for tenure and therefore, stability. During the year May 1975 to April 1976, the authors reported a crude wastage rate, for all 14 hospitals combined, of 16% for CNs, 24% for enrolled nurses, and 39% for staff nurses. The equivalent wastage rates in the hospitals in the present study in 1975 were 27% in hospital A and 29% in hospital B, both of which fell at the upper limit of the range found in West Yorkshire's CNs (7% to 28%).

The Yorkshire study examined turnover rather than wastage only, that is, accessions as well as separations, and it focussed more detailed attention on one large district general hospital and calculated turnover there for the five years, 1971 to 1975. Table 46 shows the accession and separation rates in CNs over the 5 years.

Table 46: Crude accession and separation rates in CNs in a hospital in West Yorkshire 1971 to 1975 (from Mercer & Mould, 1976)

Year	Accession rate (%)	Separation rate (%)
1971	12	19
1972	11	17
1973	13	18
1974	23	23
1975	5	19

The separation rate remained fairly stable in spite of the fluctuating accession rate in 1974 and 1975. The 1974 accession figure of 23% is likely to have resulted from the NHS reorganization and the Halsbury pay rise, both of which occurred in that year, and the emergence of the new grade of junior CN. By 1975, the accession rate had plummetted to 5% which probably reflected the economic recession. The separation rate did not decrease over the more recent years as was expected by the researchers and strongly believed by the nursing administrators with whom they had discussions. It may be, however, that the largest drop was yet to come, which was borne out to some extent in the present study. Although the 1974 and 1975 wastage rates in hospital A and hospital B were higher than the 23% and 19% reported by Mercer and Mould, they dropped considerably in 1976 and increased marginally in 1977 (Table 47).

Table 47: Crude wastage rates (%) in CNs in hospitals A and B 1974 to 1977

Year	Hospital A	Hospital B	
1974	28	36	
1975	27	29	
1976	13	23	
1977	17	24	

Although only the crude wastage rate was employed in the present study, it was complemented by a stability rate which took account of length of service, and even though the wastage rates in both hospitals fluctuated considerably over the years, at no time did stability fall below 65%. The range in hospital A was 68% to 88%, and in hospital B 65% to 74%.

In the Yorkshire study, the authors calculated stability/instability rates from cohorts of new entrants which used as their denominators, the number of nurses employed at the time of entry. They found that the instability rate of a cohort of 20 CNs drawn from 8 hospitals was only 0.5% over the period January 1975 to August 1976. The stability rate was, therefore, 99.5%. In comparison, the instability rate for staff nurses was 4.6% and for enrolled nurses, 2.1%. Cohort measures such as this take account of length of service and so enable any 'induction crisis' (eg Hill and Trist, 1955) to be identified. Mercer and Mould found a leaving peak for staff nurses and enrolled nurses after about six months' tenure which may be evidence of an 'induction crisis', but this pattern was not evident in CNs. Instead, they waited for the second peak which occurred in all the grades, after about one year in the job.

The length of time available in the Yorkshire study prevented the researchers following their cohorts over a sufficiently long time for the 'half-life', or the length of time which passes before the cohort is reduced in size by one half, to be recorded. They did, however, follow cohorts of CNs for as long as possible, which was 18 months in the earliest cohort, and they found no straight forward linear relationship

^{*} number employed at end of period with 12 months' service or more in their present post expressed as a percentage of the number employed at the beginning of the period.

between tenure and wastage. Those CNs with the shortest tenure did not have the highest wastage, since this occurred in the group who had been in post for a year. The lowest wastage was in the cohort which followed them, that is, those with tenure of about 9 months. Another wastage measure used, the 'force of separation rate' was computed by dividing the number of leavers with a specified length of service by all nurses who had the same tenure. This indicated the probability that a nurse with a particular tenure would leave soon. In CNs, the earlier picture of a relatively high likelihood of leaving in the second year, emerged and this was supported in the present study, since the median length of service in the total sample was 20 months. The wastage rate in the Yorkshire survey dropped to a low rate between 3 and about 6 years' service, and increased to a second peak at about 8 years, followed by another drop. It was interesting that wastage in CNs and staff nurses continued to fall in those with more than 10 years' service, but in the enrolled nurses, the trend was markedly upward. Perhaps at this time enrolled nurses experience the disadvantages of their training in terms of promotion prospects.

It is difficult to conclude from the present study and from previous research, what level of wastage in CNs is an optimum. It is probably unwise for nursing administrators to attempt to identify a national optimum because local circumstances will ensure that levels for individual hospitals and nursing divisions do vary. In hospital A, the nursing administrators were quite emphatic when questioned in 1976, that the rate at which their CNs were then leaving was too low, whereas it had been too high in earlier years. This suggests that a rate somewhere between 15% and 20% per year would be an optimum level for hospital A. In hospital B, CN wastage was regarded by the administrators as too high before 1976, but they seemed fairly happy

with the position in 1976 and 1977. It may be, then, that they could tolerate, and would indeed prefer, an optimum rate which was higher than the suggested optimum at hospital A, that is, one of 20% to 25% per year.

The number of absence spells per CN per year during 1974 to 1977 ranged from 1.5 to 2.7 in hospital A and 1.8 to 3.2 in hospital B, and the mean values were 2.1 and 2.5 respectively. These mean values are almost identical to the mean number of spells taken in 1975 by CNs in a District General Hospital in East Sussex, which was 2.0 (Kempner, 1976), although the actual rates in 1975 were somewhat higher in the present study (2.7 in hospital A and 3.2 in hospital B). Barr (1967) did not distinguish between different grades of trained nurses, but reported an average frequency rate of absence spells per person per year (1961 to 1964) to be 1.01 in all full-time trained nurses, and 1.25 in all qualified part-timers. His sample consisted of 7,000 nurses in the 102 hospitals which comprised the then Oxford Regional Hospital Board. Since Barr's sample included staff nurses and enrolled nurses whose absence rates were probably higher than the CNs', the implication is that the frequency of absence spells has increased over the ten or so years since his study, in CNs as well as in industrial workers (Taylor, 1967; Froggatt, 1970; Jones, 1971; Clark, 1975).

In the present study, roughly half the number of spells taken by the CNs in each hospital per year were of one day's duration, and short-term absence (1, 2 and 3 day spells) accounted for over 70% of the total number of spells. These findings confirm many earlier reports: Kempner (1976) showed that in 1975 48% of the total number of absence spells in CNs were of one day's duration, and 71% lasted less than

four days; Cormack (1973) reported that in psychiatric CNs, one day spells accounted for 46% of all incidents; and Clark (1975) found that, in her total sample of nurses (learners, untrained and trained), two-thirds of all short-term absences (1, 2 and 3 day spells) were of one day's duration, and 72% of the total number of spells were classified as short-term absence.

Placing these observations in a broader context, most research on nurse absence has reported an inverse relationship between grade of nurse and absence rate, although the relative positions of enrolled nurses, student nurses and auxiliaries in the rank order has varied (for a review of the literature, see Redfern, 1978). In most of the previous work on absence in nurses a time lost measure has been used rather than frequency of spells (Cormack, 1973; Nelson, 1974; Rushworth, 1975; Sadik, 1976), but in those that did use a frequency rate, all have reported a lower level of absence in CNs or registered nurses compared with enrolled, learner and untrained nurses (Barr, 1967; Clark, 1975; Kempner, 1976).

In conclusion, the results do provide evidence that, although fluctuations occurred from year to year, the number of absence spells, particularly short term spells, taken by CNs has increased much as it has done in other occupational groups (Redfern, 1978). This study was not concerned with the amount of time lost by CNs, which includes the length of each absence spell and is weighted towards long spells of certificated sickness. There is evidence that, although the frequency of absence spells in CNs is lower than in other grades of 'ward-based' nurses, the duration of spells is longest in the CNs (Kempner, 1976). The present study has been particularly concerned with short-term absence which may have a smaller sickness component,

since it is this kind of absence which is most likely to be related to satisfaction with and motivation to work. Previous research has, however, shown that the link may be tenuous (Redfern, 1978). The relationship of absence to other measures included in this study is reported elsewhere (p 267).

When absence and wastage were compared over the four years in each hospital, the relationship was zero in hospital A and not a linear one in hospital B, since leavers took more absence spells than stayers in 1975 and fewer spells than stayers in 1976 than would be expected by chance. There does not seem, therefore, much evidence for the suggestion that the economic recession and apparent lack of alternative employment have forced CNs to withdraw from their jobs temporarily through absence than permanently by leaving altogether. Absence in CNs who left their jobs in the 18 months following questionnaire administration was compared with the number of spells taken by a 'matched' sample of CNs who stayed in their jobs, and these results are detailed below (p 323). Although it was found that the CNs who left hospital A had taken significantly more absence spells than those who had not left, the differences between the groups were not significant in hospital B, although in the combined sample, one absence measure produced a difference which approached significance (p < .06). This then marginally supports the evidence that leavers have more absence than stayers (Lyons, 1972; Porter & Steers, 1973; Nicholson et al, 1977), but it does not provide sufficient evidence to support either of the theoretical relationships which have been advanced and examined by a number of authors (Trist et al., 1950; Burke & Wilcox, 1972; Lyons, 1972; Porter and Steers, 1973; Nelson, 1974; Hawk, 1976; Nicholson et al, 1977). One of these relationships suggests that

absence is an alternative to wastage and will be high when wastage is low. The other specifies absence as forming part of a withdrawal continuum which culminates in wastage, and so absence is a temporary form of wastage, and the individual with a high rate of absence will eventually leave. It is perhaps more likely that, in nurses who have reached the seniority of CNs, their levels of absence and wastage are totally unrelated and whether they choose to stay or leave will depend on the perceived opportunity for alternative employment and the attractiveness of those jobs relative to the ones held.

4.3 Scale Score Distributions and Comparisons Between the Hospitals

The score distributions of the items which comprised the scales and the total scale scores are summarised here, and differences between the two hospitals have been examined. Details of the raw data are provided in Appendix 10. Following each section (satisfaction, occupational needs, role stress, propensity to leave), the results have been discussed with reference to the findings from other research. In the section on propensity to leave, the relationship of biographical variables to leaving intent and absence have been described.

4.3.1 Job satisfaction

Global satisfaction

Two questions comprised this index, 'On the whole, what do you think of this hospital as a place to work?' and 'Considering your job as a whole, how well do you like it?'. The distribution of item and index scores for each hospital and the combined sample are shown in Appendix 10 (Table 137).

The majority of CNs in both hospitals thought their hospital was a good place to work in but nearly a third (30%) in hospital A thought it only a fair place compared with less than a quarter (22%) who thought this in hospital B. To compare scores between the hospitals, the 'poor' and 'fair' categories were combined so deriving a 2 x 2 contingency table because two (33%) of the expected frequencies were less than 5. The comparison revealed a statistically significant difference between the

hospitals in that a greater proportion of CNs than expected by chance in hospital B found the hospital a good or excellent place to work $(\chi^2 = 12.61, df = 1, p < .001)$.

Over half the CNs in both hospitals liked their jobs very much, and a third quite well. Very few said they did not like the job much and no-one said that they did not like the job at all. Combining the 'don't like it much' and 'like some things, dislike others' categories, the difference between the hospitals was not significant ($\chi^2 = 1.00$, df = 2).

The global satisfaction index revealed different distributions in each hospital. Over half (54%) the CNs in hospital B scored in the 'high' satisfaction category, whereas only a quarter (24%) in bospital A scored likewise. Most (70%) of hospital A's CNs were moderately satisfied. The mean global satisfaction score was 8.73 (s = 1.26) in hospital A and 9.48 (s = 1.49) in hospital B from a possible score range of 2 to 12. The difference between the hospitals was significant (F = 7.34, p < .01), suggesting that satisfaction was rather lower in hospital A than B.

Intrinsic satisfaction

Table 138 (Appendix 10) shows the score distributions for each item comprising the intrinsic satisfaction scale. As was predicted (p 48), a 'ceiling effect' emerged with all the items in that the distributions were skewed towards the satisfied end of the response scale. Taking the combined sample, the greatest proportion (98%) of satisfied responses was to 'social service', and the smallest proportion (66%) was to 'independence'. Besides 'social service', the other items which elicited the highest satisfaction were 'security', 'ability utilization',

'achievement', 'variety' and 'responsibility'.

The proportion of dissatisfied responses was small, the greatest (11%) in the combined sample being to 'creativity' followed by 'independence', 'activity' and 'responsibility'. In hospital A, 19% of the CNs were dissatisfied with 'independence', and progressively smaller dissatisfied responses were given to 'responsibility', 'creativity' and 'achievement'. In hospital B 'activity' and 'creativity' elicited dissatisfied responses in 10% of the CNs, followed by 'variety' and 'independence'.

Using the chi-squared 2-tail test with 2 degrees of freedom, none of the differences observed between the hospitals was significant. For all items some of the response categories had to be combined because many of the expected frequencies in the 'dissatisfied' and 'neither' categories were less than 5. In some cases (items 1, 2 and 16) categories 1 and 2, and 4 and 5, were combined leaving the neutral category separate, so that dissatisfied responses could be compared with satisfied, but for the others the neutral category (3) had to be combined with 1 and 2, and categories 4 and 5 were kept separate. In spite of combining categories, the expected frequencies in two (33%) cells was less than 5 for item 9 (social service). Fisher's exact probability test (Siegel, 1956) would have been an appropriate alternative but since the distribution of scores of this item was so similar in both hospitals the difference would still have been insignificant. Consequently the laborious computation necessary to calculate Fisher's test was not made. Although there were no significant differences between the hospitals on the intrinsic satisfaction items, with two exceptions, the proportion of satisfied responses to every item was greater in hospital B than hospital A. The exceptions were 'activity' and 'authority'.

Turning to the intrinsic satisfaction index, approximately half the responses in both hospitals (A = 49%, B = 52%) were in the highly satisfied category (scoring 49-58), and most of the remainder (A = 41%, B = 46%) were moderately satisfied (scoring 38-48). Only 11% (4) in hospital A and 2% (2) in hospital B scored in the lowest third. Unfortunately, no appropriate norms are available with which to compare these scores although a tentative comparison is made below (p $I \neq 2$) between the general satisfaction scale scores and American norms. The mean intrinsic satisfaction score was 47.16 (s = 6.31) in hospital A, 48.36 (s = 4.58) in hospital B and 48.02 (s = 5.13) in the combined sample. Using a simple one-way analysis of variance test, the difference between the hospitals was not significant (F = 1.46).

Extrinsic satisfaction

Table139 in Appendix 10 shows the score distributions for each item comprising the extrinsic satisfaction scale. Although most of the responses were in the 'satisfied' categories, the 'ceiling effect' was less noticeable than in the intrinsic satisfaction score distributions. The proportion of satisfied responses ranged from 66% to 43% in the combined sample and the greatest number of CNs were satisfied with 'supervision-technical' followed by 'supervision-human relations', 'compensation' and 'advancement' in that order. The proportion of dissatisfied responses was in the minority, but for all the extrinsic satisfaction items it was greater than expressed dissatisfaction of the intrinsic satisfaction items. The largest proportion was in hospital A, where a third (32%) of the sample were dissatisfied with the hospital policies and practices. In the combined sample the greatest proportion (21%) was in response to 'hospital policies and practices' followed by 'supervision -human relations', 'recognition' and 'compensation'.

Chi-squared tests were computed on the score frequencies in each hospital, and for each item response categories 1 and 2, and 4 and 5, were combined. None of the differences was significant although the proportion of dissatisfied responses to each item was greater in hospital A compared with hospital B. The proportion of satisfied responses to every item except two ('compensation' and 'advancement') was higher in hospital B than A.

Splitting the actual score range on the extrinsic satisfaction scale into three categories, the scores were divided fairly evenly between medium and high satisfaction. In hospital A 43% of CNs were very satisfied and 41% moderately satisfied, and in hospital B these proportions were 39% and 54% respectively. Six CNs (16%) scored in the lowest third in hospital A compared with 7 (7%) in hospital B. The one-way analysis of variance test showed no significant difference between the hospitals (F = 3.59).

General satisfaction

The general satisfaction scale consisted of all the items in the intrinsic and extrinsic scales and two additional items, 'working conditions' and 'co-workers'. These and the general satisfaction index score distributions are shown in Table 140 in Appendix 10.

Over half the CNs (hospital A = 51%, B = 64%) were satisfied with their working conditions but a substantial minority were not satisfied (A = 27%, B = 18%). Over 70% in both hospitals were satisfied with their colleague relations (item 18), and the differences between the hospitals were not significant for either of these items.

The general satisfaction index scores revealed half the CNs in both hospitals to be moderately satisfied (A = 49%, B = 52%), more than one-third to be very satisfied (A = 38%, B = 47%) and only a few to be in the lowest third (A = 14%, B = 1%). In spite of the lower scores on most of the items in hospital A, the difference between hospitals on the general satisfaction index was not significant (F = 2.59). It is difficult to interpret the meaning of the satisfaction scores without reference to an appropriate norm group. No British norms exist for nurses, but the Minnesota research team (Weiss et al., 1967) has developed a set of norms for American head nurses (equivalent to British CNs). Although a cross-cultural comparison of this nature is not ideal, in view of the lack of British norm data an extremely tentative comparison of the general satisfaction scores is presented here (Table 48).

Table 48: Frequency of general satisfaction scores falling within specified USA percentile score ranges, hospitals A, B and the combined sample

Percentile	Hospitals						
score	A + B		А		A + B A B		В
	freq	%	freq	%	freq	%	
25 or less	36	27.3	9	24.3	27	28.4	
26 - 74	46	34.8	16	43.2	30	31.6	
75 or more	50	37.9	12	32.4	38	40.0	
	132		37		95		

The percentile score indicates the percentage of nurses in the norm group with scores equal to or lower than the individual's raw score. A percentile score of 25 or less usually indicates a low level of satisfaction, one of 75 or more a high level, and midway percentile scores (26-74) average satisfaction

(Weiss et al., 1967). The data in Table 48 suggest that more than one quarter of the CNs were not satisfied with their jobs, over one third were very satisfied, and the remainder had an average level of satisfaction. Tables 49 and 50 summarise the results by placing them in rank order of satisfaction and dissatisfaction for each hospital and the combined sample.

Table 49: MSQ items placed in rank order according to the number of CNs who expressed satisfaction (score 4 or 5) with them

MSQ item	Rank order	* in ho	spital
	A + B	А	В
9. social service	- 1	1	1
8. security	2	5	3
11. ability utilization	2 3	3.5	4
20. achievement	4	3.5	2
3. variety	5	6	6
15. responsibility	6 7	9	5
1. activity		2	9
7. moral values	8	7	7.5
18. co-workers	9	9	10
4. social status	10	11.5	7.5
16. creativity	11	15	11
10. authority	12	9	13
2. independence	13.5	16	14
6. supervision - technical	13.5	14	15.5
5. supervision - human relations	15	18.5	12
13. compensation	16	11.5	15.5
14. advancement	17	13	19
17. working conditions	18	18.5	17
19. recognition	19	17	18
12. hospital policies & practices	20	20	20

^{* 1 =} greatest number of satisfied responses

^{20 =} smallest number of satisfied responses

Table 50: MSQ items placed in rank order according to the number of CNs who expressed dissatisfaction (score 1 or 2) with them

MSQ item	Rank orde	r* in hos	pital
May reem	A + B	A	В
12. hospital policies & practices	1	1	3
5. supervision - human relations	2.5	4	1
17. working conditions	2.5	2	2
19. recognition	4	4	4.5
13. compensation	5	6.5	4.5
14. advancement	6	6.5	6
6. supervision - technical	7	4	7
16. creativity	8	9.5	8.5
2. independence	9	8	12
18. co-workers	10	11	10
1. activity	11.5	16	8.5
15. responsibility	11.5	9.5	14
3. variety	13.5	13.5	11
20. achievement	13.5	12	14
11. ability utilization	15	13.5	14
7. moral values	16	16	16.5
10. authority	17	16	19
4. social status	18.5	19.5	16.5
8. security	18.5	18	19
9. social service	20	19.5	19

^{* 1 =} greatest number of dissatisfied responses

Although the rank order of items in both tables varied slightly between the hospitals, the ranks in the combined sample demonstrate that the intrinsic satisfaction items occupied the most satisfied positions and the extrinsic satisfaction items the most dissatisfied positions. Of the two items which were not classified as either intrinsic or extrinsic, 'co-workers' appeared amongst the intrinsic

^{20 =} smallest number of dissatisfied responses

items, being ranked 9th in Table 49 and 10th in Table 18, and 'working conditions' appeared with the extrinsic items, ranked 18th in Table 49 and joint second in Table 50. Table 51 summarises the analysis of variance comparisons made between the two hospitals on the three multidimensional indices of satisfaction: intrinsic, extrinsic and general satisfaction.

Table 51: Comparison between hospitals Aand B of intrinsic, extrinsic and general satisfaction indices: analysis of variance summary table

Variable	source	degrees of freedom	sums of squares	mean squares	F-ratio	р
intrinsic satisfaction	between groups within groups total	1 130 131	38.07 3402.86 3440.93	38.07 26.17	1.46	ns
extrinsic satisfaction	between groups within groups total	. 1 130 - 131	52.40 1893.31 1945.72	52.40 14.56	3.60	ns
general satisfaction	between groups within groups total	1 130 131	211.97 10626.66 10838.63	211.97 81.74	2.59	ns

Of all the satisfaction items and indices examined, only two demonstrated significant differences between the hospitals, and both of these were related to the global satisfaction index. One was the index itself, and the other was one of its items, 'Overall satisfaction with the hospital', and they indicated that satisfaction was lower in hospital A than B. In general, however, the results suggest that the CNs were satisfied with their jobs irrespective of the hospital they worked in.

Discussion

Research into job satisfaction in any occupational group tends to demonstrate that workers are moderately or very satisfied with their jobs, and nurses are no exception to this (Hockey, 1976). Whether the CNs in the present study scored similarly to comparable groups in other research is difficult to determine because the only research known to the author to have used the same global satisfaction index with qualified nurses, albeit American (Lyons, 1968; 1971), did not publish the satisfaction scores.

However, the SCPR survey (1971) which was set up to provide evidence for the Report of the Committee on Nursing (1972), included two global satisfaction questions. In response to a question concerning general satisfaction with nursing as a career, 55% of the 1062 CNs from all kinds of NHS hospitals said that nursing 'is the only type of work which could really satisfy me', and 27% said 'it's one of several types of work which I could find almost equally satisfying' (p.57). The second question asked the respondents to say how happy they were in their work. 44% of the hospital CNs said 'very happy', 50% said 'quite happy', and only 5% said 'not very happy'. These responses are virtually identical to the global satisfaction scores of all the CNs in the present study, which were 45% (high), 50% (medium) and 5% (low).

Hockey (1976) used a 12-item version of the Brayfield and Rothe (1951) global satisfaction scale, and found that 15% of the CNs and teachers in her sample gave 'low' satisfaction scores, 65% gave 'medium' scores, and 20% gave 'high' scores. Hockey's CNs and teachers scored relatively highly on this measure in comparison with nurse administrators, staff nurses and midwives, enrolled nurses, and district nurses, and

much higher than health visitors. Thus the cautious conclusion can be drawn that, in spite of the different measures used and nature of the sample, the level of global satisfaction in all the West Midlands' CNs was relatively high even though it was significantly higher in hospital B than hospital A.

An opinion survey of the general level of satisfaction of nurse teachers was conducted by the General Nursing Council (1975). This revealed that, of a sample of nearly 3,000 teachers, 73% expressed satisfaction with their job generally, 5% were neither satisfied nor dissatisfied, and 22% were dissatisfied. Direct comparison cannot be made with the level of satisfaction reported by the CNs in the present study, but the results of the teachers' survey do suggest that they experienced relatively more dissatisfaction than the CNs.

An American study (Bullough, 1974) used a global measure when assessing satisfaction in three groups of registered nurses, two of whom had received post-registration training. The satisfaction measure consisted of one question which was similar to the second item used in the present study ('taking all things into consideration, how satisfied with your work are you?'). For the total sample of 73 nurses, 33% said they were very satisfied, 47% were rather satisfied, and 21% dissatisfied. Although cross-cultural comparisons must be made cautiously, the CNs in the present study appeared to be rather more satisfied than the American registered nurses.

None of the differences observed between the CNs in hospital A and hospital B on the Minnesota intrinsic, extrinsic and general satisfaction scales reached significance. When the total scale scores were divided into three equal categories, 51% of the total sample

expressed high intrinsic satisfaction, and 45% moderate satisfaction; the equivalent scores on the extrinsic scale were 40% and 50%; and on the general satisfaction scale these were 45% and 51%. The largest proportion of low (dissatisfied) responses was on the extrinsic scale, which claimed 10% of the scores.

Total scale scores do, however, mask important differences in distributions to the individual items. All the intrinsic scale items elicited scores with positively skewed distributions, and in only two items were 10% or more of the responses in the dissatisfied categories, 'creativity' (11%) and 'independence' (10%). The positive skew was less marked in the extrinsic satisfaction items. At least 15% of the scores to each item were in the dissatisfied category, and 'hospital policies and practices' received the most dissatisfied responses (21%). One of the two items in the general satisfaction scale, 'working conditions', also elicited 21% dissatisfied responses.

The score distributions to some of the individual items can be compared with those found in other studies. Hockey (1976) found that about 70% of her CNs and teachers thought that good use was being made of their skills, compared with nearly 25% who thought this was not so. Comparing this with the CNs' responses to the 'ability utilization' item, 91% were satisfied with the opportunities they had to make use of their abilities compared with only 6% who were not satisfied. Hockey was concerned that such a large proportion of the CNs and teachers in her sample responded negatively to this item, because, as she pointed out, 'This group is generally considered to have sufficient autonomy to generate its own working pattern. It may be that the constraints of the system and/or extraneous pressures make it difficult for this

grade of staff to pursue their appropriate activity.' (p.127).

Hockey's study included community nurses, and their responses were not quite as favourable as those of her CNs/teachers: approximately 68% of the district nurses said good use was being made of their abilities, but as many as 30% said this was not so. The equivalent figures for health visitors were about 65% and 25%. Thus, a substantial proportion of the most senior nurses with direct patient or client contact in Hockey's study felt their skills were not being used, which was not evident in the present study.

In the SCPR survey (1971), the respondents were asked to indicate if in the last week they had done work which, in their opinion, should have been done by others. The following proportions of CNs said that they had done work which should have been done by:-

messengers	33%	
clerical staff	56%	
domestic staff	43%	
more highly qualified nurses	8%	
less highly qualified nurses	51%	
doctors	35%	(45% for CNs in acute general hospitals)
social workers	21%	
other professional/technical staff	15%	
none of these	18%	
don't know	3%	

The SCPR survey was conducted fairly soon after the publication of the Farrer Report (DHSS, 1968) and the nurses involved in the survey may not have experienced the benefits of housekeeping teams, ward clerks, 'topping-up' services, etc. Although not all CNs in the present study, especially in hospital A, enjoyed the benefits of ward clerks,

they were familiar with some of the other changes recommended in the Farrer Report.

Mercer and Mould (1976) did not quantify job satisfaction scores in their study, but they gained '...a general impression of a broadly contented work force' (p.184).

In conclusion the findings from this study have shown that the CNs were no different than other occupational groups or other nurses in that their level of expressed satisfaction was generally high.

But this is not to say that they had no dissatisfactions and further details of these are given in chapter 9. The marked 'ceiling effect' which emerged, particularly in response to the intrinsic satisfaction items, suggests that a more positively skewed response scale which would enable respondents to express different degrees of satisfaction, would be more sensitive and hence more meaningful.

4.3.2 Occupational needs

Results

The score distributions of occupational needs which emerged from the Minnesota Importance Questionnaire (MIQ) are summarised here, and comparisons have been made between the hospitals. The distributions indicate the importance to the CNs of items similar to those in the Minnesota satisfaction scales (with an additional item, 'autonomy') and are categorised here according to the intrinsic/extrinsic satisfaction dichotomy employed above. Table 141 in Appendix 10 shows the score distributions for each item comprising the intrinsic satisfaction scale, and Table 142 the distributions for each item

comprising the extrinsic satisfaction scale and the three additional items that do not appear in either scale: 'co-workers' and 'working conditions' appear in the general satisfaction scale, and 'autonomy' (being able to plan work with little supervision) is the extra item in the MIQ. This was included so that there was an equal number in each block of items in the multiple rank order form questionnaire, and each item would be paired only once with each other item (Borgen et al., 1968).

The items which elicited the greatest number of 'high' (moderate and high importance) scores belonged with one exception ('working conditions') to the intrinsic satisfaction scale. The rank order of these items was the same in each hospital: 'ability utilization', 'achievement', 'social service', 'responsibility', 'working conditions' and 'creativity'. These 6 items, each of which claimed more than half the available scores, indicated those occupational needs which were most important for the ideal jobs of the CNs. Referring to Table 138 (Appendix 10) it can be seen whether these items elicited the greatest proportion of satisfied responses as actually experienced by the CNs. Taking the combined sample, the CNs expressed satisfaction with 4 of the 6 items: 'ability utilization', 'achievement', 'social service' and 'responsibility'. 'Working conditions' and 'creativity' were ranked 18th and 11th respectively in Table 49 (p/73) and as Table 50 shows, were amongst the items which elicited dissatisfied responses. 'Working conditions' was ranked equal second on dissatisfaction and 'creativity' was ranked 8th. These findings suggest that the current job of the CNs matched their ideal job requirements on four of the occupational needs considered important, but the amount of dissatisfaction with the working conditions and the opportunity for creativity was sufficient to produce a mismatch between actual experience and what was considered ideal.

The items which elicited the greatest number of low (less than 0.4) scores belonged to both the intrinsic and extrinsic satisfaction scales. In the combined sample, 77% of the CNs regarded the need for 'authority' as unimportant, followed by the need for 'independence' (64%), 'social status' (60%), 'recognition' (42%), 'compensation' (32%) and 'advancement' (29%).

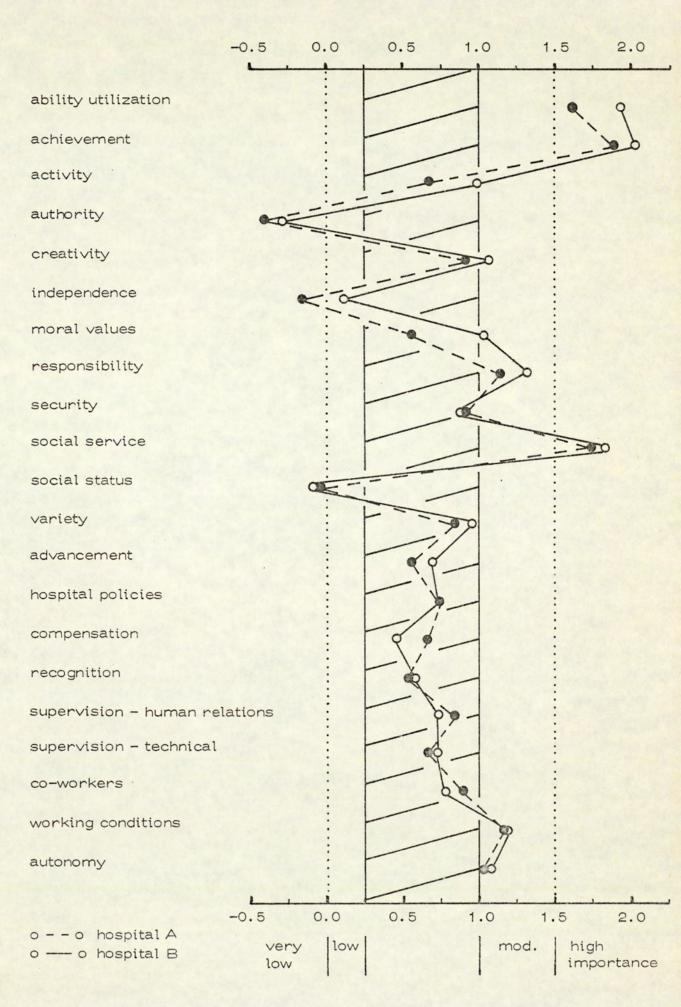
Although 'recognition', 'compensation' and 'advancement' were regarded as unimportant, reference to Table 50 (p/74) shows that they were amongst the items which elicited the most dissatisfied responses. However, these dissatisfied responses were made by only 19% or less of the combined sample.

In Table 52 the mean scores and standard deviations of each occupational need item are shown separately for hospitals A and B, and the mean scores are presented graphically in Figure 9.

Table 52: Mean (\bar{x}) and standard deviation (s) scores of the CNs' occupational needs, hospitals A and B

Occupational need	Hospi	tal A	Hospital B	
occupational need	x	S	×	S
ability utilization	1.63	0.69	1.94	0.58
achievement	1.89	0.75	2.03	0.68
activity	0.68	0.96	0.99	0.85
authority ,	-0.39	0.85	-0.26	0.81
creativity	0.93	0.58	1.07	0.69
independence	-0.15	0.90	0.12	0.98
moral values	0.57	1.05	1.05	1.02
responsibility	1.14	0.75	1.33	0.78
security	0.93	0.85	0.91	0.77
social service	1.74	0.89	1.84	0.82
social status	-0.02	0.95	-0.07	1.41
variety	0.85	0.77	0.96	0.75
advancement	0.56	1.02	0.71	0.71
hospital policies and practices	0.74	0.67	0.72	0.62
compensation	0.67	0.99	0.47	0.79
recognition	0.54	0.96	0.60	1.00
supervision - human relations	0.85	0.87	0.74	0.56
supervision - technical	0.67	0.79	0.74	0.54
co-workers	0.91	0.89	0.79	0.69
working conditions	1.17	0.86	1.19	0.62
autonomy	1.03	0.80	1.09	0.73

Figure 9. Mean occupational need score profiles of CNs in hospitals A and B.



These mean score profiles illustrate how similar the scores were in each hospital, only two scores being significantly different from each other, 'ability utilization' (F = 6.13, p = .01), and 'moral values' (F = 5.12, P < .05). In both cases, the CNs in hospital B valued these items significantly more so than those in hospital A. Another point which Figure 9 illustrates very clearly, is the more extreme scores given to many of the intrinsic satisfaction items ('ability utilization' to 'variety') than the extrinsic and other

satisfaction items. Details of the analysis of variance comparisons

between the hospitals are shown in Appendix 10 (Table 143).

Discussion

The items which emerged as important (mean scores of 1.0 or above) occupational needs for the total sample of CNs were, in rank order, 'achievement', 'ability utilization', 'social service', 'responsibility', 'working conditions', 'autonomy', and 'creativity'. Two items elicited mean scores of below 0.03, 'authority' and 'social status', which indicated that, on average, the CNs did not consider them as important to their ideal jobs. Six of the valued items belonged to the intrinsic satisfaction scale and one ('working conditions') to the This demonstrated that it was the intrinsic items extrinsic scale. which were the most important occupational needs for the CNs and indeed, it was these items which, on the whole, provided them with the most satisfaction. Two items which were highly valued, however, elicited a relatively large proportion of dissatisfied responses, 'working conditions' (21%) and 'creativity' (11%), suggesting a discrepancy between what was considered ideal and actual experience.

The mean need score profiles for each hospital were similar except for two items, 'ability utilization' and 'moral values', which were significantly higher in hospital B than hospital A.

Making comparisons with earlier research is not easy because no work was found in which the MIQ had been used with nurses. Considerable research has, of course, been published with other occupational groups such as research scientists (Graen et al., 1968; Golden & Weiss, 1968), female rehabilitation counsellors (Gay et al., 1971), and social workers (Elizur & Tziner, 1977). However, none of these presented actual MIQ scores and so comparison is impossible, but a study with American psychology graduates did so (Rounds & Dawis, 1975). Scores of 1.0 or higher (indicating importance) emerged for these students on the same items as for the CNs except that the students did not place so much importance on 'working conditions' and they placed greater importance than the CNs on 'moral values'. Of the items highly valued by both groups, the CNs' mean scores on 'achievement', 'responsibility', and 'working conditions' were higher than the students' mean scores. At the other end of the scale, mean scores of 0.03 or below (unimportant) were given to 'authority' and 'social status' which were the same two which elicited 'unimportant' scores in the CNs, although the CNs' scores were not as low as the students'. The comparisons made here between these groups were much as would be expected since one group was employed in a caring occupation and the other may not have experienced employed status.

Although no work has been found in which the MIQ was used with nurses, other scales expressing the extent to which nurses regarded job characteristics as important have been used (Lyons, 1971; Meir, 1972; Munson & Heda, 1974; Marriner & Craigie, 1977).

Lyons (1971) used the need for clarity scale employed in this study with American registered nurses and reported a high median score of 17 (range 7 to 20). This was similar to the median of 18.5 (range 8 to 20) in this study (see pi93 for further details). Lyons split his sample at the median into high and low scores and found that need for clarity acted as a powerful moderator since the correlations between role clarity and voluntary turnover, propensity to leave, satisfaction and job related tension were all significant at the p < .01 level for the high need for clarity group compared with tension only for the low group.

Marriner and Craigie (1977) asked American nurse teachers to rate the importance of 50 job characteristics for job satisfaction. Although many of the characteristics related to a teacher's job (eg academic freedom, class size, teaching media aids), some were similar to those on the MIQ. Those ranked in the first 20, which therefore were considered to be relatively important, were 'responsibility', 'achievement', 'individual autonomy', 'security', 'variety in work', 'salary increases policies' and 'recognition'. 'Promotion policies' and 'salary' were considered less important, being ranked 25 and 32 respectively.

Subsequent factor analysis produced 12 factors accounting for 60% of the variance. These the authors classified into three categories:

- i) Professional: 'instruction', 'competent governance', 'research'.

The first two categories which contained most of the intrinsic job characteristics together accounted for 36% of the total variances, and it was the intrinsic characteristics in the present study which the CNs considered most important.

Meir (1972) related intrinsic needs to persistence at work in five groups of Israeli women workers including registered nurses, and she listed those intrinsic needs which were considered important by each group. The author found that intrinsic but not extrinsic needs correlated positively (p < .05) with persistence at work as measured by length of time the nurses worked between the age of 30 and 38 years. The intrinsic needs which the nurses considered important were:

```
contacts with people ('social service')
responsibility ('responsibility')
requires patience
physical activity ('activity')
working in the fields of science
help to those who cannot help themselves ('social service')
interest in medicine
working under tension
helping others ('social service')
improvisation ('creativity')
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The items in parenthesis are those occupational needs from the present study which were similar.

A number of studies with workers other than nurses have used

Porter's 'is now - should be - importance' format (Porter, 1961) in

relation to Maslow's needs hierarchy. Porter himself (1961) found that

both 'bottom' and 'middle' level American industrial managers ranked

the 'high' level need of self-actualization and the 'low' level need of

security as most important, with another 'high' level need, esteem,

placed at the bottom of the rank order. In a later study with all levels

of management from 'lower' to 'president', Porter (1963) found a positive correlation between management level and importance attached to autonomy and self-actualization needs, but when all levels were combined, the rank order was self-actualization, autonomy, security and social, and esteem.

Mansfield & Evans (1975) used a modified Porter format with British managers and clerks and the rank order of importance for both groups was identical:

chance to obtain feelings of accomplishment opportunities to use one's capabilities feelings of security prestige opportunities to make friends

In contrast to Mansfield & Evans and the present study, Wild (1970) reported that 'adequate wages' and 'working with friendly people' were more important than 'doing a job which is personally satisfying', 'security of employment' and 'having a job with high status', for unskilled and semi-skilled female British manual workers.

Finally, American professional workers (mostly engineers) regarded Maslow's higher order needs as generally more important than the lower needs (Costello & Lee, 1974), and in an early study (Schaffer, 1953) American professional, clerical and sales personnel ranked occupational needs in the following order of importance:

creativity and challenge
mastery and achievement
social welfare (ie helping others)
moral value scheme
affection and interpersonal relations

self expression
dominance
recognition and approbation
economic security
independence
socio-economic status
dependence

These studies have shown that, on the whole, the CNs' importance ranking came closer to those of professional and non-manual workers than manual workers.

4.3.3 Perceived role stress: job related tension, role conflict and ambiguity

This section is concerned with the descriptive results which emerged from the four perceived role stress scales, the job related tension index, perceived role clarity, and perceived role conflict and ambiguity. Also presented here is the score distribution of the need for clarity index. This has been included in this section rather than the previous one because, although it is an occupational need, the findings will be considered in relation to role clarity.

Job related tension

Nine items comprised this index and the CN was asked to indicate how often she felt bothered by each of them. The items are listed together with the score distributions for each hospital and the combined sample, in Appendix 10 (Table 144).

The item which emerged as giving the CNs greatest concern was one of the workload questions (item 7 - '... the amount of work you have to do may interfere with how well it gets done'). Nearly two-thirds (64%) of

the combined sample said they were bothered sometimes or more often to The other items which bothered a substantial number of the combined sample were having too heavy a workload (47%), being unclear about the scope and responsibilities of the job (46%), being unable to get information to carry out the job (46%), being uncertain of their colleagues' expectations of them (44%), and being unclear about how their nursing officer evaluated their performance (43%). The rank order of items which elicited tension in the greatest number of CNs was slightly different in each hospital. Combining the 'high' scores (3, 4 and 5), this was in hospital A, workload interferes with quality of work (70%) unable to get information for job (68%), too heavy aworkload (57%), unclear about scope and responsibilities (54%), unclear how nursing officer evaluates performance (49%) and uncertain of colleagues' expectations (46%). In hospital B, the main difference was that item 4 (being unable to get information for job) did not occupy the same position as it did in hospital A, since only 37% of the CNs said that this bothered them sometimes or more often. This difference between the two hospitals on item 4 was statistically significant ($\chi^2 = 8.57$, df = 1, p<.01). The comparisons between the hospitals were made by reducing the response categories to a 2 x 2 table by combining scores 1 with 2 and scores 3 with 4 and 5. This avoided the problem of expected frequencies of less than 5. Although the median scores were higher in hospital A compared with B on all the items except one, the difference between the hospitals was significant only for item 4. The exception was item 2 (not knowing the advancement opportunities), and this item elicited the lowest proportion of 'high' (scores 3, 4 and 5) tension scores in both hospitals.

Turning to the Job Related Tension Index, about two-thirds of the CNs experienced a moderate level of tension on the job (hospital A = 70%,

B = 66%, A + B = 67%), about one-quarter experienced very little tension (A = 22%, B = 31%, A + B = 28%), and the remainder were in the high tension category (A = 8%, B = 3%, A + B = 5%). Only 6 CNs experienced high tension, however. The mean index scores were 22.70 (s = 6.29) in hospital A and 20.71 (s = 5.26) in hospital B, and the difference between the hospitals using one way analysis of variance was not significant. By dividing the mean scores by the number of items in the scale (9) the level of tension experienced by the CNs can be put in perspective since it places the score at a position on the 5 point scale. This mean score was 2.52 in hospital A, 2.30 in hospital B, and 2.36 in the combined sample.

Role Clarity

Clarity is the obverse of ambiguity and in the role clarity index the CN was asked how clear she was about the limits of her authority, what she was supposed to do and how she was supposed to do things in her job, and how clearly defined the hospital's policies and rules and regulations were. The score distributions for each hospital are shown in Appendix 10 (Table 145).

For each item the scores were skewed towards the 'clear' end of the response scale, with less than 17% of the combined sample indicating that they were unclear about these aspects of their jobs. There were, however, significant differences between the hospitals on one of the items and on the Role Clarity Index. Nearly a quarter (9, 24%) of the CNs in hospital A compared with 9% (8 CNs) in hospital B were unclear about the limits of their authority, and 75% in hospital B compared with 65% in hospital A were mostly clear $(\%)^2 = 4.56$, df = 1, p < .05). A similar proportion (9, 24%) of CNs in hospital A said they did not find the

policies and rules and regulations of the hospital clearly defined, compared with 14% (13 CNs) in hospital B, but the difference between the hospitals on this item was not significant. The comparisons between the hospitals were made by combining categories 1 and 2 and comparing their scores with those in 3, 4 and 5 combined, so that there was 1 degree of freedom for each comparison.

The Role Clarity Index scores indicated that nearly half (48%) the total number of CNs were fairly clear about these aspects of their jobs, 46% were very clear and only 6% were unclear. The distributions in each hospital were significantly different (F = 4.45, p < .05) however, since 41% in hospital A experienced high role clarity compared with 69% in hospital B and 14% in A gave low scores compared with 3% in B. The mean scores were 14.00 (S = 3.56) in hospital A, 15.22 (S = 2.74) in hospital B and 14.88 (S = 3.03) in the combined sample.

There are some apparent contradictions between the score distributions of two of the role clarity items when compared with similar items in the job-related tension index. The role clarity item, 'how clear are you about the limits of your authority in your present job?', is similar to the first tension item, 'how often do you feel bothered by being unclear on just what the scope and responsibilities of your job are?' Seventy two percent of the CNs said they were clear about the limits of their authority, yet 46% maintained that they were bothered sometimes or more often by being unclear about their scope and responsibilities. The author was aware of the similarity of these two items which has also been pointed out by others (eg Miles & Petty, 1975) but the two scales were retained in their original form so that comparison could be made with results from other studies. These responses may not have been contradictory to the CNs, however, since they may have felt that they were clear about the limits

of their authority, yet were, even so, sometimes bothered about uncertainty concerning their responsibilities.

The second apparent contradiction concerned the role clarity item,

'do you feel you are always as clear as you would like to be about what
you have to do in your job?', and the job tension item, 'how often do
you feel bothered about the fact that you can't get information needed
to carry out your job?' Eighty two percent of the CNs said they were
clear about what to do, but 46% were apparently bothered at times when
they were unable to get necessary information. This apparent
contradiction is more easily explained than the first one. It was clear
from the comments added to the role clarity item that the CNs related this
to the practical job of nursing. From their training and experience
they were relatively clear about what they had to do as nurses, but this
was not to say that they had the necessary information at their disposal
at all times, and this bothered a substantial number of them to some extent.

Need for clarity

The items in the Need for Clarity Index were concerned with the perceived importance of three of the role clarity items, with an additional one about performance. The score distributions are shown in Appendix 10 (Table 146). Nearly all the CNs indicated that it was important to know exactly what the limits of their authority were, what to do and how to do it. Slightly fewer (87% in hospital A and 79% in B) were as emphatic about the importance of knowing how well they were doing. The chi-squared test to determine differences between the hospitals was inappropriate here because of the small expected frequencies in some of the cells, but the score distributions were sufficiently similar to make a significance test unnecessary.

The index scores showed that three-quarters (76%) of the combined sample had a high need for clarity, and this was 84% in hospital A and 72% in hospital B. In view of the severe skewness of the distributions, the median is a more representative average than the mean, and it was 18.78 (range 14-20) in hospital A, 18.36 (range 8-20) in hospital B, and 18.52 (range 8-20) in the combined sample. The difference between the two hospitals was not significant (F = 2.06).

Role conflict

Eight items comprised this scale and two scores were obtained for each item and the index. The first has been termed objective role conflict and refers to the CN's responses to 'how true?' she considered the item to be. The second is subjective role conflict which was derived by computing the difference between the 'how true?' and 'desirability' scores for each item.

Objective role conflict

Table 147 in Appendix 10 shows the distributions in each hospital and the combined sample. The item which apparently gave the CNs greatest conflict in both hospitals was 'I work with two or more groups who operate quite differently'. 65% of CNs in hospital A gave a score of 5 or more to this item compared with 55% in hospital B (58% in the combined sample). The other items with the greatest number of high (5, 6 or 7) scores were 'I receive an assignment without the manpower to complete it' (hospital A = 65%, B = 43%, A + B = 49%),'I do things that are apt to be accepted by one person and not by others' (A = 56%, B = 42%, A + B = 46%), and 'I have to bend a rule or policy in order to carry out an assignment' (A = 44%, B = 38%, A + B = 40%). In hospital A, 47% of the CNs gave high scores in response to 'I have to do things that should be done differently', but

only 26% in hospital B responded likewise. The items which elicited the most low (1, 2 or 3) objective conflict scores in the combined sample, were 'I work on unnecessary things', 'I receive an assignment without adequate resources and materials to execute it', 'I have to do things that should be done differently' (although there were 47% high scores in hospital A), and 'I receive incompatible requests from two or more people!.

The comparison of scores between the two hospitals revealed that two differences were significant. The first was 'insufficient manpower' and objective conflict scores were significantly higher in hospital A than B (F = 6.01, p < .05), and the second was 'do things that are accepted by one person but not others', when again, the scores in hospital A were higher than in B (F = 3.90, p < .05).

The Objective Role Conflict Index scores showed that over 50% of the CNs experienced moderate conflict (hospital A = 62%, B = 57%, A + B = 58%), about one quarter experienced very little conflict (A = 21%, B = 29%, A + B = 27%), and the remainder experienced high conflict (A = 18%, B = 14%, A + B = 15%). The mean score was 31.59 (s = 9.93) in hospital A, 28.36 (s = 10.55) in hospital B, and 29.28 (s = 10.44) in the combined sample. The difference between the two hospitals was not significant. By dividing the mean scores by 8 the mean score relative to the 7 point scale was 3.95 in hospital A, 3.55 in hospital B and 3.66 in the combined sample.

Three of the items in the conflict scale were similar to three in the Job-Related Tension Index, and comparisons have been made between the scores. 48% of the combined sample gave high (5, 6 or 7) scores to the 'insufficient manpower' item in the Role Conflict scale compared with

47% of high (3, 4 or 5) scores to the item 'too heavy a workload' in the Job-Related Tension Index. The second comparison was between 'receive incompatible requests from 2 or more people' (role conflict) and 'unable to satisfy others' conflicting demands' (job-related tension).

34% of the combined sample gave high scores to the conflict item, compared with 41% to the tension item. The third comparison concerned the conflict item, 'do things which should be done differently' and the tension item, 'do things against better judgement'. 32% of the combined sample gave high conflict scores compared with 41% of high tension scores. In view of the different response scales used for each index, the similarity between the scores in all three cases is relatively close.

Subjective role conflict

Table 148 in Appendix 10 shows the score distributions for each hospital and the combined sample. The item which elicited the greatest number of high (4, 5 or 6) scores in both hospitals was 'insufficient manpower' (hospital A = 56%, B = 37%, A + B = 42%). The other items which gave the CNs most conflict varied in each hospital. In hospital A the greatest number of high scores was in response to 'do things that are accepted by one person but not others' (38%), 'incompatible requests from 2 or more people' (35%), 'do things that should be done differently' (27%), and 'have to bend rules' (27%). In hospital B the order was 'do unnecessary things' (27%), 'incompatible requests from 2 or more people' (26%), 'insufficient resources and materials' (24%) and 'work with groups which operate differently (21%).

As with the objective conflict scores, the same two items revealed scores which were significantly different between the hospitals, 'insufficient manpower' and 'do things that are accepted by one person but not others'. In both cases, more CNs in hospital A selected high scores

compared with B.

The subjective Role Conflict index showed that a similar number of CNs in the combined sample experienced low (46%) or moderate (45%) conflict, but in hospital A there were more (59%) moderate than low (32%) scores, and in B more low (52%) than moderate (40%) scores. High subjective conflict was experienced by only about 9% of the samples. The mean scores were 17.91 (s = 10.01) in hospital A, 14.37 (s = 9.87) in hospital B, and 15.40 (s = 10.00) in the combined sample. When divided by the number of items (8) in the scale, the means were 2.24, 1.80 and 1.93 respectively. The difference observed between the hospitals was not significant.

Comparisons between the objective and subjective role conflict scores

When the two conflict scores were compared, quite marked differences emerged (Table 53). All the scores for the subjective conflict items were lower than those of the objective items which suggests that these CNs were less bothered about the conflict items than the objective scores implied. The greatest discrepancy was with the item 'I work with two or more groups who operate quite differently', since 58% high objective scale scores emerged compared with 22% high subjective scores. Comments made by some of the CNs can shed light on this discrepancy. Some of them certainly agreed that working with several groups which operate differently does present conflict, but others welcomed the challenge that this provided, and said it 'kept them on their toes'. The other items which showed the greatest discrepancies between the objective and subjective scores were 'I do things that are apt to be accepted by one person and not by others', 'I have to bend a rule or policy in order to carry out an assignment', and 'I have to do things which should be done differently'.

Table 53: Comparison of high score frequencies to the Objective and Subjective Role Conflict items (combined sample)

conflict item	high obj conflict (5 - 7)		high subjective conflict scores (4-6)		
	freq	%	freq	%	
work with groups which operate differently	69	57.5	26	21.7	
insufficient manpower	59	49.2	50	42.0	
do things that are accepted by one person but not others	55	45.9	24	20.2	
have to bend rules	48	40.0	24	20.2	
incompatible requests from 2 or more people	41	34.2	34	28.6	
do things which should be done differently	38	31.7	21	17.9	
do unnecessary things	34	30.0	29	24.4	
insufficient resources and materials	35	29.1	28	23.7	

Two additional role conflict items

The Role Conflict questionnaire contained two items which were not included by its originators (Rizzo et al., 1970) in the Conflict scale:

I don't have much say or influence with my co-workers.

I don't have much say or influence with higher management.

The distribution of Objective and Subjective Conflict scores to these items are shown in Appendix 10 (Table 149). The 'influence with co-workers' item elicited very few high objective (5 - 7) or subjective (4 - 6)

conflict scores but the reverse was true for the 'influence with higher management' items. In this case the proportion of high objective conflict scores was 65% in hospital A, and 48% in hospital B. The difference between the two hospitals was significant F = 4.88, p<.05). The proportion of high subjective conflict scores on this item was lower, which suggests that not all the high scorers were very troubled by having little influence with higher management. These scores were 38% in hospital A and 18% in hospital B, and again, the difference between the hospitals was significant (F = 13.51, p < .001).

Role ambiguity

Six items comprised this scale and, as with Role Conflict, objective and subjective scores were obtained for each item and the index.

Objective role ambiguity

The score distributions for each hospital and the combined sample are detailed in Appendix 10 (Table 150). The scores were reversed for the objective ambiguity items so that high scores indicated high ambiguity. For all the items the majority (over 60%) of the CNs gave low ambiguity (1 - 3) scores. A very small minority selected high ambiguity (5 - 7) scores except the response in hospital A to 'I feel certain about how much authority I have', which was 24% (8 CNs). Apart from this item, the proportion of high scores was 16% or less, and the one which elicited 16% of high scores in both hospitals was 'clear, planned goals and objectives for my job'.

Comparing the two hospitals, none of the differences was significant except for the item which elicited the greatest number of high scores in

hospital A (F = 4.03, p < .05).

The Objective Role Ambiguity Index scores showed that about two-thirds of the sample experienced low objective ambiguity (hospital A = 65%, B = 69%, A + B = 68%), 29% in each hospital experienced moderate objective ambiguity, and a tiny minority found the job highly ambiguous (A = 6%, B = 2%, A + B = 3%). The mean scores were 9.50 (s = 6.79) in hospital A, 8.40 (s = 6.11) in hospital B, and 8.71 (s = 6.30) in both combined. When divided by the number of items, these were 1.58, 1.40 and 1.45 respectively which shows clearly how unambiguous the CN's job was perceived. The difference between the hospitals was not significant.

Three of the ambiguity items were similar to three in the Job Related Tension Index, and comparisons have been made between these scores. The first was 'I know what my responsibilities are' (ambiguity) which was similar to 'being unclear on just what the scope and responsibilities of your job are' (tension). In the combined sample, 7% experienced high (scores 5 - 7) objective ambiguity compared with 46% who experienced high (scores 3 - 5) tension. This discrepancy was reduced when only scores 4 and 5 of the tension item were included, and 6% of the CNs experienced high tension. The second comparison was between the ambiguity item 'explanation is clear of what has to be done' and the tension item 'the fact that you can't get information needed to carry out your job'. The proportion of high ambiguity scores was 9% compared with 46% of high tension scores. Again, when score 3 was removed from the tension score, this (11%) was close to the ambiguity score. Finally, 'I know exactly what is expected of me' (ambiguity) was compared to 'not knowing just what people you work with expect of you' (tension). 13% gave high ambiguity scores compared with 44% high tension scores. However, when score 3 on the tension response scale

was removed, the score was only 8%.

Subjective role ambiguity

The score distributions are shown in Appendix 10 (Table 151). The pattern was similar to that found with objective ambiguity in that, with one exception, over 60% of the CNs scored in the low (0 - 1) range.

The exception was 'I know that I have divided my time properly', when only 50% of the CNs in hospital A gave low (0 - 1) scores, and 44% gave moderate (2 - 3) subjective ambiguity scores. The difference between the hospitals on this item was significant (F = 3.89, p < .05).

With one exception, very few (less than 15%) CNs gave high (4 - 6) scores to any of the items. The exception was again in hospital A where 21% experienced high subjective ambiguity to 'I feel certain about how much authority I have', compared with 6% in hospital B.

The difference between the hospitals on this was significant (F = 3.86, p < .05).

Two comparisons between the hospitals were significantly different whereas only one objective ambiguity comparison was.

The subjective Role Ambiguity Index scores showed that over three-quarters of the CNs experienced very little ambiguity (hospital A = 77%, B = 86%, A + B = 83%), a minority found the job moderately ambiguous (A = 18%, B = 13%, A + B = 14%) and virtually none found it highly ambiguous (A = 6%, B = 1%, A + B = 3%). The mean scores were 7.71 (s = 6.80) in hospital A, 5.86 (s = 5.48) in B, and 6.38 (s = 5.91) in the combined sample. Dividing by 6 gave 1.29, 0.98 and 1.06 respectively demonstrating how unambiguous the CN's job is perceived. The difference between the hospitals was not significant.

Comparisons between objective and subjective role ambiguity scores

As with the objective and subjective conflict comparisons, the proportion of all the high subjective ambiguity scores was lower than that of the high objective ambiguity scores (Table 54).

Table 54: Comparison of high score frequencies to the Objective and Subjective Role Ambiguity items (combined sample)

ambiguity item	high ob ambigui (5 - 7)	jective ty scores	high subjective ambiguity scores (4 - 6)		
	freq %		freq	%	
clear, planned goals	20	16.6	13	10.8	
know what is expected of me	16	13.3	12	10.0	
know have divided time properly	15	12.5	7	5.8	
know how much authority I have	14	11.4	12	10.0	
explanation clear of what has to be done	11	9.2	10	8.3	
know my responsibilities	8	6,6	7	5.8	

The difference between the two kinds of score was greatest for 'clear, planned goals' (objective ambiguity = 17%, subjective ambiguity = 11%), which suggests that the CNs were less concerned about this than their objective scores implied. Generally, the discrepancies were smaller than those found in the objective - subjective conflict comparisons.

Summary and discussion of perceived role stress

The summary analysis of variance table of differences between the hospitals can be seen below (Table 55).

Table 55: Comparison between hospitals A and B of the role stress scores: analysis of variance summary table (2-tail tests)

role stress variable	source	degrees of freedom	sums of squares	mean squares	F- ratio	p
job-related tension index	between groups within groups total	1 129 130	105.13 4002.97 4108.11	105.13	3.39	ns
role clarity index	between groups within groups total	1 129 130	39.74 1152.31 1192.05	39.74 8.93	4.45	<.05
objective role conflict	between groups within groups total	1 118 119	253.86 12716.06 12969.92	253.86 107.76	2.36	ns
subjective role conflict	between groups within groups total	1 115 116	301.96 11292.16 11594.12	301.96 98.19	3.08	ns
objective role ambiguity	between groups within groups total	1 118 119	29.73 4697.06 4726.79	29.73	0.75	ns
subjective role ambiguity	between groups within groups total	1 118 119	82.98 4079.38 4162.37	82.98 34.57	2.40	ns

On only one variable, Role Clarity, was the difference between the hospitals significant (F = 4.45, p < .05), and one item within this index was responsible for this difference. This item was 'how clear are you about the limits of your authority in your present job?' and a significantly larger proportion of the CNs in hospital B were clear about this than those in hospital A (χ 2 = 4.56, p < .05).

The proportion of high, medium and low scores has been summarised in Table 56.

Table 56: Proportion of low, medium and high scores across the role pressure indices (combined sample)

	role	role pressure scores (%)				
role pressure index	low	medium	high*			
job-related tension index	28	67	5			
role clarity index	6	48	46			
objective role conflict	27	58	15			
subjective role conflict	46	45	9			
objective role ambiguity	68	29	3			
subjective role ambiguity	83	14	3			

^{*} high scores represent high values of the variable, and vice versa.

Excluding the role ambiguity scores, the majority (45 - 67%) of scores fell in the 'medium' category which suggests that there was a moderate amount of experienced tension and role conflict. Very few CNs experienced high pressure (low role clarity), the greatest proportion (15%) being on objective role conflict. With role ambiguity, however, most of the CNs gave low scores, particularly on subjective role ambiguity (83%). This suggests that the CNs perceived their jobs as being relatively unambiguous as measured by the Role Ambiguity scales, but some of the ambiguity items within the Job-Related Tension Index did bother them to some extent.

The items within each index which concerned the CNs to the greatest extent were:

The workload being so heavy that the quality of work suffered (tension);

The workload was too heavy (tension)

Insufficient manpower (conflict);
Working with groups which operate differently (conflict);
Having to bend rules (conflict);
The scope and responsibilities of the job were unclear (tension);
Information to do the job was unavailable (tension);
Uncertain of colleagues' expectations of them (tension);

Unclear how nursing officer evaluates their performance

(tension).

rather less clear.

The Need for Clarity Index was included in this section so that direct comparison could be made with the Role Clarity scores. Three-quarters of the CNs needed high clarity in their jobs and 46% of them did indeed perceive their jobs to be clear. However, 48% found the job

It is difficult to understand the meaning of any scale score unless there exist suitable norms for comparison. No work has been found which used role conflict and ambiguity scales with British nurses, nor indeed with any kind of British worker. However, there is now a considerable overseas (mostly American) literature in which role pressure scales derived from the early work of Kahn et al. (1964) have been developed and modified, and administered to a variety of occupational groups some of whom were nurses. Cross cultural and cross occupational comparisons must be made with due caution but in the absence of suitable British data, such comparisons are justified.

Table 57 presents the mean scores which emerged from research which employed items from the Job-Related Tension Index. Four studies

5 job-related tension item unclear about scope and responsibilities workload interferes with quality of work uncertain of colleagues' expectations unable to get information for job unclear how superior evaluates performance not knowing advancement opportunities unable have to do things against better judgement too heavy a workload Job-Related to satisfy others' Tension Index (mean) conflicting demands hospital 3.0 2.6 2.5 2.9 2 1.9 5 5 A British CNs hospital 2.3 22 B w 0 (the present study) 2.4 hospitals 5 2 .9 .8 4 5 4 A + B 2 Lyons (1971) 4 USA registered staff nurses Sheridan & Vredenburgh (1978) .4 USA nurses (all grades excllearmers) small Arndt & Laeger (1970a, 1970b) 2.0 3.1 3.2 2.1 2.3 hospitals 2 1.9 1.4 ω large USA directors of 2.4 3.2 2.6 1.5 2.0 nursing service 2.5 2.9 Blalack & Davis (1977): USA .4 hospital unit managers (non-nurses Miles & Petty (1975): USA research & dev'pment professionals (1976,1977)Miles & Perrault USA research and development professionals Miles 3.0 2.0 2 (1976)4 Burke (1976) 2.2 2.0 2.0 Canadian professionals .9

Notes: possible score range = 1 to 5
see text for explanation of variations in scale scores

(including the present one) included nurses and four included other workers. The number of items included and their wording varied to some extent, but they were considered to be sufficiently similar for valid comparison. The studies by Sheridan and Vredenburgh (1978) and Arnot and Laeger (1970a, 1970b) used the original 18 item index developed by Kahn et al. (1964), but Arndt and Laeger presented mean scores for each item and so only the 9 employed in the present study have been included, and the index score has been calculated from these 9 item scores. The work by Lyons (1971) employed the same 9 items as in the present study. Blalack and Davis (1977) used a 15 item job-related tension index, four of which were similar to items in the present study, and the mean index score was derived from all 15 items. Miles and Petty (1975) based 13 job tension items on the work by House and Rizzo (1972) but these were similar to the tension items used in the present study. The later work by Miles (1976, 1977) and Miles and Perrault (1976) included role overload, role expectation and role performance evaluation items similar to those in the present study. Finally, Burke (1976) used 14 items from the Kahn et al scale, 7 of which were similar to those used with the CNs, and the mean index score was calculated from these 7 items.

Comparing the results, it is remarkable how similar the mean job related tension scores derived from the four studies with nurses were (2.3 to 2.5). However, the CNs gave higher mean scores than the USA nurse directors (Arndt & Laeger 1970a, 1970b) on 4 of the items (unclear about scope and responsibilities; not knowing advancement opportunities; unclear how superior evaluates performance; have to do things against better judgement), and lower scores on 3 items, the two workload questions and being unable to satisfy others' conflicting demands. The suggestion is that all the nurses in these studies experienced a moderate level of job tension which was close to the upper end of the range (2.0 to 2.4) found in four professional occupational groups other than nurses.

In Table 58 mean Objective Role Conflict and Ambiguity scores from the present study and previous American research are presented. The work by Szilagyi et al. (1976) involved 5 groups of workers from an American university medical centre, and 3 of these groups included nurses (registered nurses, licensed practical nurses, nurse aides). The Rizzo et al. scales were used and, although it was not explicitly stated, the assumption has been made from the correlational analysis that the role ambiguity scores were reversed, as in the present study, so that high scores represented high levels of ambiguity. Similarly, it has been assumed from the correlation coefficients, that the ambiguity scores were reversed in the original work by Rizzo et al (1970). studies by Schuler (1975, 1977), the ambiguity scores were definitely not reversed and so this was done by the present author. In the Schuler studies and the one with nurse aides by Brief and Aldag (1976), the mean scores were divided by the number of items in the scale, so that the results were comparable. Miles (1977) used a 5-point rather than a 7-point response scale and it is assumed that high scores represented high ambiguity as well as conflict.

Schuler (1977) categorised his respondents into four groups according to their task complexity and 'organic-mechanistic' structure. He considered only one group, the 'complex task-organic structure' group to have achieved congruence and hypothesised that conflict and ambiguity would be higher in the less congruent groups. This was confirmed in his study.

The most appropriate comparison with the CNs' scores can be made with Szilagyi et al's (1976) professional university medical centre staff, since these included registered nurses and paramedical personnel.

The mean role conflict scores were identical (3.7), but the role ambiguity scores were much less in the CNs (1.5) than the Americans (3.0).

* RNs = registered nurses Notes: high scores indicate possible score range	Role Ambiguity Index (mean)	Role Conflict Index (mean)					
red nu pres i	1.6	4.0	hospital A				
nurses indicate ore range	1.4	3.4	hospital B		British CNs (the present study)		
	1.5	3.7	hospitals A + B				
s = 1i0 confl: to 7	3.5	3.9	administrato	rs			
licensed practical nurses flict and ambiguity (ambi	3.0	3.7	professionals (including R		Szilagyi et al (1976)		
pract d ambi	2.9	3.7	technicians (including L	PNs)*	USA university medical centre staff		
ical n	2.8	3.6	clerical workers				
urses (ambig	2.8	4.0	service works (incl.nurse				
LPNs = licensed practical nurses high conflict and ambiguity (ambiguity reve = 1 to 7	1.2	2.9	Brief & Aldag assistants in	g (1976 n unive	6) USA nurse aides and ersity hospital		
everse	3.8	4.2	sample A		Rizzo et al. (1970)		
scored)	4.0	3.9	sample B		USA managerial and professional - technical employees		
d)	2.7	2.8	Miles (1977) USA research	and de	evelopment professionals		
	3.0	2.5	lower manager and workers	rs	Schuler (1975)		
	3.6	3.1	middle manage and professio	ers onals	USA manufacturing firm staff		
	3.4	3.1	higher manage and profession				
	3.0	2.6	complex - organic				
	4.0	3.2	simple - mechanistic	task c	Schuler (1977) USA public		
	3.5	2.7	simple - organic	complexity structure	utility employees		
	3.6	3.0	complex - mechanistic	ity re			

Similar comparisons were apparent between the CNs and Szilagyi etal'slicensed practical nurses and technicians. The only other study in which similarly low ambiguity scores emerged was with Brief and Aldag's nurse aides (1976). Comparisons with the other occupational groups showed that conflict was relatively higher and ambiguity relatively lower in the CNs. Whilst some degree of conflict and ambiguity may be welcomed by professional workers to prevent monotony and boredom, in CNs, a job which is characterised by fairly low ambiguity particularly, is a desirable state of affairs, since supervisory nurses who have direct contact with the patient must know what their responsibilities are, what goals they are working towards, what is expected of them etc. Relatively high levels of uncertainty in this kind of work may be counter-productive in that the patients' confidence in those nurses in charge of their nursing care would be undermined.

The lack of comparative data with British workers continues to be the case with the Role Clarity and Need for Clarity Indices, but a few American studies have been published. The one with American registered staff nurses (Lyons, 1971) unfortunately did not provide the average role clarity scores but Lyons did report a median score of 17 on need for clarity which is similar to the 18.5 found in the CNs. The mean role clarity score for the CNs was 3.7 and the need for clarity score 4.5. In a group of American women teachers, role clarity was slightly lower at 3.4 and for men teachers was about the same (3.6), but their need for clarity was a good deal lower being 3.6 in the women and 3.5 in the men (Paul, 1974). Miles and Petty (1975) used a 6-item role clarity index and reported a mean of 2.7 in American research and development professionals which is considerably lower than that found in the CNs. The mean need for clarity score based on the same scale used in the present study, was also lower at 3.4. It was the median score, however,

which was more representative of the CNs' need for clarity because the distribution was strongly skewed but mean as well as median scores have been reported here so that comparison with other work was possible.

The conclusions drawn from the results were that job-related tension, role conflict, role clarity and need for clarity were experienced by the CNs to a similar extent to that found in roughly comparable workers, but except for one group of American nurse aides role ambiguity was lowest in the CNs. Correlational analyses reported elsewhere (p2%) have demonstrated the extent to which these levels of perceived pressure may have been counterproductive as reflected in their negative relationships with job satisfactions and their positive relationship with propensity to leave. Furthermore, the higher level of conflict (but not ambiguity) found in those CNs who left their jobs compared with a 'matched' sample who did not leave suggests that conflict was higher than its optimum level in at least some of the CNs (p323).

4.3.4 Satisfactoriness

The Minnesota Satisfactoriness Scales were completed by the nursing officers on behalf of the CNs. The score distributions of the five scales which comprised this questionnaire are presented in Appendix 10 (Table 152), and their mean and standard deviations in Table 59.

About half or more of the CNs were given medium scores on each scale, suggesting that the majority were considered to be fairly similar on satisfactoriness as judged by their nursing officers. The largest proportion of high scores in each hospital was on the Dependability scale (combined sample = 37%). The largest number of low scores in each hospital was on the Personal Adjustment scale (combined sample = 17%).

Table 59: Mean (\bar{x}) and standard deviation (s) Satisfactoriness scale scores in hospitals A and B, and the combined sample

	Hospital								
satisfactoriness scale	A +	- В	А		В				
	x	s	x	S	x	S			
performance (9 - 28)*	18.64	3.64	16.38	3.90	19.07	3.45			
conformity (7 - 21)	14.67	2.17	13.25	1.95	14.94	2.11			
dependability (4 - 12)	9.03	1.66	8.56	1.41	9.12	1.70			
personal adjustment (7 - 21)	15.35	2.97	15.13	3.39	15.39	2.91			
general satisfactoriness (28 - 85)	59.72	7.93	55.31	8.35	60.55	7.61			

^{*} numbers in parentheses indicate possible score ranges

Although there was a greater proportion of low and a smaller proportion of high scores in hospital A compared with hospital B, none of the comparisons was significantly different. The chi-squared test was used, with 2 degrees of freedom, in preference to analysis of variance because of the small sample size (16) in hospital A. Because of small expected frequencies on the General Satisfactoriness scale, the low and medium category scores were combined, giving 1 degree of freedom. Taking the combined sample, nearly three-quarters (72%) of the CNs were said to be average on satisfactoriness, 25% were above average, and only 3% below.

4.3.5 Propensity to leave

Results

The extent to which the CNs intended to leave their jobs was one of the main dependent variables in this study because actual wastage had

dropped over recent years to such an extent that the numbers were small. Since propensity to leave has been reported as the best single predictor of actually leaving (Kraut, 1975; Mercer & Mould, 1976) greater emphasis on leaving intentions was considered legitimate. Furthermore, propensity to leave is regarded as a much simpler behavioural measure than actual termination because it is not cluttered by uncontrollable external factors (such as job availability) which would influence the decision to leave (Nicholson et al., 1977). Those CNs who left their jobs voluntarily during the 18 months after data collection were 'matched' with a sample of CNs who stayed, and comparisons were made between their scale scores, and these results are reported elsewhere (p323). The other withdrawal behaviour measured was the frequency of absence spells, and the reader is referred to p. 150 for these findings, although the relationship of biographical variables to absence as well as propensity to leave has been included in this section. Four items comprised the Propensity to Leave Index, and the score distributions are shown in Appendix 10 (Table 153).

Taking the whole sample, about 60% or more of the CNs said that they would prefer to stay in their hospital, would return if they left temporarily, and were unlikely to leave in the next 12 months. Thirteen percent or less said they would like to leave soon, would not return, and would probably leave in the next 12 months. The remainder were uncertain of their plans and not sure how much longer they would stay. Approximately 40%, therefore, were uncertain of their plans or were intending to leave. The differences between the hospitals were examined by applying the chi-squared test on the data grouped into the three categories as in Table 153. Of the four comparisons, one was significantly different, more CNs preferring to stay in hospital A, and more 'uncertains' at hospital B than expected by chance (\times 2 = 10.29, p < .01).

The mean scores on the Propensity to Leave Index were 9.05

(s = 3.57) in hospital A, 9.01 (s = 3.11) in hospital B, and 9.02

(s = 3.24) in the combined sample. Dividing by the number of items

(4) the means were 2.26, 2.25 and 2.26 respectively, which suggests a relatively low propensity to leave. The difference between the hospitals was not significant.

The main reasons that the CNs said they would stay at their hospitals have been grouped into two categories:

- 'job commitment' reasons satisfying, challenging, provides security, good experience, happy atmosphere.
- ii. 'home commitment' reasons convenient for travelling, suitable for combining with family responsibilities, attractive hours, need the money.

The main reasons they said they would leave were:

- i. 'unavoidable' reasons pregnancy, retirement, to get a job nearer home.
- ii. for promotion or to widen experience many of the CNs felt that about two years in post was the optimum period after which the challenge of the job had gone and a change was needed. A number had been looking for other posts but without success.
- iii. 'dissatisfaction' reasons inconvenient hours, no advancement opportunities, insufficient support from management.

During the 18 months following questionnaire administration 36 (28%) CNs left their hospitals and they gave the following reasons:

pregnancy	6
leaving area	5
retirement	1
further training/experience	9
promotion	1
dissatisfaction/need a change	6
asked to resign	1
not known	7

Not much reliance can be put on these categories because they are not necessarily mutually exclusive. For example, some of those who left for further experience or because they were pregnant may have been unhappy in their jobs and so decided to move or start a family.

The relationship of biographical variables to propensity to leave and absence

The two 'withdrawal' variables, propensity to leave and absence, were cross-tabulated with several biographical variables to determine the nature of the relationship between them. Data which refer to the total sample only are included here. Chi-squared 2-tail tests have been used, and where the data have been cast into 2 x 2 c-ntingency tables, the chi-squared formula has been corrected for continuity (Siegel, 1956). The Propensity to Leave Index scores were divided into two categories, 'intending stayers' (score 4-9) and 'uncertains and intending leavers' (score 10-20). Absence frequency was coded into four categories according to the number of spells taken in two years: 0-2, 3-5, 6-8, and 9 or more spells, although when expected frequencies were less than 5 in 20% or more of the cells, categories were combined.

Age

The null hypotheses of no difference between age group and propensity to leave, and age group and absence were tested, and the data are shown in Tables 60 and 61.

Table 60: Distribution of age by propensity to leave

	age (years)								
propensity to	< 30)	30 - 39		40 +				
leave	freq	%	freq	%	freq	%			
intending stayers	35	51.5	19	57.6	25	92.6			
uncertains and intending leavers	33	48.5	14	42.4	2	7.4			
total	68		33		37				

 χ_2 = 14.17, df = 2, p<.001

Table 61: Distribution of age by absence

	age (years)								
absence (spells)	< 30		30 - 39		40 +				
	freq	%	freq	%	freq	%			
0 - 2	29	42.0	12	31.6	12	44.4			
3 - 5	14	20.3	11	28.9	6	22.2			
6 - 8	8	11.6	6	15.8	2	7.4			
9 +	18	26.1	9	23.7	7	25.9			
total	69		38		27				

 $\chi_2 = 2.69$, df = 6, ns

The data demonstrate convincingly that more CNs under 30 were likely to leave and more aged 40 or over were likely to stay than expected by chance, but the proportions of CNs who took varying numbers of absence spells were similar in each age group.

Length of service in present job

Data categorised into tenure bands by propensity to leave are shown in Table 62, and by absence spells in Table 63.

Table 62: Distribution of tenure in present post by propensity to leave

propensity	tenure (years)							
to leave	1 or less		over 1-3		over 3 - 5		ove	r 5
	freq	%	freq	%	freq	%	freq	%
intending stayers	25	53.2	24	60.0	12	63.2	18	81.8
uncertains & intending leavers	22	46.8	16	40.0	7	36.8	4	18.2
total	47		40		19		22	

 χ_2 = 5.28, df = 3, ns

Table 63: Distribution of tenure in present post by absence

	tenure (years)									
absence	1 or less		over 1 - 3		over 3 - 5		over 5			
(spells)	freq	%	freq	%	freq	%	freq	%		
0 - 2	20	40.8	14	34.1	11	52.4	8	34.8		
3 - 5	10	20.4	10	24.4	4	19.0	7	30.4		
6 +	19	38.8	17	41.5	6	28.6	8	34.8		
total	49		41		21		23			

 χ^2 = 2.88, df = 6, ns

The data indicate that the proportions of CNs in each tenure group likely to stay or leave were similar except for those who had been in their jobs for over 5 years, but the numbers were too small to affect the significance test. With absence, two categories had to be combined because of small expected frequencies, and there was a similar proportion of absence spells in each tenure group.

Nationality

Because of the preponderance of British CNs in the sample, all other nationalities were grouped into one category. Tables 64 and 65 show the distribution of propensity to leave and absence by nationality.

Table 64: Distribution of nationality by propensity to leave

	nationality						
propensity to leave	Brit	tish	Other				
	freq	%	freq	%			
intending stayers	66	63.5	12	52.2			
uncertains and intending leavers	38	36.5	11	47.8			
total	104		23				

$$\chi^2 = 0.59$$
, df = 1, ns

Table 65: Distribution of nationality by absence

absence	nationality						
(spells)	Brit	tish	Other				
	freq	%	freq	%			
0 - 2	46	43.0	7	28.0			
3 - 5	26	24.3	4	16.0			
6 - 8	11	10.3	5	20.0			
9 +	24	22.4	9	36.0			
total	107		25				

$$\chi_2 = 4.82$$
, df = 3, ns

There was no significant difference between propensity to leave or absence in relation to nationality.

Marital status

Data showing the score distributions of propensity to leave and absence by marital status are in Tables 66 and 67.

Table 66: Distribution of marital status by propensity to leave

propensity to leave	marital status						
	sir	ngle	married & other				
	freq	%	freq	%			
intending stayers	22	44.9	57	72.2			
uncertains and intending leavers	27	55.1	22	27.8			
total	49		79				

$$\chi^2 = 8.39$$
, df = 1, p < .01

Table 67: Distribution of marital status by absence

	marital status						
absence (spells)	single married & other						
	freq	%	freq	%			
0 - 2	25	49.0	28	33.7			
3 - 5	8	15.7	23	27.7			
6 - 8	6	11.8	10	12.0			
9 +	12	23.5	22	26.5			
total	51		83				

$$x^2 = 3.95$$
, df = 3, ns

Marital status did distinguish between those likely to stay or leave, since significantly more single CNs were uncertain or likely to leave and more married CNs were likely to stay than expected by chance. The association between marital status and absence, however, was not significant.

Number of children

Those CNs who had no children were compared with those who had one or more on their propensity to leave scores and number of absence spells (Tables 68 and 69).

Table 68: Distribution of number of children by propensity to leave

propensity to leave	number of children						
	nor	ie	one or	r more			
	freq	%	freq	%			
intending stayers	43	51.2	36	81.8			
uncertains and intending leavers	41	48.8	8	18.2			
total	84		44				

$$\chi^2 = 10.21$$
, df = 1, p<.01

Table 69: Distribution of number of children by absence

		number o	of child	ren
absence (spells)	no	ne	one or	more
	freq	0/	freq	%
0 - 2	37	42.5	16	34.0
3 - 5	18	20.7	13	27.7
6 - 8	11	12.6	5	10.6
9 +	21	24.1	13	27.7
total	87		47	

$$\chi^2$$
 = 1.45, df = 3, ns

More CNs without children were uncertain or likely to leave and more with children were likely to stay than expected by chance, but similar proportions of absence spells were taken by CNs with or without children.

Shift

The number of CNs who worked on different shifts was compared with their propensity to leave scores (Table 70) and absence spells (Table 71).

Table 70: Distribution of shift worked by propensity to leave

		- Prefu	shift			The State
propensity to leave	earlies	& lates	days	5*	nig	nts
to reave	freq	%	freq	%	freq	%
intending stayers	52	60.5	10	62.5	17	65.4
uncertains and intending leavers	34	39.5	6	37.5	9	34.6
total	86		16	W 144	26	

 $[\]chi_2 = 0.21$, df = 2, ns

^{*} approx 8 a.m. to 5.30 p.m.

Table 71: Distribution of shift worked by absence

		sh	ift worke	d		
absence (spells)	earlies	& lates	day	S	nig	hts
	freq	0/	freq	%	freq	%
0 - 2	37	41.6	7	36.8	9	34.6
3 - 5	21	23.6	7	36.8	3	11.5
6 +	31	34.8	5	26.3	14	53.8
total	89		19		26	

$$\chi^2 = 6.04$$
, df = 4, ns

There was no difference between intending stayers and leavers according to shift worked, and although a greater proportion of night CNs than CNs on the other shifts had 6 or more absence spells in 2 years, the differences observed between absence spells and shift worked were not significant.

Travelling to work

It was possible that those CNs who had a long distance to travel to work would be more likely to leave and take more absence than those who lived near the hospital (Tables 72 and 73).

Table 72: Distribution of travelling distance to work by propensity to leave

			dist	ance to	work (m	iles)		
propensity to leave	<	1	1 -	4	5 -	9	10 -	+
to reave	freq	%	freq	%	freq	%	freq	%
intending stayers	11	50.0	34	61.8	20	66.7	14	70.0
uncertains & intending leavers	11	50.0	21	38.2	10	33.3	6	30.0
total	22		55 .		30		20	

$$\chi^2$$
 = 2.17, df = 3, ns

Table 73: Distribution of travelling distance to work by absence

		di	stance t	co work	(miles)	
absence (spells)	<	5	5 -	9	10	+
	freq	%	freq	%	freq	%
0 - 2	31	40.3	. 11	34.4	10	45.5
3 - 5	18	23.4	9	28.1	4	18.2
6 - 8	10	13.0	4	12.5	1	4.5
9 +	18	23.4	8	25.0	7	31.8
total	77		32		22	

 \times 2 = 2.56, df = 6, ns

A greater proportion of intending stayers lived more than

10 miles from the hospital, and a greater proportion of uncertains or
intending leavers lived close by, but these differences were not significant.

Nor did the number of absence spells increase with distance travelled.

An association between the number of changes in mode of travel (rather than length of journey per se) and absence has been reported in London office workers (Taylor & Pocock, 1972) and ease of travel in relation to both propensity to leave and absence is reported here (Tables 74 and 75).

Table 74: Distribution of ease of travelling by propensity to leave

		travell	ing	
propensity to leave	easy/fairl	y easy	diffic	ult
	freq	%	freq	%
intending stayers	75	64.1	4	36.4
uncertains & intending leavers	42	35.9	7	63.6
total	117		11	

 $\chi^2 = 2.21$, df = 1, ns

Table 75: Distribution of ease of travelling by absence

		travelli	ng	
absence (spells)	easy/fairl	y easy	diffic	ult
	freq	%	freq	%
0 - 2	51	42.5	2	16.7
3 +	69	57.5	10	83.3
total	120		12	

 χ 2 = 2.05, df = 1, ns

Very few CNs reported difficulty with travelling and no association was found between this and either propensity to leave or absence spells, although the data do suggest a trend in the expected direction.

Finally, comparisons were made between propensity to leave and absence spells, and one more item, 'If you could go back to when you were at school, would you still choose nursing as a career?'. These data are presented in Tables 76 and 77.

Table 76: Distribution of absence by propensity to leave

	abs	sence (s	pells)	
propensity to leave	0 -	2	3 +	
	freq	%	freq	%
intending stayers	51	65.4	28	56.0
uncertains and intending leavers	27	34.6	22	44.0
total	78		50	

 $\chi^2 = 0.01$, df = 1, ns

Those who intended to stay in their jobs did not take more absence spells than those who were uncertain or intending to leave. Further information on absence rates is presented on p. i50 and the number of absence spells taken by those CNs who left their jobs has been compared with that of a matched sample of stayers (p. 323).

Table 77 shows the data about choosing nursing again in relation to propensity to leave.

Table 77: Distribution of the item 'would you choose nursing again?' by propensity to leave

	choo	se nursi	ng again	
propensity to leave	У	res	no/ur	sure
	freq	%	freq	%
intending stayers	68	71.6	10	31.3
uncertains and intending leavers	27	. 28.4	22	68.8
total	95		32	

$$\chi^2 = 14.77$$
, df = 1, p < .001

A significantly greater proportion of CNs in the 'uncertains and intending leavers' group were unsure or would not have chosen nursing again, and more intending stayers said they would nurse again, than expected by chance.

In summary, propensity to leave and the number of absence spells taken by the CNs were each cross-tabulated against age, tenure, nationalty, marital status, number of children, shift worked, travelling distance to work and ease of travelling, and chi-squared tests of significance applied.

In addition, propensity to leave was tabulated against absence spells and whether the CN would choose nursing again given the chance to turn the clock back. Four of the tests were significantly different from chance expectation: a greater proportion of young (under 30) CNs were likely to leave and more older (40 years and over) were likely to stay than expected by chance; more single than married CNs and more without than with children were potentially mobile than expected; and more of those who were unsure about or would not have chosen nursing again were in the 'uncertain and intending leavers' group.

None of the comparisons with absence was significantly different from chance expectation, which suggests that absence was not a noteworthy variable with this sample of CNs. However, further examination of the frequency of absence spells has been made elsewhere (p 150).

In addition to the cross-tabulations described above, the relationships between age and tenure and job satisfaction and withdrawal were examined with correlational analysis (Table 78).

Table 78: Correlations (Pearson's) between age and tenure and job satisfactions, absence and propensity to leave (N = 128-132)

	global satisfaction	intrinsic satisfaction	trinsic tisfaction	general satisfaction	absence (spells)	propensity to leave
	S	in	ex	ge	ah (s)	pr
age	ns	ns	21*	20*	ns	-26**
tenure	ns	ns	ns	ns	ns	-19*

^{*} p≤.05 ** p≤.01

The coefficients were low and mostly not significant. Age correlated positively and significantly with extrinsic and general satisfaction

(p < .05) and negatively with propensity to leave (p < .01), and tenure correlated significantly and negatively only with propensity to leave (p < .05). The cross-tabulation (p.216) showed that the young (under 30 years) CNs were more likely to leave than the older CNs (over 40), and the chi-squared test was significant at the p < .001 level. The tabulation between age and absence spells, however, revealed no significant association and this was supported by these correlational data. With tenure, the cross-tabulation showed that the proportions in each tenure group of CNs likely to stay or leave their jobs were similar except for those who had been in their jobs for over 5 years and a greater proportion of these were likely to stay than leave. The chi-squared test was not significant, however, but the correlation coefficient was, although it was not large (r = -.19, p < .05). With absence spells no significant correlations were found with age or tenure, which supports the chi-squared tests.

Discussion

In the absence of comparable research findings, it is difficult to conclude whether the 40% of CNs who were uncertain of their plans or who were intending to leave was alarmingly high. The recent work by Mercer and Mould (1976) and Mercer et al. (1976) with qualified 'ward-based' nurses in West Yorkshire provides the most appropriate comparative data. They asked one question which was very similar to one of the items included here (likelihood of leaving in next 12 months). Unfortunately their results were presented for CNs, staff nurses and enrolled nurses combined, but 15% indicated that they would be definitely leaving, 31% were uncertain, 15% thought there was a slight chance they would leave, and 38% definitely intended to stay (Mercer et al. 1976). Thus the 46% of 'uncertains and definite leavers' was fairly close to the 40% reported in the present study, but since the latter involved CNs only,

who are generally considered to be more occupationally stable than staff nurses, the extent of expressed intent to leave appeared to be higher in the present study than in the West Yorkshire CNs.

In fact, 36 CNs in the present study left their jobs during the 18 months after data collection, which was 28% of the sample. As far as was known, the largest proportion (9) left to take further training or to gain more experience in another CN's job, 6 were pregnant, 6 were dissatisfied or needed a change, and 5 were leaving the area. Mercer and Mould (1976) found that 16% of the CNs who completed their first questionnaire left their jobs during the subsequent 12 months which was somewhat fewer than the rate of leaving in the West Midlands. Mercer and Mould classified the reasons for leaving given by all those who left (CNs, staff nurses and enrolled nurses combined) and found that the greatest proportion (19%) left for marriage or pregnancy, followed by 'further training' (14%), 'want a change/moving' (10%), and promotion/better job' (8%). Six percent left because they disliked the hospital, the hours, etc., 3% transferred to another job in the same hospital group, and 0.4% were 'leaving nursing altogether'. The small numbers involved in the present study and the different classifications used make comparison difficult, but the results suggested that a greater proportion of the West Midlands CNs compared with their opposite numbers in West Yorkshire left for further training and experience, fewer were pregnant, and more were dissatisfied with their jobs or wanted something new.

How did propensity to leave in the CNs compare with other workers?

Waters, Roach & Waters (1976) found that 20% of the female clerical workers in an American insurance company did not intend to stay in their jobs, 24% planned to stay until they qualified for a better job elsewhere or become married/pregnant, and 56% planned to stay indefinitely. This was somewhat similar to the CNs' Propensity to Leave index result, where 62%

gave low scores and 38% medium or high scores. However, although first impressions suggest concern that the potential stability rate of highly qualified CNs was not much higher than that of clerical workers, there was very little evidence of wastage from nursing altogether. On the contrary, the conclusion reached by Mercer and Mould (1976) that nurses moved from job to job to gain further experience in their chosen occupation, was supported in the present study. Such a 'mobility culture' in trained nurses at the clinical level was in strong contrast to the much more stable environment of American salesmen. Kraut (1975) found that 90% said if they had their way, they probably or certainly would be working for the same company in 5 years' time compared with only 10% who were not sure or would not be there. This was not to say, however, that they were expecting to remain in the same jobs. There may have been an attractive promotion policy for the salesmen, whereas the CNs who wanted to retain patient contact felt that promotion prospects were slim and the only alternative to falling into 'a rut' was to move jobs every few years.

The mean score of the 3-item propensity to leave index used by Lyons (1971) was 3.47 in a sample of American school teachers (Paul, 1974). This was considerably higher than the mean of 2.26 found in the present study. It is unfortunate that comparisons cannot be made with Lyons' (1968, 1971) American registered staff nurses, since he did not publish the propensity to leave scores. Lower leaving intention scores were reported by Rizzo et al. (1970) for American managers ($\bar{x} = 2.19$) and research engineers ($\bar{x} = 1.70$) when using a slightly different propensity to leave scale. Finally, very high leaving intentions were expressed by a large sample of assorted American workers which included supervisory and non-supervisory hospital workers, employees from a research and development organization, a printing company and car accessory plants (Beehr & Gupta, 1978). The mean score in response to a question

very similar to the fourth one in Table 153 (likelihood of leaving in next 12 months) was 4.04, compared with 2.29 in the CNs.

In conclusion, the data on leaving intentions suggest that the 40% or so 'uncertains and intending leavers' were not planning to leave through disenchantment with nursing itself, although there was some criticism of the hospital environment (see chapter 9). On the contrary, most of those who were planning to leave nursing intended to have children and probably return to nursing later on, and of the remainder, most were totally committed to nursing and planned to leave for reasons of career growth.

5 RELIABILITY OF THE SCALES

Information is presented here on internal consistency of the scales used on the total sample and comparisons are made with previous work. Inter-item correlation coefficients were calculated using Kendall's Tau and Pearson's Product Moment correlation coefficients according to the level of measurement of the scale Each item was then correlated with its index (i.e. the total scale) score. To avoid falsely inflated correlation coefficients the item was deleted from its index and the subsequent correlations were corrected for length. Cronbach's alpha reliability coefficient (Cronbach, 1951) was computed for the total Alpha was selected in preference to the split-half reliability coefficient because, since alpha is the "... mean of all split-half coefficients resulting from different splittings of a test", (Cronbach, 1951, p.297) it is likely to be more representative than a random split-half coefficient. The SPSS Reliability computer program (Specht and Hohlen, 1975) was used for the item-index and alpha coefficients, which meant that Pearson's correlation coefficients were used even though a non-parametric item-index correlation would have been more appropriate for many of the scales. It was considered legitimate to take advantage of the Reliability computer program because, with the total sample (N = 101-132), the difference between inter-item correlation coefficients derived from Pearson's and Kendall's Tau was very small.

5.1 Job Satisfaction Scales

Minnesota Satisfaction Questionnaire

Inter-item correlation coefficients for the Intrinsic Satisfaction

Scale are presented in Table 79 and item-index and the alpha reliability

Table 79 . Intrinsic Satisfaction Scale: inter-item correlation coefficients (Kendall's Tau)

	a	8	4	5	9	7	8	6	10	11	12
1. activity	*91	23**	22*	11	26**	30***	15	24***	15	60	***
2. independence		1	15	03	17*	12	31**	13	21**	12	14
3. variety			90	14	15	21**	15	37***	24***	24***	* * * 88
4. social status			1100	16*	19*	19*	33**	12	18*	90	23**
5. moral values					25**	13	23**	88***	26***	32**	14
6. security						***04	81*	23***	18*	90	30***
7. social service							17*	43***	25***	12	****
8. authority								24***	33***	13	***
9. ability utilisation									***98	23***	43***
10. responsibility										55***	***14
11. creativity											32***
12. achievement											
The party has been delicated and the party of the party o											

n = 132

* p <.05 ** p ≤.01

*** p <.001

In this and subsequent tables decimal points have been omitted for clarity

Table 80: Intrinsic Satisfaction Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	Corrected ¹ item-index correlation
1	37***
2	33***
3	37***
4	22**
5	32***
6	24***
7	11
8	41***
9	49***
10	56***
11	51***
12	61***
Alpha	a coefficient = 74

corrected for length when item removed from index $p \le .01$

^{***} p < .001

coefficients in Table 80. Of the 66 inter-item coefficients, 22 (33%) were not significant at the p \leq .05 level, and the remainder ranged from .16 to .55. The median coefficient was .22, and the total range .03 to .55. With only 16 coefficients at or above .30, the internal consistency of the intrinsic Satisfaction Scale appeared to be minimal.

Taking p ≤.01 as the criterion of significance, the items which correlated with most of the others were 'ability utilization' (the chance to do something which makes use of my abilities) and 'achievement' (the feeling of accomplishment I get from my job).

Both of these correlated significantly and positively with nine of the other items. 'Independence' (the chance to work alone on the job) correlated significantly with only two other items, and 'social status' (the chance to be 'somebody' in the community) with only three.

The corrected intem-index correlations were higher with all but three being over .30 (median = .37, range .11 to .61). The alpha coefficient was .74. In comparison with other work, the median Hoyt reliability coefficient for 6 occupational groups was higher, reaching .86 on the intrinsic satisfaction scale (Weiss et al., 1967).

Inter-item, item-index and alpha coefficients for the Extrinsic Satisfaction Scale are shown in Tables 81 and 82. Two (13%) of the 15 inter-item correlations were not significant at the p \leq .05 level, and the median correlation was .23, range .02 to .69. The corrected item-index correlations ranged from .09 to .51 and the alpha coefficient was .65, suggesting relatively low internal consistency. The item from which consistently low coefficients

Table 81: Extrinsic Satisfaction Scale : inter-item correlation coefficients (Kendall's Tau)

			2	3	4	5	6
1		supervision - human relations	69***	28***	08	25***	22**
2	2.	supervision - technical		26***	02	25***	36***
3	3.	company policies and practices	,		16*	35***	23***
4		compensation				23***	19**
5	5.	advancement					19**
6		recognition					

n = 132 * $p \le .05$ ** $p \le .01$ *** $p \le .001$

Table 82: Extrinsic Satisfaction Scale : corrected item-index correlations coefficients and alpha reliability coefficient

Item	Corrected item-index correlation
1	41***
2	5]***
3 .	48***
4	09
5	45***
6	39***
alph	a coefficient = 65

1 corrected for length when item removed from index *** p < .001

emerged was satisfaction with pay (compensation). Weiss et al (1967) reported a median Hoyt reliability coefficient of .80 on the extrinsic satisfaction scale.

Data for the General Satisfaction Scale are presented in Table 83 and Table 154 in Appendix 11. 54 (28%) of the 190 coefficients were not significant, and the median was .21, range -.05 to .69. The item-index correlations ranged from .11 to .59 with a median of .42, and the alpha coefficient was .83, which was lower than the median Hoyt reliability coefficient of .90 for the General Satisfaction Scale reported by Weiss et al. (1967).

What is an acceptable level of alpha? Nunnally (1970) advised that no definite rules could be made as to a minimum acceptable criterion but one should be suspicious if a test has a reliability coefficient of less than .80. This criterion, however, applies more to ability tests and personality measures in which one needs to discriminate accurately between individual scores. When attitude scales are used in surveys, the objective is to discriminate between groups rather than individuals and so a lower reliability coefficient is acceptable. Bond (1974) observed that .50 seems to be the minimal acceptable level of alpha for most researchers.

An alpha coefficient of .83 for the General Satisfaction Scale is relatively respectable but, even though they exceeded Bond's criterion of .50, the coefficients of .74 for Intrinsic Satisfaction and .65 for Extrinsic Satisfaction indicate some inconsistency.

Table 83: General Satisfaction Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected ¹ item-index correlation
1	36***
2	40***
3	40***
4	25***
5	37***
6	25***
7	11
8	40***
9	47***
10	59***
11	53***
12	55***
13	44***
14	48***
15	52***
16	14
17	56***
18	44***
19	43***
20	36***
alph	a coefficient = 83

 $^{^{1}}$ corrected for length when item removed *** p $\leqslant .001$

Global Satisfaction Index

This index consisted of two items only, and so alpha coefficients could not be calculated. The correlation between satisfaction with the hospital and with the job was $.28 \ (p < .001, N = 130)$. This was lower than the coefficient of .44 reported by Lyons (1971) in his study with American staff nurses.

5.2 Perceived Role Pressure Scales

This section includes reliability information on the Job-Related Tension, Role Clarity, Need for Clarity, Role Conflict and Role Ambiguity scales.

Job-Related Tension Index

This index consisted of 9 items relating to both conflict and ambiguity and so a relatively inconsistent scale was expected. The inter-item correlations, item-index and alpha coefficients are presented in Tables 84 and 85. Three (8%) of the 36 inter-item correlations were not significant at the p \leq .05 level, and the median coefficient was .32 with a range of .12 to .70. This compares closely with the median coefficient of .36 reported by Lyons (1971). The highest coefficient (.70) in the present study occurred between the two workload items, the CN being bothered by too heavy a workload, and it interfering with the quality of work. When the ambiguity items (1 to 5 in Table 84) were separated from the conflict items (6 to 9), the inter-item correlations were relatively high. For the ambiguity items these ranged from .30 to .49, median .35, and all were

Table 84 . Job-Related Tension Index: inter-item correlation coefficients (Kendall's Tau)

6	48***	26***	***88	40 ***	41***	40***	34***	39**	
8	32***	19*	12	30***	35***	24***	33***		
7	24**	14	18*	24***	24***	***02			
9	23**	13	24***	23**	***				
2	43***	31**	45***	49***					
4	45***	30***	30***						
ဗ	33**	32**							
Q	36**								
	1. unclear about scope and responsibilities	2. not knowing advancement opportunity	3. unclear how nursing officer evaluates performance	4. unable to get information to do job	5. uncertain of colleagues' expectations	6. workload too heavy	7. workload interferes with quality of work	8. do things against better judgement	9. unable to satisfy others' conflicting demands

** p <.01 * p <.05

n = 131

*** p<.001

Table 85: Job-Related Tension Index : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1	44***
2	22**
3	37***
4	43***
5	51***
6	42***
7	34***
8	41***
9	52***
alph	a coefficient = 73

¹ corrected for length when item removed from index ** $p \le .01$ *** $p \le .001$

significant at the p <.001 level, and for the conflict items, the range was from .24 to .70, median .37, all p <.001. Although some of the correlations between the ambiguity and conflict items were reasonably high, they ranged from .12 to .48 with a median of .24. These results do suggest that role ambiguity and conflict are independent factors. The corrected item-index correlations ranged from .22 to .52, with a median of .42 (Table 85), and the alpha reliability coefficient was .73.

These correlations compare favourably with Lyons' (1971) median item-index correlation of .59 (apparently uncorrected) and his split-half coefficient of .70. In an earlier study with nurses (Lyons, 1968), Lyons used two of the items employed in the present study: 'workload too heavy' and 'workload interferes with quality of work'. He

reported a correlation coefficient of .62 (p < .01) between these two items, whereas it was .70 (p < .001) in the present study.

Role Clarity and Need for Clarity Indices

Inter-item correlations for the 4 items in the Role Clarity

Index ranged from .39 to .62 (p < .001), with a median of .46

(Table 86). This demonstrated relatively high internal consistency
which was supported by the corrected item-index correlations

(.57 to .69) and the alpha coefficient of .81 (Table 87). Lyons (1971)
reported a median inter-item correlation of .36 and a split-half
reliability coefficient of .70.

Table 86: Role Clarity Index : inter-item correlation coefficients

(Nellual) 3 lau/						
	(10)	2	3	4		
1. c1	ear about limits of authority	62	49	43		
2. c1	ear about how to do job		52	43		
3. c1	ear about what to do in job			39		
	learly defined policies, rules d regulations					

n = 131p \leq .001 for all coefficients

Table 87: Role Clarity Index: corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected litem-index correlation
1	69
2	57
3	65
4	57
alp	ha coefficient = 81

 $^{^{1}}$ corrected for length when item removed from index p <.001 for all coefficients

Similarly, the Need for Clarity inter-item correlations were relatively high (median = .37, range .33 to .66), the item-index correlations ranged from .45 to .58, and the alpha coefficient was .75 (Tables 88 and 89). The median inter-item correlation in Lyons' (1971) nurses was .38, and the split-half reliability coefficient, .82.

Table 88: Need for Clarity Index : inter-item correlation coefficients (Kendall's Tau)

		2	3	4
1.	importance of knowing limits of authority	43	34	38
2.	importance of knowing how to do job		66	33
3.	importance of knowing what to do			35
4.	importance of knowing how well one is doing			

n = 131

p < .001 for all coefficients

Table 89: Need for Clarity Index : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected 1 its	em-index	correlation
1		55	
2		51	
3		58	
4		45	
alpha	a coefficient	=	75

¹ corrected for length when item removed from index $p \le .001$ for all coefficients

Role Conflict and Role Ambiguity Scales

The Role Conflict Scale contained 8 items and inter-item, itemindex and alpha coefficients are presented for the Objective Role Conflict Scale in Tables 90 and 91, and for the Subjective Conflict Scale in Tables 92 and 93. Two (7%) of the Objective Conflict Scale's inter-item correlations were not significant, the range was from .09 to .48, and the median was .35. The corrected item-index correlations ranged from .34 to .59 and the alpha coefficient was .80. This compares well with the Kuder Richardson coefficient of .82 for two samples, reported by Rizzo et al. (1970). The Kuder Richardson coefficient is a special case of alpha (Cronbach, 1951). The inter-item correlations of the Subjective Conflict Scale ranged from .21 to .47 (all p <.01 or better) and the median was .32. The item-index correlations ranged from .42 to .62 and the alpha coefficient was .79.

The 6 Role Ambiguity items revealed a similar picture, and data are presented in Tables 94 and 95 for Objective and Tables 96 and 97 for Subjective Ambiguity. The inter-item correlations for the Objective Ambiguity Scale ranged from .21 to .61, with a median of .38. The item-index correlations ranged from .43 to .70 and the alpha coefficient was .79. Rizzo et al. (1970) found Kuder Richardson coefficients in two samples to be .78 and .81. The Subjective Ambiguity Scale's inter-item correlations ranged from .20 to .58, median .37, the item-index correlations ranged from .42 to .67, and the alpha coefficient was .77.

These results provide considerable support for the internal consistency of the Conflict and Ambiguity Scales.

Table 90: Objective Role Conflict Scale : inter-item correlation coefficients (Pearson's)

		2	3	4	5	6	7	8
1.	do things that should be done differently	35***	33***	15	26***	23***	26***	44***
2.	insufficient manpower		38***	24***	38***	46***	31***	30***
3.	have to bend rules			30***	43***	41***	44***	36***
4.	work with groups which operate differently				25***	36***	09	22**
5.	incompatible requests from 2 or more people					42***	34***	36***
6.	do things that are accepted by one person but not others						34***	38***
7.	insufficient resources and materials							48***
8.	do unnecessary things							

n = 120 ** $p \le .01$ *** $p \le .001$

Table 91: Objective Role Conflict Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected litem-index correlation
1	44
2	53
3	59
4	34
5	54
6	58
7	49
8	56
alph	na coefficient = 80

¹ corrected for length when item removed from index all coefficients $p \leq .001$

Table 92: Subjective Role Conflict Scale : inter-item correlation coefficients (Pearson's)

	2	3	4	5	6	7	8
1. 1	28***	37***	23***	26***	21**	31***	41***
2.		41***	28***	42***	30***	31***	30***
3.			41***	36***	33***	47***	40***
4.				38***	21**	23***	24***
5.					32***	35***	33***
6.						27***	31***
7.							39***
8.							

¹ see Table 90 for description of items n = 117 ** $p \le .01$ *** $p \le .001$

Table 93: Subjective Role Conflict Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1	45
2	50
3	62
4	43
5	54
6	42
7	51
8	53
alph	na coefficient = 79

¹ corrected for length when item removed from index all coefficients $p \leq .001$

Table 94: Objective Role Ambiguity Scale : inter-item correlation coefficients (Pearson's)

	2	3	4	5	6
1. clear, planned goals	36***	51***	51***	35***	33***
2. know have divided time properly		29***	48***	21**	24***
3. know my responsibilities			61***	40***	43***
4. know what is expected of me				38***	41***
5. know how much authority I have					21**
6. explanation clear of what has to be done					

n = 120 ** $p \le .01$ *** $p \le .001$

Table 95: Objective Role Ambiguity Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1′	59
2	43
3	65
4	70
5	43
6	44
alph	a coefficient = 79

1 corrected for length when item removed from index
all coefficients p ≤.001

Table 96: Subjective Role Ambiguity Scale : inter-item correlation coefficients (Pearson's)

		2	3	4	5	6
1.	1	34***	46***	51***	25***	24***
2.			27***	40***	20**	33***
3.				58***	44***	39***
4.	lide.				39***	37***
5.						20**
6.						

1 see Table 94 for description of items n = 120 *** $p \le .01$ *** $p \le .001$

Table 97: Subjective Role Ambiguity Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1	52
2	43
3	64
4	67
5	42
6	42
alpl	na coefficient = 77

¹ corrected for length when item removed from index all coefficients $p \le .001$

5.3 Satisfactoriness Scales

Reliability data of the four subscales of the Satisfactoriness

Scale are presented here together with the whole scale. Tables 98
and 99 contain inter-item correlations, item-index correlations and
the alpha reliability coefficient for the Performance Scale. The
inter-item correlations ranged from .04 to .83 and the median was .32.

Four (11%) of the 36 coefficients were not significant and 14 (39%)
were lower than .30 which indicates some internal inconsistency.

The range of corrected item-index correlations was from .30 to .65
and the alpha coefficient was .84. The Hoyt reliability coefficient
for 'workers-in-general', which included practical nurses, was .90
(Gibson et al., 1970).

Tables 100 and 101 provide the information for the Conformity

Scale. The inter-item correlations ranged from .04 to .53 with

3 (14%) failing to reach significance, and the median was .38. The

3 non-significant correlations all belonged to one item, 'gets along with co-workers', which can be singled out from the other items which all related to some extent to supervision, authority and discipline. The item-index correlations ranged from .31 to .65 and the alpha coefficient was .80. Gibson et al's (1970) Hoyt reliability coefficient was .85.

The data for the Dependability Scale are presented in Tables 102 and 103. The inter-correlations between the 4 items ranged from .23 to .49 with a median of .38, the range of item-index correlations was .42 to .59, and the alpha coefficient was .71. Gibson et al's (1970) Hoyt reliability coefficient was .74.

Data on the final subscale, Personal Adjustment, are in Tables 104 and 105. The inter-item correlations ranged from .11 to .78, median .37. Six (29%) of the 21 coefficients were below .30, which suggests, like the Performance Scale, some inconsistency. The item-index correlations ranged from .44 to .71, and the alpha coefficient was high, .82, which compares with the Hoyt reliability coefficient of .85 reported by Gibson et al. (1970).

The inter-item correlation coefficients for the General Satisfactoriness Scale are in Appendix 11. Table 106 shows the corrected item-index correlations and these ranged from .23 to .59, with a median of .46. The alpha coefficient was .89, compared with Gibson et al's (1970) Hoyt reliability coefficient of .94.

Table 98: Performance Scale : inter-item correlation coefficients (Kendall's Tau)

	2	3	4	5	6	7	8 .	9.
1. accepts responsibility of job	43***	32***	53***	44***	21*	41***	46**	43***
2. adapts to changes in methods		50***	31***	47***	19*	35***	40***	21*
3. performs tasks requiring variety and change in methods			37***	25**	04	28***	28***	15
4. quality of work good				59***	24**	34***	35***	40***
5. quantity of work good					30***	25**	36***	45***
6. recommend pay rise						12	14	27***
7. transfer to job at higher level							83***	25**
8. promote to more responsible position								30***
9. overall competence								

n = 101

* p ≤ .05

**p ≤.01

***p < .001

Table 99: Performance Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected litem-index correlation
1	65
2	55
3	40
4	61
5	63
6	30
7	59
8	62
9	53
alph	a coefficient = 84

¹ corrected for length when item removed from index all coefficients $p \le .001$

Table 100: Conformity Scale: inter-item correlation coefficients (Kendall's Tau)

						,
	2	3	4	5	6	7
1. follows hospital policies and practices	29***	41***	38***	38***	44***	16
2. accepts direction of supervisor		48***	51***	38***	47***	11
3. follows standard rules and procedures			31***	30***	31***	04
4. respects authority of supervisor				47***	53***	22*
5. works as member of team					44***	34***
6. gets along with supervisors						31***
7. gets along with co-workers						

n = 101

* p < .05

** p ≤ .001

Table 101: Conformity Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected litem-index correlation
1	51
2	57
3	44
4	64
5	59
6	65
7	31
alph	na coefficient = 80

¹ corrected for length when item removed from index all coefficients p \leq .001

Table 102: Dependability Scale : inter-item correlation coefficients (Kendall's Tau)

	2	3	4
1. comes late for work	23*	44***	33***
2. needs disciplinary action		37***	38***
3. stays absent from work			49***
4. doesn't listen when spoken to			

n = 101

*p ≤ .05

*** p < .001

Table 103: Dependability Scale : corrected item-index correlation coefficients and alpha reliability coefficient

-	Item	corrected litem-index correlation
	1	46
	2	42
	3	59
	4	53
	alph	na coefficient = 71

¹ corrected for length when item removed from index all coefficients p \leq .001

Table 104: Personal Adjustment Scale : inter-item correlation coefficients (Kendall's Tau)

		2	3	4	5	6	7
1.	becomes overexcited	45***	37***	35***	51***	31***	32***
2.	becomes upset and unhappy		41***	31***	22*	11	18*
3.	seems bothered by something			21*	39***	12	29***
4.	complains about physical ailments				45***	61***	45***
5.	says 'odd' things					49***	78***
6.	tires easily						53***
7.	wanders from subject to subject when talking						

n = 101 * p $\leq .05$ *** p $\leq .001$

Table 105: Personal Adjustment Scale : corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1	60
2	45
3	44
4	57
5	71
6	52
7	61
alph	a coefficient = 82

corrected for length when item removed from index all coefficients $p \le .001$

Table 106: General Satisfactoriness Scale: corrected item-index correlation coefficients and alpha reliability coefficient

Item	corrected litem-index correlation
1	56***
2	55***
3	38***
4	53***
5	58***
6	35***
7	35***
8	46***
9	59***
10	46***
11	41***
12	47***
13	38***
14	45***
15	46***
16	29***
17	26***
18	59***
19	53***
20	51***
21	42***
22	24*
23	31***
24	43***
25	48***
26	48***
27	54***
28	23*
alph	a coefficient = 89

 $^{^{}m 1}$ corrected for length when item removed from index

^{*} p ≤ .05 *** p ≤ .001

5.4 Propensity to Leave Scale

The data presented in Tables 107 and 108 demonstrate how internally consistent the Propensity to Leave Index was. The inter-item correlations ranged from .45 to .57, with a median of .56. Lyons (1971) used the first three items only in his Propensity to Leave Index, and reported inter-item correlations of .75, .59 and .54, which were very similar to those found in his earlier study (1968). The corrected item-index correlations ranged from .54 to .76 in the present study, and the alpha coefficient was .82. Lyons' (1968) item-index correlation coefficients were .92, .88 and .78, all higher than those found in the present study, but it is possible that Lyons' coefficients are artificially inflated through his failing to remove the item score from the index and correcting for length when calculating these coefficients. A study with American registered nurses reported a coefficient alpha of .87 for an intent to leave index (Price & Bluedorn, 1976b).

Table 107: Propensity to Leave Index : inter-item correlation coefficients (Kendall's Tau)

	2	3	4
1. prefer/not prefer to continue working here	52	56	55
2. how long like to stay in this hospital?		56	57
3. return later if left temporarily?			45
4. likelihood of leaving in next 12 months			

n = 127 - 128

p ≤ .001 for all coefficients

Table 108: Propensity to Leave Index: corrected inter-item correlation coefficients and alpha reliability coefficient

Item	corrected item-index correlation
1	67
2	76
3	54
4	59
alph	a coefficient = 82

¹ corrected for length when item removed from index $p \le .001$ for all coefficients

5.5 Summary

The results which emerged from the tests of reliability of the scale scores supported the scales' internal consistency to the extent that this had been confirmed in previous work. This is not to say that all the scales should be accepted as highly internally consistent, nor has the reliability analysis performed here provided sufficient evidence for homogeneity of the scales. Cronbach's alpha has been misused by many authors as a test of item homogeneity (Green et al., 1977). Green and his colleagues suggested that factor analysis provides stronger evidence of homogeneity than item-index correlations and coefficient alpha. The alpha coefficients which emerged for the scales used in this study ranged from .65 (extrinsic satisfaction) to .89 (general satisfactoriness) which is reasonable for a research survey of this kind. Factor analysis was not employed because the scales selected were accepted as being relatively reliable and it was not the purpose of this research to provide evidence of item homogeneity.

6. THE OCCUPATIONAL NEEDS - ORGANIZATIONAL REWARDS CORRESPONDENCE AND ITS RELATIONSHIP TO JOB SATISFACTION, PERCEIVED ROLE PRESSURES AND WITHDRAWAL

In this section, the extent to which the two ratings of the organizational rewards matched, and the degree of correspondence between the CNs' occupational needs and the organizational rewards, are examined. Following this, the relationships which emerged between the needs - rewards correspondence and job satisfaction, perceived role pressures and withdrawal are described, and finally, these results are summarised and discussed.

6.1 The Relationship between Occupational Needs and Organizational Rewards Using British and USA Norm Profiles

A median score profile of the CNs' occupational needs was derived from their scores on the Minnesota Importance Questionnaire (MIQ) and comparisons were made with the Minnesota Organizational Reinforcer Pattern (ORP) and the British 'ORP'. Median scores were computed in preference to means because the score distributions tended to be skewed towards one end of the scale. These ORPs were 'norm' profiles which described the extent to which the MIQ items were descriptive of the CN's job as rated by the nurses immediately senior to them. The following hypotheses were tested using Kolmogorov - Smirnov's one and two-sample tests:

- There was no difference between the Minnesota ORP and the British 'ORP'.
- The differences observed between the CNs' median MIQ profile and the British 'ORP' were minimal and did not reach significance.
- 3. The differences observed between the CNs' median score profile and the Minnesota ORP were minimal and did not reach significance.

The median scores for each of the three ratings are listed in Table 109.

Table 109 Median M1Q, Minnesota ORP and British 'ORP' Scores

		Medi	Median scores	
		CNs' *	British ORP	Minnesota *
1.	Ability utilization	7.8	6.2	6.4
2.	Achievement	7.9	6.2	7-3
3.	Activity	5.8	5.9	6.1
4.	Advancement	5.3	5.0	5.1
5.	Authority	3.3	6.8	5.5
6.	Company policies and practices	5-3	6.1	5.4
7.	Compensation	5.0	4.0	4.2
8.	Co-workers	5.6	5.6	5.9
9.	Creativity	6.2	5.9	5.3
10.	Independence	3.9	3.5	4.3
11.	Moral values	5.6	4.7	6.0
12.	Recognition	5.2	6.0	5.5
13.	Responsibility	6.6	6.6	5.6
14.	Securi ty	5.8	7.3	7.3
15.	Social service	7-7	7-3	7.9
16.	Social status	3.8	6.1	4.7
17.	Supervision - human relations	5.6	6.9	5.3
18.	Supervision - technical	5.3	6.0	5.0
19.	Variety	5.9	5.1	5.6
20.	Working Conditions	6.2	5.4	5.5
21.	Autonomy	6.1	6.7	5.6

^{*} scores converted to a 7-point scale for comparison

The Minnesota ORP and British 'ORP' profiles are presented in Figure 10. The scores were similar on most of the items with supervision - human relations, 'social status', and 'authority' providing the greatest difference between the profiles. The Kolmogorov - Smirnov two sample test for small samples showed no significant difference between the profiles (KD = 6, p > .05), which supports hypothesis 1.

The CNs' median MIQ profile and the British 'ORP' are shown in Figure 11. Again, the scores were similar except on 'authority', 'social status', 'ability utilization', 'achievement', 'security' and 'supervision - human relations'. In all but two of these discrepant scores, the median CN MIQ score indicated that less of the item was required than was provided, according to the nursing officers. The exceptions were 'ability utilization' and 'achievement', and here the median MIQ scores indicated that the CNs required substantially more opportunity to make use of their abilities and to experience a sense of achievement in their work than the job provided. In spite of these variations, the Kolmogorov - Smirnov one-sample test showed no significant difference between the profiles (D = .238, p < .20), and so hypothesis 2 was supported.

Finally, Figure 12 contains the CNs' median MIQ profile and the Minnesota ORP. Here the greatest differences were on 'authority', 'security', 'ability utilization', 'responsibility', 'social status' and 'creativity'. The CNs' median MIQ scores were higher than the ORP on 3 items, 'ability utilization', 'creativity' and 'responsibility', which suggests that the job provided them with less opportunity to achieve these characteristics than they wished. The Minnesota ORP, however, related to the American professional nurse as rated by American nurse supervisors, and so the difference between these two profiles suggested interesting cultural variation rather than real discrepancies between the British CN's occupational needs and organizational rewards. Application of the

Figure 10. Comparison of the Nursing Officers' 'ORP' with the Minnesota ORP.

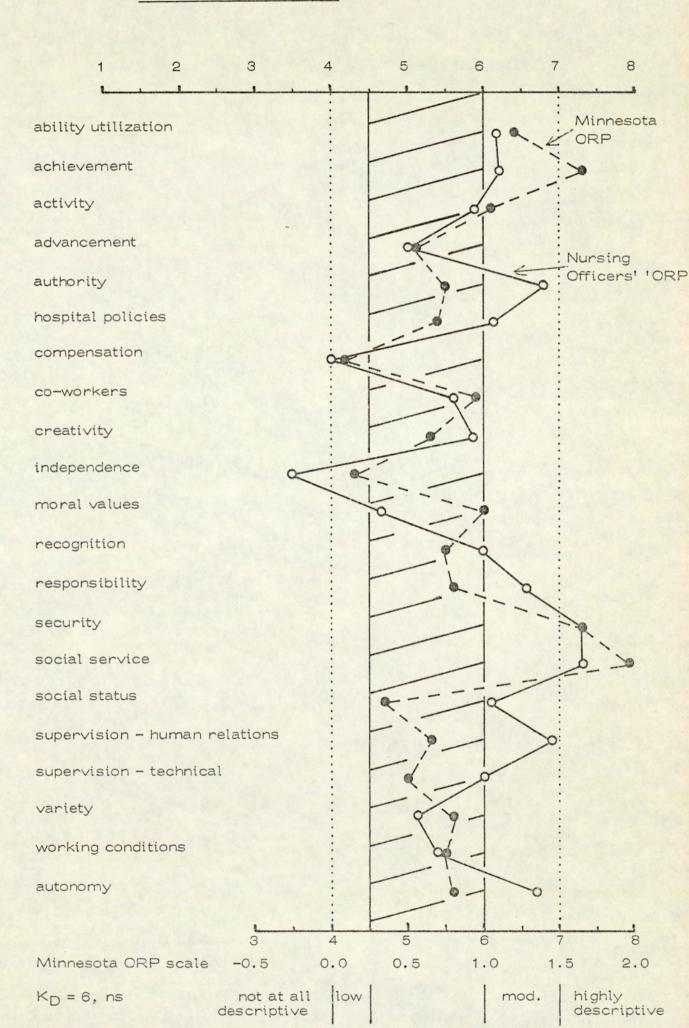


Figure 11

Comparison of the CNs' median MIQ score profile with the nursing officers' 'ORP'

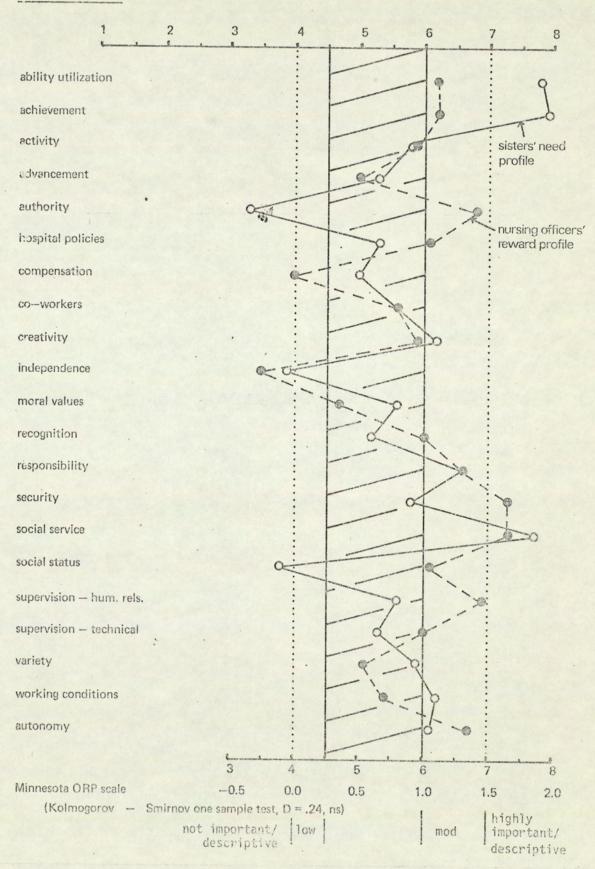
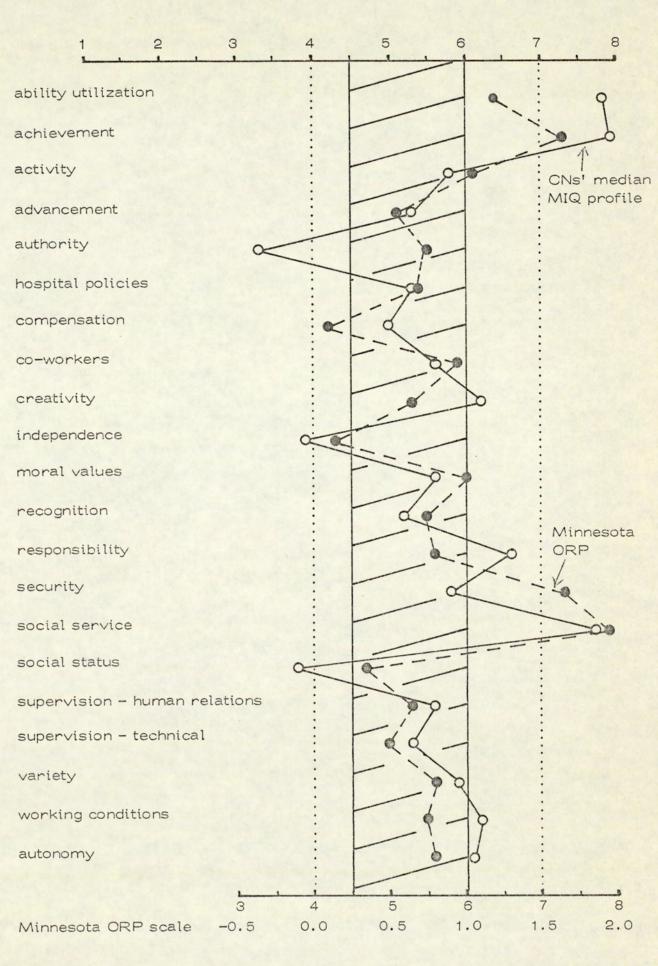


Figure 12. Comparison of the CNs' median MIQ score profile with the Minnesota ORP.



 $D = \cdot 14$, ns

not important/ low descriptive

mod.

highly important/ descriptive Kolmogorov - Smirnov one-sample test revealed no significant difference between the profiles (D = .143, p >.20) which supports hypothesis 3. In fact, the D values suggested that the CNs' median MIQ profile was closer to the Minnesota ORP than to the British one.

The items which the CNs regarded as being most important for their ideal jobs were 'being able to use their abilities' (ability utilization), 'gaining a sense of accomplishment' (achievement), and 'doing things for other people' (social service). Moderately important items were 'being given the opportunity to try out their own ideas' (creativity), 'making their own decisions' (responsibility), 'good working conditions', and 'being able to plan their work with little supervision' (autonomy). Three items which were accorded very low importance were 'being able to tell people what to do' (authority), 'working alone on the job' (independence) and 'being somebody' in the community (social status).

6.2 The Relationship of Job Satisfaction and Withdrawal to the Needs - Rewards Correspondence

The Theory of Work Adjustment states that a high correspondence between occupational needs and organizational rewards is related to job satisfaction and substantial tenure (Lofquist & Dawis, 1969). The aim in this section was to determine whether or not the theory could be supported in British CNs. The discrepancies between the occupational needs and organizational rewards were derived by computing the difference between the occupational need scores (from the MIQ) and the organizational reward norms (from the ORP). It was considered legitimate to use the American ORP with the sample of British CNs because no significant difference was found between the ORP and the British 'norm' profile. Propensity to stay or leave was used as the tenure (or withdrawal) variable because, since the number of actual terminations was small, the size of the leavers group relative to the stayers would have been very unequal.

Leaving intention has been established as the best single predictor of actual termination (Mercer & Mould, 1976; Kraut, 1975) and is not dependent on uncontrollable external variables such as alternative employment opportunities.

The mean needs - rewards discrepancy scores for the total sample are listed in Table 110. Nine items had negative mean scores, which indicated that the rewards exceeded the needs, and 12 means were positive, demonstrating that the rewards fell short of the needs. The items in the latter group (where needs exceeded rewards) which elicited the largest discrepancy scores were 'ability utilization', 'compensation', 'creativity', 'responsibility' and 'working conditions'.

The Theory of Work Adjustment was examined by testing the following hypotheses:

- The needs rewards discrepancy scores would, in combination,
 be related to (a) job satisfaction, and (b) propensity to leave.
- The needs rewards discrepancy scores would discriminate between
 (a) 'high' and 'low' satisfaction scores, and (b) intending stayers and leavers.

The first hypothesis was tested with simple linear multiple regression analysis, and the second with discriminant function analysis (direct method). If a composite of discrepancy predictors were identified this could have implications for the organization since attempts could be made to reduce those discrepancies which were negatively related to satisfaction and positively related to propensity to leave. Linear multiple repression analysis is a multivariate correlational technique used to predict a single continuous criterion from a composite of independent variables (Nie et al., 1970; Weiss, 1972). Simple multiple

Table | 10 Means and standard deviations for the needs - rewards discrepancy scores (N = 115)

	ds - rewards crepancy item	Mean	Standard deviation
1.	Ability utilization	0.65	0.63
2.	Achievement	0.29	0.70
3.	Activity	-0.21	0.89
4.	Advancement	0.17	0.82
5.	Authority	-1.00	0.82
6.	Hospital policies & practices	0.02	0.63
7.	Compensation (pay)	0.43	0.86
8.	Co-workers	-0.08	0.76
9.	Creativity	0.43	0.66
10.	Independence	-0.06	0.96
11.	Moral values	-0.10	1.05
12.	Recognition	-0.12	0.98
13.	Responsibility	0.47	0.77
14.	Securi ty	-0.68	0.79
15.	Social Service	-0.19	0.84
16.	Social status	-0.36	1.28
17.	Supervision - human relations	0.17	0.66
18.	Supervision - technical	0.22	0.62
19.	Variety	0.13	0.75
20.	Working conditions	0.39	0.70
21.	Autonomy	0.29	0.75

regression analysis was used rather than stepwise method because it demonstrates the ability of the independent variables to predict the criterion and identifies those of the predictor set which are the 'best' predictors. Stepwise multiple regression should not be used in 'one-stage' research because it is likely to reduce, and cannot increase, the predictive accuracy of the independent variables (Weiss, 1972).

Discriminant function analysis is also a multivariable technique, but is designed to establish the extent to which a weighted composite of variables can distinguish between two categorical criterion groups (Nie et al., 1970; Weiss, 1972). The predictions made are related to actual group membership in a 'hit rate' table which shows the extent to which predicted and actual scores match. The discriminant analysis used here, with the needs - rewards discrepancy variables as predictors, employed the 'direct' method of analysis in which all the predictors were included in the equation irrespective of their individual contributory power. This was considered to be the most appropriate method because the aim was to establish whether the set of 21 needs - rewards discrepancy variables did distinguish between the criterion groups.

The main limitations of both these multivariate techniques are linearity, multicollinearity, and sample-specific variability. If the relationship between each predictor and the criterion and each predictor with other predictors is not linear (or zero), then multivariate techniques which do not assume linearity may demonstrate greater predictive accuracy (Weiss, 1972). Tests for linearity were not made on these data, but the scattergrams between pairs of variables did suggest that most of the relationships either followed a linear function more closely than any other, or were near zero. If any pair of predictors suffered from multicollinearity (r>.80, Nie et al., 1970) then one of the pair was dropped from the analysis. This was not the case in the analyses reported here. The problem of

sample-specificity could not be examined since no validation could be made against a 'hold-out' sample, and so, with both multivariate techniques used here, the predictions which emerged must be accepted with caution.

The correlations between the needs - rewards discrepancy variables and the dependent variables of satisfactions and propensity to leave are presented in Table III. None of the coefficients reached significance at the p <.01 level with propensity to leave, and only the discrepancy variables of 'activity' and 'hospital policies and practices' correlated significantly with one or more of the satisfaction variables. The mean score of 'hospital policies and practices' was positive (ie needs exceeded rewards), and the correlations with intrinsic and general satisfaction were negative, which suggests that the greater the discrepancy between requiring fair hospital policies and practices and the extent to which this existed in the hospital, the lower was the level of CN satisfaction. The 'activity' discrepancy variable had a positive mean score (rewards exceeded needs), and the correlation with global satisfaction was positive. This suggests that the greater the discrepancy between wanting to 'be busy all the time' in the job and having the opportunity to be just that, the higher was the level of satisfaction.

Before proceeding to the multiple regression analysis, the correlations between the needs - rewards discrepancies and general satisfaction were examined with the effect of satisfactoriness controlled. The theory of work adjustment states that satisfactoriness acts as a moderating variable. Table 112 shows the significant zero-order and partial coefficients with general satisfaction. Only one discrepancy variable ('hospital policies and practices') produced a significant zero-order correlation, and this was rendered non-significant when the effect of satisfactoriness was removed. None of the non-significant

Table 111: Correlation coefficient matrix between the needs-rewards

discrepancy scores and job satisfaction, perceived role pressures,
and propensity to leave (Pearson's Product Moment coefficients,
one-tail tests, N = 115)

needs - rewards discrepancy item	global satisfaction	intrinsic satisfaction	extrinsic satisfaction	general satisfaction	propensity to leave
1. ability utilization	ns	ns	ns	ns	ns
2. achievement	ns	ns	ns	ns	ns
3. activity	24**	ns	ns	ns	ns
4. advancement	ns	ns	ns	ns	ns
5. authority	ns	ns	ns	ns	ns
6. hospital policies and practices	ns	-20**	ns	-20**	ns
7. compensation (pay)	ns	ns	ns	ns	ns
8. co-workers	ns	ns	ns	ns	ns
9. creativity	ns	ns	ns	ns	ns
10. independence	ns	ns	ns	ns	ns
11. moral values	ns	ns	ns	ns	ns
12. recognition	ns	ns	ns	ns	ns
13. responsibility	ns	ns	ns	ns	ns
14. security	ns	ns	ns	ns	ns
15. social service	ns	ns	ns	ns	ns
16. social status	ns	ns	ns	ns	ns
17. supervision - human relations	ns	ns	ns	ns	ns
18. supervision - technical	ns	ns	ns	ns	ns
19. variety	ns	ns	ns	ns	ns
20. working conditions	ns	ns	ns	ns	ns
21. autonomy	ns	ns	ns	ns	ns

^{**} p ≤ .01

Decimal points omitted for clarity

Table 112 . Correlations between the needs-rewards discrepancy variables and job satisfaction before and after partialling out general satisfactoriness

	general sa	atisfaction
needs-rewards discrepancy item	zero-order correlation	correlation when satisfactoriness removed
1. ability utilization	ns	ns
2. achievement	ns	ns
3. activity	ns	ns
4. advancement	ns	ns
5. authority	ns	ns
6. hospital policies and practices	-20**	ns
7. compensation (pay)	ns	ns
8. co-workers	ns	ns
9. creativity	ns	ns
10. independence	ns	ņs
11. moral values	ns	ns
12. recognition	ns	ns
13. responsibility	ns	ns
14. security	ns	ns
15. social service	ns	ns
16. social status	ns	ns
17. supervision - human relations	ns	ns
18. supervision - technical	ns	ns
19. variety	ns	ns
20. working conditions	ns	ns
21.autonomy	ns	ns

^{**} p <.01

zero-order coefficients became significant which suggests that satisfactoriness was not a powerful moderator in this sample of CNs.

Turning to the prediction of satisfactions and propensity to leave from multiple regression analysis, the initial runs revealed multiple correlations of over .46 and R^2 values of 22% to 25% (Table 113).

Table 113: Prediction of general, intrinsic and extrinsic satisfaction and propensity to leave from the individual needs - organizational rewards discrepancy variables: multiple regression analysis summary table (N = 122-115)

Dependent variable	Multiple R	R2	F	р
General satisfaction	.50	.25	1.515	ns
Intrinsic satisfaction	.47	.22	1.263	ns
Extrinsic satisfaction	.48	.23	1.352	ns
Propensity to leave	.48	.23	1.313	ns

The multiple R reflects the accuracy with which the criterion score can be predicted from the independent variables, and R² represents the proportion in the criterion that is explained by the predictors (Weiss, 1972).

Although up to 25% of the variance was explained by the needs - rewards discrepancy variables, the subsequent analysis of variance tests revealed insignificant F - ratios. In a further attempt to find support for the hypothesis, the regression analyses were re-run with the 10 'best' discrepancy variables as predictors (those with the highest individual F-ratios). It was possible that inclusion of all 21 independent variables lessened the predictive power of the few most important items.

Tables 114, 115 and 116 show the results of the prediction of intrinsic, extrinsic and general satisfaction from these 10 discrepancy items.

This time, although the proportion of the variance in the criterion variables which was explained by the predictors was similar (20 - 24%) to that obtained earlier, the F values were significant for each

Table 114: Summary of multiple regression analysis used to explore the relationship between intrinsic job satisfaction and the 10 'best' needs - rewards discrepancy variables (N = 115)

needs - rewards discrepancy items	simple correlation	F	p	beta coefficient
15. social service	.16	6.57	<.05	.28
5. authority	.07	6.50	<.05	.30
18. supervision - technical	21	4.53	<.05	24
14. security	.06	2.88	ns	.19
 ability utilization hospital policies and 	07	2.20	ns	18
practices	19	2.00	ns	17
12. recognition	10	1.66	ns	14
compensation	09	1.36	ns	14
19. working conditions	.05	.25	ns	05
8. co-workers	01	.08	ns	.03
Constant	L. C.			52.73

Multiple R = .44

 $R^2 = .20$ F = 2.45 p < .05

Table 115: Summary of multiple regression analysis used to explore the relationship between extrinsic job satisfaction and the 10 'best' needs - rewards discrepancy variables (N = 115)

	eds - rewards screpancy item	simple correlation	F	p	beta coefficient
	compensation co-workers	17 .16	9.42 5.79	<.01	36
	social service	.19	4.03	<.05	.22
14.	security	.09	3.34	ns	.20
	authority	.08	3.19	ns	.21
	supervision - technical hospital policies and	06	1.79	ns	15
	practices	10	1.02	ns	12
19.	working conditions	.04	.47	ns	07
12.	recognition	06	.31	ns	06
1.	ability utilization	.03	.06	ns	11
	Constant	W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			24.11

Multiple R = .45

 $R^2 = .20$ F = 2.54

p < .01

Table 116: Summary of multiple regression analysis used to explore the relationship between general job satisfaction and the 10 'best' needs - rewards discrepancy variables (N = 115)

needs - rewards discrepancy item	simple correlation	F	р	beta coefficient
5. authority 15. social service 7. compensation 14. security 18. supervision - technical 1. ability utilization 6. hospital policies and practices 8. co-workers 12. recognition 19. working conditions	.08 .18 15 .08 17 06 18 .06 11	7.65 7.27 5.12 4.53 4.27 3.01 2.12 1.86 1.79 .67	<.01 <.01 <.05 <.05 <.05 ns ns ns ns	.32 .29 26 .23 23 20 17 .15 14 09
Constant				85.82

Multiple R = .49 $R^2 = .24$ F = 3.15 p < .01

satisfaction criterion. Not all the discrepancy items, however, made a significant contribution to the predictions. Four items ('authority', 'social service', 'security' and 'co-workers') were successful in predicting satisfaction and two ('compensation' and 'supervision - technical') were the most powerful predictors of dissatisfaction.

Turning to the prediction of propensity to leave, the 10 'best' discrepancy items, with their multiple regression statistics, are presented in Table 117. 'Activity' and 'achievement' contributed negatively to propensity to leave, and 'ability utilization' related positively. The contribution of 'hospital policies and practices' approached significance (p < .10) and its relationship with propensity to leave was positive.

These results provided considerable support for the Theory of Work Adjustment, since satisfaction and propensity to leave were dependent on

Table 117: Summary of multiple regression analysis used to explore the relationship between propensity to leave and the 10 'best' needs - rewards discrepancy variables (N = 112)

needs - rewards discrepancy item	simple correlation	F	р	beta coefficient
3. activity	15	8.05	<.01	33
2. achievement	05	5.86	<.05	30
1. ability utilization	.16	5.15	<.05	.28
hospital policies and practices	.18	3.59	ns	.21
19. variety	04	1.89	ns	.16
7. compensation	.11	1.38	ns	.14
9. creativity	.18	1.31	ns	.12
10. independence	.07	1.17	ns	.11
14. security	03	1.09	ns	12
16. social status	09	.98	ns	10
Constant				7.35

Multiple R = .46

 $R^2 = .21$

F = 2.67

p <.01

some of the needs - rewards discrepancy items.

Discriminant function analysis was used to test the second hypothesis that the needs - rewards discrepancy scores would discriminate between

(a) 'high' and 'low' satisfaction, and (b) intending stayers and leavers.

Considering intrinsic, extrinsic and general satisfaction first, the categorical criterion groups were derived by dividing the score distributions at the median: intrinsic satisfaction = 48.5, extrinsic satisfaction = 21.4, general satisfaction = 77.5. Table 118 shows, for each satisfaction variable, the 'hit' rates (ie the percent of CNs who were both predicted to be and appeared in the same group) together with the chi-squared tests and significance level of the classification tables.

Over 73% were correctly classified and the chi-squared test for each criterion group was highly significant.

Table 118 . The extent to which the needs-rewards discrepancy variables, in combination, distinguished between 'high' and 'low' satisfaction scores : discriminant function analysis, direct method (N = 115)

Intrinsic satisfaction

actual group membership	predic	ted gro	oup	
freq.	'low' satisfa	action	'high' satisfa	action
	freq.	%	freq.	%
'low' satisfaction 56	41	73.2	15	26.8
'high' satisfaction 59	13	22.0	46	78.0

 $\chi^2 = 28.195$ df = 1 p < .001

'hit' rate = 75.7%

Extrinsic satisfaction

actual group membership	predic	ted gro	oup	
freq.	'low' satisfa	action	'high' satisfa	action
	freq.	%	freq.	%
'low' satisfaction 60	41	68.3	19	31.7
'high' satisfaction 55	11	20.0	44	80.0

 $\chi^2 = 25.146$ df = 1
p < .001

'hit' rate = 73.9%

General satisfaction

actual group membership freq.		eted gro	oup	
	'low' satisfa	action	'high' satisfa	action
	freq.	%	freq.	%
'low' satisfaction 57	41	71.9	16	28.1
'high' satisfaction 58	14	24.1	44	75.9

 $\chi^2 = 24.434$ df = 1
p < .001

^{&#}x27;hit' rate = 73.9%

distinguished between 'high' and 'low' intrinsic satisfaction: Table 119 The extent to which each needs - rewards discrepancy item details of the discriminant function analysis

needs - rewards	low intrinsic	nsic	high intrinsic	ringic	
disorepancy item	sati sfaction	ion group	sati sfaction	cion group	weight.
	7 7 7	5) 5)	114	£3	
5. anthority	-1.06	.74	94	.88	,83
15. social service	08	.88	-, 03	.80	.62
20. working conditions	.55	.63	.23	073	44
	.32	. 68	.22	.81	43
	071	190	.59	,63	37
	.05	. 91	-, 28	1,03	33
18 supervision - technical	• 34	.62	11.	190	32
	• 34	.76	.01	.52	29
achi evenent	330	.74	, 20	.65	22
3. activity	22	.92	-19	.87	21
	•43	• 56	. 42	.75	.21
13. responsibility	170	69.	74.	.85	.20
8. co-workers	900-	074	600-	. 73	,20
11. moral values	-014	1001	05	1.09) TI.
[19, variety	010	11.	215	.80	.03
7. compensation	• 59	.95	. 29	0.74	05
10, independence	60	,86	04	1,06	.05
	. 25	.89	60.	074	0.05
6. hospital policies &			ACR. CORNEL		
	16	110	-,11	.52	05
16, social status	38	1.47	34	1,08	\$00
14. security	59	.85	76	410	03
Group centroid	95		.53		

standardized disoriminant function coefficients

x = mean

s = standard deviation

distinguished between 'high and 'low' extrinsic satisfaction : Table 120 The extent to which each needs - remards discrepancy item details of the discriminant function analysis

needs - rewards discrepancy item	low extrinsic	low extrinsic	high extrinsic satisfaction g	high extrinsic satisfaction group	weight
	×	ಜ	ı×	to	
8, co-workers	24	.87	.11	.57	19.
15. social service	- 38	.93	.03	. 89	.54
	.50	16.	• 35	.77	51
	.21	190	.23	.57	- 38
19. variety	• 1.2	.80	014	170	-034
10. independence	- 014	96°	°03	16.	15.
	, 28	,84	0.04	.78	30
14. security	910	. 92	09	,62	.25
17. supervision - human	3.14	,83	. 21	• 42	.23
relations					
5. authority	-1.06	17.	93	.87	, 20
autonomy	. 29	.73	.25	177.	16
	.01	11.	50.	• 54	e Ho
prectices					
social stat	42	1,44	28	1.03	*13
20, worling conditions	• 39	.79	.38	.59	110-
	. 29	.76	. 29	.63	-,10
	.49	. 64	. 36.	190	70
	10	.94	14	1,03	600-
3. activity:	32	06.	1,08	.38	60°
· respon	.53	080	0.41	*78	600-
	610-	1.07	000	1,02	-007
l. ability utilization	•62	.72	. 68	.53	06
group centroid	47		.51		
The finished by the contraction of the finished formation of the contraction of the finished formation of the finished for			a name parent direct or the property and the same	The desirement and an united section seems making the	The state of the s

See footnotes to Table 119.

distinguished between thigh and 'low' general satisfaction: Table 121 The extent to which each needs - rewards discrepancy item details of the discriminant function analysis

needs - rewards disorepancy item	low general	eral otion group	high general	general faction group	weight
	X	72	1 ×	τα	
15. social service	- 30	00	90	77	-
5. suthority	2001	20	90.		. 50
7. compensation	1001	000	0000	26.	.53
	30	000	77.0	0.00	1.43
	16	39	o Fo	0,99	1,31
8, co-workers	-,10	27.0	900-1	200	0000
	96.	. 56	30	200	000
20. working conditions	.53	.64	2000	73	10.69
	34	.68	600	80	1.60
	-0.42	1-45	30	200	470
3, activity	- 29	000	000	000	77.0
19, variety	910	.78	500	7.3	710
12, recognition	0.01	76"	100	200	07,
6. hospital policies &		100	1.06	100	07.0
practices				600	1770
· ability ut	.63	09.	69	66	0,
0	, 56	120	200	200	777
17. supervision - human	523	276	0.07	- u	0.11
relations				+700	10,1
9	-,15	1.00	105	01.1	,,
14. security	1.63	060	173	200	000
4. advancement	286	200	200	000	\$0°
10. independence	1,03	.92	60.1	2.07	1,03
	-			1001	1000
Group centroid	50		. 50		

See footnotes to Table 119.

Details of the discriminant function analysis of the satisfaction criterion groups are presented in Tables 119, 120 and 121 with the needs - rewards discrepancy items placed in rank order according to their contributory power. The first 10 discrepancy items provided the majority of the contribution to the discriminant function of the three criteria, and most of the mean scores of these 10 items were smaller (greater needs - rewards correspondence) in the 'high' satisfaction group than the 'low' satisfaction group. There were a few exceptions, however. For the intrinsic satisfaction criterion (Table 119), the mean discrepancy score was larger in the 'high' satisfaction group on 'recognition', and for the extrinsic satisfaction criterion (Table 120), this was so for 'supervision - technical', 'variety' and 'supervision - human relations'.

The propensity to leave score distribution was divided into two groups by classifying scores of 4 to 9 as 'likely stayers' and 10 to 20 as 'uncertains and likely leavers' (shortened to 'likely leavers' for brevity). Accordingly, 70 CNs appeared as 'likely stayers' and 45 as 'likely leavers'. This uneven apportioning had to be reflected in the discriminant analysis, and so prior probabilities of 61% and 39% were accorded respectively. The success with which the needs - rewards discrepancy items distinguished between the likely stayers and the likely leavers is shown in Table 122. The percent of cases which were correctly classified was 74% and the chi-squared test of the classification table was significant at the p < .001 level. As with the satisfaction criteria, details of the discriminant function analysis for the 'high' and 'low' propensity to leave groups are presented in Table 123. The first 10 items contributed to the greatest extent to the discriminant function and the mean scores of all but two of these 10 items were larger (less needs rewards correspondence) in the 'likely leavers' than the 'likely stayers'. The exceptions were 'independence' and 'security'.

Table 122: The extent to which the needs - rewards discrepancy variables, in combination, distinguished between 'likely stayers' and 'likely leavers': discriminant function analysis, direct method (N = 115)

actual group		predi	cted gro	oup member	ship
membership		likely s	tayers	likely 1	eavers
	freq	freq	%	freq	%
likely stayers	70	60	85.7	10	14.3
likely leavers	45	20	44.4	25	55.6

 $\chi^2 = 20.129$ df = 1 p < .001

'hit' rate = 73.9%

In summary, only two of the needs - rewards discrepancy items correlated significantly with job satisfactions, and this number was reduced even further when satisfactoriness was partialled out. Multiple regression analysis with the whole set of 21 discrepancy items failed successfully to predict job satisfaction, but when the 10 discrepancy items with the most predictive power were subjected to further regression analysis, the predictions were significant for intrinsic, extrinsic and general satisfaction. Furthermore, discriminant function analysis demonstrated that the needs - rewards discrepancy item scores successfully distinguished between 'high' and 'low' intrinsic, extrinsic and general satisfaction, with 'hit' rates of over 73%.

None of the zero-order correlations between the discrepancy items and propensity to leave was significant. Multiple regression analysis with all 21 discrepancy items again failed to exhibit a successful prediction of propensity to leave, but when the 10 'best' predictors were submitted to further analysis, the prediction was significant. Finally, discriminant analysis distinguished between 'likely stayers' and 'likely leavers' with a 'hit' rate of 74%. These results therefore provided substantial support for the Theory of Work Adjustment in that

See footnotes to Table 119.

distinguished between 'likely stayers' and 'likely leavers': Table 123 The extent to which each needs - rewards discrepancy item details of the discriminant function analysis,

tdo ton			55	. 50	49	47		42	34	- 26	•23	:	. 21	.20	,19	.18	.18	1,15	1011	, c1	01"1	60 1	10.	.03	03	
Likely	7.	0,	0.40	990	.83	.53		.54	1.58	386	.52		.81	.79	.82	. 93	.74	26.	0 (1)	69.	.79	.91	.94	. 52	69*	
Lilk	- N		600	-11,06	. 58	,20		. 73	53	000	.25		65	60	.50	25	.29	90	. 34	• 34	, 20	-,12	90	.30	12.	09~-
Likely	20	7.0	210	.91	980	190		190	1.04	1,03	170		.79	. 77.	.75	.83	.76.	1.02	.83	. 77	.72	.80	1.12	,68	07.	
Likely	H	80	07.	96	, 33	600-		.57	25	16	01.2		-,70	100-	• 45	-,18	• 25	-,16	.05	. 26	.08	-,23	12	110	, 31	.39
needs - rewards		9. creativity				6. hospital Milicies &	practices	l. ability utilization	16. social status	10. independence	17. supervision - human		14. security			3. activity	21. autonomy	1.2. recognition			19, variety		11. moral values	18. Supervision - technical	20. working conditions	Group centroid

satisfaction and propensity to leave were dependent on the discrepancy between occupational needs and organizational rewards of some of the 21 items.

6.3 Discussion

The principle tenet of the Theory of Work Adjustment, that job satisfaction is a function of the correspondence between occupational needs and organizational rewards, has been supported in several groups of American workers: supervisory nurses (Lofquist & Dawis, 1969), female social workers (Elizur & Tziner, 1977), supervisory, research, engineer, technical and administrative employees (Golden & Weiss, 1968), and cashiers and sales clerks (Betz, 1969).

One of the aims of this study was to establish whether the needsrewards correspondence was related to job satisfaction in British CNs,
and the first step was to determine the degree of similarity between the
Minnesota ORP and the British 'ORP', and the CNs' median MIQ score
profile and the two ORPs. Although there were relatively large
discrepancies between some of the item scores, none of the differences
between the score profiles reached significance, which suggests that,
on average, the occupational needs brought by the CNs to the job were indeed
supplied by it.

These findings were those which would be expected in a sample of nurses who have persisted in their careers to CN level, which justified the decision to invite nursing officers to complete the British 'ORP' scale rather than the CNs themselves. Although the CNs would be the most knowledgeable group to estimate the rewards of their own jobs, their needs and degree of job satisfaction would have been likely to affect their estimate of their own job rewards. This suggestion has been

supported in some unpublished research reported by Borgen et al (1968) in which relatively high correlation coefficients emerged between the workers' ratings of their own organizational rewards and their expressed satisfaction. As Borgen et al. pointed out: 'These data imply that some employees are indeed "too close" to their jobs to describe effectively the job reinforcers independently of their feelings of satisfaction with their job'. (p.7)

Support for the Theory of Work Adjustment emerged in the multivariate analyses with which the relationship between the needs - rewards discrepancy scores and satisfaction and propensity to leave were examined. This support was not total, however, in that some of the discrepancy items failed to contribute to the prediction of the criterion variables. The impression which emerged on reading the literature on the Theory of Work Adjustment (Lofquist & Dawis, 1969), that a discrepancy between occupational needs and organizational rewards will result in dissatisfaction and short tenure, was over simplistic. It is suggested here that a needs - rewards discrepancy is either negatively or positively related to satisfaction and propensity to leave depending on the direction of the discrepancy. If the CNs' needs exceeded the organizational rewards then dissatisfaction is the likely outcome, but if the discrepancy indicated an excess of the reward, then it is more likely that satisfaction will result.

Multiple regression analysis with the 10 'best' discrepancy items indicated that intrinsic, extrinsic and general satisfaction and propensity to leave were predicted from some but not all of them. Taking a criterion of p <.05, five discrepancy variables emerged as significant predictors of general satisfaction, three having a positive contribution ('authority', 'social service' and 'security') and two a negative contribution ('compensation' and 'supervision - technical'). The implications of

these results are that if the level of organizational rewards on opportunity to 'tell people what to do' (authority), to 'do things for other people' (social service), and 'to have a job which would provide for steady employment' (security), were increased so that the needs - rewards discrepancy were larger than before, greater satisfaction would result. The mean discrepancy scores showed that the rewards exceeded the needs for these three items. Conversely, the rewards fell short of the needs for two items, compensation ('My pay would compare well with that of other workers') and supervision - technical ('My boss (nursing officer) would train the workers well'). If rewards on these two items were increased so that the discrepancy were smaller than before, then dissatisfaction would be reduced.

Four discrepancy items emerged from the prediction of propensity to leave, although one ('hospital policies and practices') gave a significance level of only p <.10. Two of these ('activity' and 'achievement') contributed negatively to propensity to leave and two ('ability utilization' and 'hospital policies and practices'), positively. This suggests that the propensity to leave would decrease if the environment provided the CNs with even more opportunity to 'be busy all the time'; and that the tendency to leave would increase if they were unable to do work 'that makes use of my abilities', and did not agree that the hospital administered its policies fairly. The negative contribution of the 'achievement' discrepancy item is perplexing because its mean score was positive (.29). That is, the extent to which the job provided the CNs with 'a feeling of accomplishment' fell short of their requirements. The zero-order correlation of the 'achievement' discrepancy item with propensity to leave was not significant but negative (-.05), and the multiple regression beta coefficient was also negative. difficult to accept that a discrepancy in which achievement needs exceeded

perceived rewards should predict a low likelihood of leaving. It might be, however, that an inability to fulfil achievement needs acted as an inducement to the CNs to stay in the job in order to try and reduce the discrepancy. But, since the likelihood of leaving the job increased with the discrepancy between wanting to make use of one's abilities and being able to do so (ability utilization), the negative relationship between the achievement discrepancy and propensity to leave is puzzling.

An explanation in terms of locus of control and attribution theory may throw some light on this dilemma. Achievement is an internal need, within the self, and so the individual has some control over it. When unfulfilled, the need for achievement may motivate the CN to try and reduce the discrepancy between desired and actual fulfilment, and to do this she is more likely to stay in the job. Being able to make use of one's abilities in the job may, on the other hand, be seen as an external need, in that the CN may feel she has relatively little control over it because she perceives her activities as being under contextual control. Therefore, if her ability needs are unfulfilled she is likely to leave because she does not think that she can do anything to improve matters. In terms of attribution theory, fulfilment of the achievement need would be regarded as largely within the individual's power, whereas it is the organizational environment which is seen as being responsible for enabling the CN to make full use of her skills and abilities.

The partial support given by the multiple regression analyses to the theory of Work Adjustment was confirmed with discriminant function analyses. The needs - rewards discrepancy items distinguished between CNs relatively low on satisfaction from those who gave high scores, with 'hit' rates of over 73%. Furthermore, the discrepancy items discriminated between CNs who were likely to stay in their jobs and those who were uncertain or

intending to leave, producing a 'hit' rate of 74%. The discrepancy items which made the greatest contribution to the discriminant analysis of general satisfaction were 'social service', 'authority', 'compensation', 'achievement', 'supervision - technical' and 'co-workers', all of which had weights of .35 or more. For all the items the mean discrepancy scores were smaller for the 'high' satisfaction group than the 'low' group. For the propensity to leave criterion groups the most powerful discrepancy items were 'creativity', 'authority', 'compensation', 'hospital policies and practices', 'ability utilization' and 'social status'. With all these, the mean discrepancy scores were larger in the 'likely leavers' compared with the 'likely stayers'.

Some research has been published in which the Minnesota instruments were used with a number of American occupational groups, which provided support for the Theory of Work Adjustment and cautionary comparison with the present study. Weiss (1969) emphasised the direction of the needs rewards discrepancy scores and reported a correlation between the total discrepancy score and satisfaction of only .02. When only those discrepancy scores were included in which the reinforcer fell short of the need, the correlation was -.26, and when the analysis was made on the remainder, where rewards existed in excess, the correlation with satisfaction was .44. Weiss supported this author's suggestion, that if the needs were not fulfilled by the environment, the greater the discrepancy, the higher the dissatisfaction. But when more of the need was provided than required, the greater the discrepancy, the higher the satisfaction. Distinguishing the direction of the discrepancy items by analysing the positive and negative items separately, would have been sensible in the present study, and may have provided greater support for the Work Adjustment Theory. Furthermore, this would have enabled emphasis to be given to the positively discrepant items, since it is these that should

provide greater concern for the organizational management in that their reduction would reduce dissatisfaction which is arguably more important than increasing existing satisfaction.

7. JOB SATISFACTION, ROLE PRESSURES, SATISFACTORINESS AND WITHDRAWAL: INTERRELATIONSHIPS

7.1 Results

First, bivariate relationships suggested by the model (p /co) were examined with Pearson's Product Moment correlation coefficients; second, partial correlation was used to determine whether biographical variables (age, tenure, travelling distance to work, number of children) moderated the relationship between job satisfaction and withdrawal (absence, propensity to leave); third, the hypothesis that the job satisfaction and role pressure scores differed significantly between those CNs intending to stay in their jobs and those who were uncertain or intending to leave was tested using discriminant function analysis; and finally, linear multiple regression analysis was used to establish whether a group of variables, in combination, could predict firstly, propensity to leave, and secondly, satisfaction.

The hypotheses based on zero order correlations were:

- satisfaction was negatively related to frequency of absence spells and propensity to leave.
- 2. perceived role pressures were negatively related to satisfaction.
- perceived role pressures were positively related to absence frequency and propensity to leave.
- 4. satisfactoriness was positively related to satisfaction.
- satisfactoriness was negatively related to absence frequency and propensity to leave.

The correlation coefficients for hypothesis 1 are detailed in Table 124.

Table 124: Correlation coefficients (Pearson's) between job satisfactions and absence and propensity to leave (N = 128)

satisfaction variable	absence ¹ (spells)	propensity to leave
global satisfaction	ns	-58***2
intrinsic satisfaction	ns	-36***
extrinsic satisfaction	ns	-52***
general satisfaction	ns	-48***

- in this and subsequent tables, absence = number of spells in 2 years corrected for tenure less than 2 years
- 2 in this and subsequent tables, * = $p \le .05$ ** = $p \le .01$ *** = $p \le .001$

None of the correlations with absence was significant but highly significant (p < .001) negative coefficients emerged between each satisfaction variable and propensity to leave. Therefore, hypothesis 1 was supported for propensity to leave but not for absence. Table 125 contains the data for hypothesis 2.

Table 125: Correlation coefficients (Pearson's) between perceived role pressures and job satisfactions (N = 120-131)

perceived role pressure	global satisfaction	intrinsic satisfaction	extrinsic satisfaction	general satisfaction
job-related tension	-45***	-46***	- 52***	- 55***
objective role conflict	-32***	-20*	-28**	-27**
subjective role conflict	-31***	-23**	-31***	-31***
objective role ambiguity	-47***	-49***	-44***	-52***
subjective role ambiguity	-43***	-44***	-41***	-48***
role clarity	54***	48***	55***	58***

Hypothesis 2 was strongly supported since all the coefficients were in the expected direction, and all but four were greater than .30 and significant at the p <.001 level.

Table 126 shows the correlations for hypothesis 3, that the relationship between perceived role pressures and absence and propensity to leave was a positive one, except for that with role clarity, which was negative.

Table 126: Correlation coefficients (Pearson's) between perceived role pressures and absence and propensity to leave (N = 120-128)

perceived role pressure	absence (spells)	propensity to leave
job related tension	ns	31***
objective role conflict	ns	27**
subjective role conflict	ns	30***
objective role ambiguity	ns	24**
subjective role ambiguity	ns	22*
role clarity	ns	-23**

Although the coefficients with propensity to leave were generally not as high as those with job satisfaction, they were all significant and in the expected direction. However, none of the correlations with absence was significant, and so hypothesis 3 was supported for propensity to leave only.

It was possible that the correlations between job satisfaction and role pressures on the one hand and absence and propensity to leave on the other were moderated by certain biographical variables to such an extent that if their effect were removed, the bivariate coefficients would alter substantially. Accordingly, the correlations were recalculated with age,

tenure, travelling distance to the hospital, and number of children separately partialled out. The resultant coefficients have been tabulated in Appendix 12. Very little alteration was made to the bivariate coefficients, since, of the 40 computed, none of those with absence achieved significance, and the median difference between significant zero-order and partial coefficients was .01 (range .00 to .07). The hypothesis that the relationship between satisfaction and role pressures and absence and propensity to leave would be moderated by age, tenure, number of children and travelling distance to work, was therefore not supported.

Hypotheses 4 and 5 concerned satisfactoriness and its relationship with satisfaction and withdrawal. Table 127 shows the correlations for both these hypotheses.

Table 127: Correlations (Pearson's) between satisfactoriness and satisfactions, absence and propensity to leave (N = 101)

satisfactoriness scale	global satisfaction	intrinsic satisfaction	extrinsic satisfaction	general satisfaction	absence (spells)	propensity to leave
performance	20*	ns	ns	ns	-20*	ns
conformity	22*	ns	ns	ns	ns	ns
dependability	21*	30**	ns	26**	-22*	-31**
personal adjustment	20*	21*	20*	23*	-25**	-25**
general satisfactoriness	28**	ns	ns	ns	-26**	-26**

Not all the coefficients were significant, and those that were were not large, the highest being -.31 (p<.01) between dependability and propensity to leave. The coefficients between dependability and personal adjustment and satisfactions, absence and propensity to leave were the only two satisfactoriness scales to give support to both hypotheses, although general satisfactoriness did support hypothesis 5. Performance, conformity and general satisfactoriness correlated positively with global satisfaction but not with the other satisfaction measures, so failing to give more than minimal support to hypothesis 4. Performance, dependability, personal adjustment and general satisfactoriness correlated negatively with absence but conformity did not, and all but performance and conformity correlated with propensity to leave.

The third analysis technique used was discriminant function analysis to test the hypothesis that 'likely stayers' differed significantly from 'uncertains and likely leavers' on their job satisfaction and perceived role pressure scores (the null hypothesis of no difference was in fact tested). The Wilk's stepwise discriminant function method (Nie et al., 1970) was used to establish which independent variables from the total set had significant discriminatory power. Seventy three CNs appeared in the 'likely stayers' group and 43 in the 'likely leavers' and so prior probabilities of 63% and 37% respectively were specified. The extent to which the independent variables distinguished between the groups is shown in Table 128.

Table 128: The extent to which the satisfaction and role pressure variables, in combination, distinguished between 'likely stayers' and 'likely leavers':discriminant function analysis, Wilk's method (N = 116)

	actual group memb	onshin	predicted group membership					
	actual group memo	freq	likely	stayers	likely leavers			
			freq	%	freq	%		
	likely stayers	73	. 68	93.2	5 .	6.8		
-	likely leavers	43	18	41.9	25	58.1		

2 = 34.50df = 1 p < .001

'hit' rate = 80.2%

The percent of cases which were correctly classified was 80% and the chi-squared test of the classification table was significant at the p<.001 level. This supports the hypothesis that a number of the independent variables, in combination, distinguished between the two criterion groups. The satisfaction and role pressure variables with significant discriminatory power are shown, with their mean scores and weights, in Table 129.

Table 129: Variables which, in combination, significantly distinguished between 'likely stayers' and 'likely leavers': discriminant function analysis, Wilk's method.

variable	likely	stayers	likely	leavers	weightl
variable	-2 x	s ³	x	S	
role clarity	15.04	3.20	14.30	2.88	.88
job related tension	20.15	5.48	23.81	5.36	.63
global satisfaction	9.64	1.24	8.63	1.65	39
extrinsic satisfaction	22.10	3.40	18.93	3.96	38
general satisfaction	78.99	7.67	71.49	9.79	38
group centroid	40		.68		

¹ standardised discriminant function coefficient

 $^{2\}bar{x} = mean$

³ s = standard deviation

The level of role clarity and job satisfaction was higher and job-related tension lower in the 'likely stayers' group compared with the 'uncertains and likely leavers'.

The final technique was simple linear multiple regression employed to determine whether a group of independent variables were related to (a) propensity to leave and (b) job satisfaction. The independent variables included in the propensity to leave prediction equation were:

global satisfaction
intrinsic satisfaction
extrinsic satisfaction
general satisfaction
job-related tension
role clarity
objective role conflict
objective role ambiguity
year qualified
age
length of service in present job
number of absence spells in 2 years
(corrected for tenure less than 2 years)

Subjective role conflict and ambiguity were excluded from the analysis because the correlation coefficients between them and their objective counterparts were over .80 (objective - subjective conflict coefficient = .88; objective - subjective ambiguity coefficient = .91), and so suffered from multi-collinearity. The results which emerged from the prediction of propensity to leave are summarised in Table 130.

Table 130: Summary of multiple regression analysis used to explore the relationship between propensity to leave and satisfaction, role pressure and biographical variables (N = 118)

variable	simple correlation	F	р	beta coefficient
global satisfaction	61	39.45	<.001	59
role clarity	25	7.59	<.01	.30
job tenure	20	2.55	ns	13
age	24	2.38	ns	29
objective ambiguity	.24	1.43	ns	.11
objective conflict	.27	1.08	ns	.08
year qualified	.18	.74	ns	16
job-related tension	.30	.58	ns	.08
extrinsic satisfaction	50	.26	ns	14
general satisfaction	48	.18	ns	22
absence spells	.06	.14	ns	.03
intrinsic satisfaction	36	.09	ns	.10
constant				25.78

Multiple R = .71
$$R^2 = .51$$
 F = 9.10 p < .001

The multiple correlation was .71, the proportion of variance in the criterion explained by the predictors was 51%, and the F-ratio was highly significant (F = 9.10, p < .001). Of the 12 predictors included in the analysis, however, only 2 had sufficiently high (p \leq .05) individual F-ratios to contribute substantially to the prediction equation. These were global satisfaction and perceived role clarity. Global satisfaction was by far the more powerful predictor and contributed negatively to propensity to leave. The simple correlation between role clarity and propensity to leave was also negative but its contribution to the prediction equation appeared, from the beta weight, to be positive. An explanation for this unexpected finding is suggested in the discussion section below.

The independent variables included in the predictions of general, intrinsic and extrinsic satisfaction were identical to those in the propensity to leave prediction except that the four satisfaction variables were removed and propensity to leave was added. The results for general, intrinsic and extrinsic satisfaction separately are summarised in Tables 131, 132 and 133.

Table 131: Summary of multiple regression analysis used to explore the relationship between intrinsic satisfaction and propensity to leave, role pressure and biographical variables (N = 118)

variable	simple correlation	F	р	beta coefficient
objective ambiguity	48	7.10	<.01	26
propensity to leave	36	7.07	₹.01	22
role clarity	.48	5.32	<.05	.26
year qualified	04	2.44	ns	.32
age	.10	1.89	ns	.28
objective conflict	20	1.25	ns ·	.10
job-related tension	43	.76	ns	10
absence spells	.03	.73	ns	.07
job tenure	.12	.03	ns	01
constant				17.33

Multiple R = .61

 $R^2 = .37$

F = 7.07

p < .001

Table 132: Summary of multiple regression analysis used to explore the relationship between extrinsic satisfaction and propensity to leave, role pressure and biographical variables (N = 118)

variable	simple correlation	F	р	beta coefficient
propensity to leave	50	23.54	<.001	36
role clarity	.58	19.03	<.001	.43
job tenure	.06	5.55	<.05	19
age	.17	1.86	ns	.25
job-related tension	50	1.04	ns	11
objective ambiguity	44	.70	ns	07
year qualified	11	.69	ns	.15
objective conflict	28	.32	ns	.04
absence spells	04	.08	ns	.02
constant				8.19

Multiple R = .72 $R^2 = .51$ F = 12.57 p < .001

Table 133: Summary of multiple regression analysis used to explore the relationship between general satisfaction and propensity to leave, role pressure and biographical variables (N = 118)

variable	simple correlation	F	р	beta coefficient
propensity to leave	48	18.32	<.001	32
role clarity	.59	13.55	<.001	.36
objective ambiguity	51	4.95	<.05	19
age	.16	1.73	ns	.24
year qualified	11	1.40	ns	.21
job-related tension	53	1.40	ns	12
objective conflict	27	.87	ns	.07
absence spells	01	.54	ns	.05
job tenure	.15	.47	ns	05
constant				35.69

Multiple R = .72

 $R^2 = .51$ F = 12.72 p $\approx .001$

The multiple correlation was .61 for intrinsic satisfaction and .72 for both extrinsic and general satisfaction, and the variance in the criterion explained was 37%, 51% and 51% respectively. For each prediction the F-ratios were significant at the p<.001 level. The variables which made the greatest contribution to the satisfaction predictions were propensity to leave, role clarity, objective ambiguity and job tenure. The relationship of role clarity to the dependent variables was positive; and of propensity to leave, objective ambiguity and length of service in the present job, negative.

7.2 Discussion

The zero correlations between the job satisfaction measures and propensity to leave were all negative and significant (p<.001), and greater than .35. However, none of the satisfaction - absence (spells) coefficients was significant. The negative satisfaction - propensity to leave correlations support previous work with registered nurses (Lyons, 1968, 1970), although, in a study with nurse aides and assistants (Brief & Aldag, 1976) which used the Job Descriptive Index (JDI), the relationship with 'supervisory satisfaction' was significant (-.31, P<.01) but with 'work satisfaction' was not (-.18). Newman (1974) used the JDI and the General Motors Faces Scale with a hospital sample which included registered nurses, licensed practical nurses and nurse aides, and found that only the global Faces scale correlated significantly (-.16, p<.05) with actual termination.

The lack of significant absence - satisfaction correlations failed to support those reported by Lyons (1968) and Newman (1974). Lyons recorded the number of absence spells taken by registered nurses during two periods and reported significant or nearly significant negative relationships with 'satisfaction with the job' (r = -.26, p < .05) and -.45, p < .01 and 'satisfaction with the hospital' (r = -.23, p < .10)

and -.27, p <.05), but non-significant correlations with 'satisfaction with superior' (r = -.18 and -.15). Newman reported significant correlations with only two out of six satisfaction scales, the JDI work scale (-.19, p <.05) and the global Faces scale (-.31, p <.01). With student nurses, Clark (1975) found no evidence that job satisfaction was a predictor of short-term absence. Thus, although Slocum et al. (1972) concluded that the dissatisfied nurse is likely to stay away from work more often, this was not supported in the present study.

With occupational groups rather than nurses, correlations between propensity to leave or actual termination and satisfaction have generally been reported as negative, although variations have occurred according to the satisfaction measure used. For example, Koch & Steers (1978) reported significant negative correlations between wastage and the JDI work (-.31) and JDI co-worker scales (-.21) but non-significant ones with the JDI supervision, JDI pay, JDI promotion and the total JDI scale, in a sample of non-managerial employees (clerks, custodians, manual labourers, road maintenance crews). Kraut & Ronen (1975) found extremely high positive correlations between a global satisfaction item and intent to stay in salesmen (r = .80, p < .05) and repairmen (r = .93, p < .05)p < .05). In another study by Kraut (1975) with salesmen, significant positive static correlations emerged between various work attitudes and intent to remain, but when dynamic correlations were computed between two time periods (ie the change in the respondent's intent to remain was correlated with their change in attitude to work) the magnitude of the correlations dropped considerably. However, two attitudinal items did retain relatively high correlations with intent to stay: satisfaction with the work itself (.26, p <.01) and with the company as a place to work (.30, p <.01). Waters et al. (1976) found that, in female insurance clerks, the only JDI scale that correlated significantly with termination

was JDI work (-.37, p<.01), but three of the scales correlated with intent to remain: work (.36, p<.01), pay (.27, p<.01) and promotion (.19, p<.05). This suggests that other factors, such as availability of alternative employment, may have influenced the final withdrawal decision. In a study with British steelworkers (Nicholson et al., 1977) propensity to leave correlated with all the satisfaction scales in the Worker Opinion Survey (Cross, 1973), but dissatisfaction with the work itself emerged as the main predictor of leaving intent.

Not all previous research has demonstrated negative relationships between satisfactions and leaving intentions. For example, Hamner & Tosi (1974) found a non-significant correlation between job satisfaction and propensity to leave (-.12) in a sample of managers, and Paul (1974) reported positive coefficients in both male (.46) and female (.52) school teachers. Paul's results need not necessarily be unexpected, however, if highly satisfied teachers planned to leave their jobs for promotion.

The literature on absence and job satisfaction on the whole, supports a negative relationship although generalizations from early research are dangerous because of methodological inconsistencies (Nicholson et al., 1976; Redfern, 1978). Studies which have been published relatively recently and which are methodologically sounder, have, however, supported the earlier negative relationships, although not for all the satisfaction facets in multidimensional scales. In a recent review, Muchinsky (1977) found that global satisfaction and satisfaction with the work itself correlated negatively with absence, but the correlations with satisfaction with co-workers, pay, promotion and supervision tended to be near zero. In their study of steel workers, Nicholson et al. (1977) found significant negative correlations between absence spells and satisfaction with the work itself, co-workers,

the firm, and total satisfaction, but, as with propensity to leave, the most significant predictor of absence to emerge was dissatisfaction with the work itself.

Job satisfaction was related to attendance but only when the behaviour was under the individual's control (Smith, 1977). Smith recorded attendance in a group of administrative, professional and technical employees of a Chicago merchandising corporation on a single day following a crippling snowstorm. He correlated attendance with the employees' satisfaction with certain job aspects and compared these with similar data from a sample in New York which had not experienced the severe weather conditions. All the satisfaction - attendance correlations were over .35 (p < .05) in the Chicago sample, but none was greater than .14 (ns) in New York.

The results of the present study have been supported by studies with female clerical workers (Ilgen & Hollenback, 1977) and women working in an accounting department (Garrison & Muchinsky, 1977). Ilgen & Hollenback reported a correlation of -.09 between absence duration and satisfaction as measured with the Minnesota Satisfaction Questionnaire, and Garrison & Muchinsky found that none of their coefficients with 'absence with pay' was significant, although JDI (work) and JDI (total) correlated negatively and significantly with 'absence without pay'.

The assumption in the literature has been that absence is a result of low satisfaction rather than vice versa (Ilgen & Hollenback, 1977). These authors have pointed out that attendance is bound to vary with satisfaction with specific aspects of the job. For example, if the organization has liberal sick-leave benefits, or if lay-offs, promotions, and pay rises occur on a seniority basis, it is not likely that attendance will be higher when an individual is satisfied with pay, security, and company policies. Furthermore, if absences are not

likely to affect satisfaction with co-workers, higher absence may be related to higher co-worker satisfaction. On the other hand, satisfaction with supervision is likely to encourage attendance.

Ilgen & Hollenback predicted that those researchers who found significant negative satisfaction - absence correlations studied organizations in which rewards were contingent upon attendance. Therefore, a significant correlation would depend on their relationship to a third factor, 'attainment of value rewards'. In the present study with CNs, rewards on the job were not dependent on attendance and so the insignificant absence - satisfaction correlations support Ilgen & Hollenback's thesis, and their conclusion: 'Sick leave, personal leave policies, as well as a decrease in a general work ethic that it is one's duty to attend the job one holds all tend to decrease the contingency between the absence behavior and rewards.' (p.159)

The second hypothesis examined in the present study, that job-related tension, role conflict and role ambiguity were negatively, and role clarity was positively related to global, intrinsic, extrinsic and general satisfaction, was supported. Comparisons can be made with several studies with nurses. The correlation found between the global satisfaction index and role clarity was .54 (p<.01) which was considerably higher than that reported by Lyons (1971) with registered staff nurses (.44, p<.01) in which the same measures were used. Lyons did find, however, that need for clarity emerged as a powerful moderator in that the satisfaction-role clarity correlation increased to .54 (p<.01) in the high need for clarity group and disappeared to a non-significant level in the low need for clarity group. In his earlier study with nurses (1968, 1970) Lyons supported the positive clarity-satisfaction relationship at the individual level of analysis, and also demonstrated significant negative correlations between job pressures and satisfactions.

The role conflict and ambiguity scales developed by Rizzo and his colleagues (1970) have been the instruments of choice in recent years because of their demonstrated independence, and nurses have been included in some of the studies. Szilagyi et al. (1976) employed these scales with samples of employees at different occupational levels in a medical centre and a manufacturing firm. The medical samples consisted of administrative staff, professional staff including registered nurses, technical staff including licensed practical nurses, clerical staff, and service staff including nurse aides. In the professional group, role conflict correlated significantly with the satisfaction dimensions (the JDI), with coefficients ranging from -.21 (p < .01) for satisfaction with pay to -.47 (p < .001) for satisfaction with supervision. Although direct comparison with the MSQ scales used in the present study is not possible, the correlation between objective role conflict and intrinsic satisfaction was -.20 (p < .05), with extrinsic satisfaction -.28 (p < .01) and with general satisfaction, -.27 (p < .01). These were somewhat lower than those reported by Szilagyi and his colleagues. Szilagyi et al's correlations between role ambiguity and the JDI dimensions were lower than those with role conflict, and ranged in the professional sample from -.08 (ns) for pay to -.43 (p <.001) for supervision. The coefficients between objective role ambiguity and satisfaction in the present study were higher than this, ranging from -.44 (p <.001) for extrinsic satisfaction to -.50 (p <.001) for general satisfaction.

Szilagyi et al went further in their study by repeating the correlational analysis whilst holding two out of three moderating variables (locus of control, role conflict and ambiguity) constant. This resulted in a decrease in all the coefficients although for the professional group, the partial coefficients suggested that role conflict made a greater contribution than role ambiguity or locus of control to the explained

variance in the satisfaction measures. Thus, role conflict appeared to be more important for the professional group whereas ambiguity was dominant in the administrative sample. The authors added a cautionary note to their findings which applies to the present study: even though many of the correlation coefficients were significant, they were only of low to moderate magnitude, and therefore, the amount of variance they explained was not high. The authors pointed out that longitudinal or experimental research was necessary in order to investigate causal relationships and the effect of other moderating variables on the relationships. Consequently, a more recent study was carried out by Szilagyi (1977) which employed a longitudinal design by administering questionnaires before and after a 6 month period. This enabled causal inferences to be made. For the professional group, which consisted of registered nurses, both role conflict and ambiguity resulted in a decrease in work satisfaction (-.36 and -.25 respectively). Role ambiguity led to dissatisfaction at the 'top' administrative level and conflict did so at the 'lower' service level, whereas both ambiguity and conflict were significant at the 'middle' professional level.

The greater impact of role conflict at 'lower' organizational levels was not supported by Schuler et al. (1977) with various occupational groups which included first-line managers (head nurses) as the 'highest' level. Six occupational groups were included in this study, in two of which were nurses. The first contained nurses of all grades between nurse aide and head nurse in an American hospital, and all the correlation coefficients between satisfactions (the JDI) and role conflict and ambiguity were negative, and with one exception, significant (p < .05 or better). The exception was a coefficient of -.10 between satisfaction with pay and role ambiguity. In contrast, the only significant correlations that emerged with the sample of nurse aides and assistants were between role

conflict and satisfaction with work and supervision. None of the ambiguity - satisfaction correlations was significant. Similar results were reported by Brief & Aldag (1976). Thus, although both role conflict and ambiguity emerged as important correlates of satisfaction at the 'middle' occupational level which included professional nurses, conflict did not appear as significant for the 'lower' level as it had done in Szilagi's (1977) study.

The impact of providing lay 'Service Unit Management' to take over much of the head nurse's administrative work was examined by comparing the relationship between role clarity and intrinsic satisfaction in head nurses with and without the assistance of Service Unit Management (Munson & Heda, 1976). Perceived 'task concensus' and 'unit tension' were used as indicators of role clarity. Unit tension correlated significantly with intrinsic satisfaction (-.32, p =<.05) but task concensus did not, and subsequent multiple regression analysis demonstrated that Service Unit Management increased the level of intrinsic satisfaction in the head nurses. It may be that the ward clerk employed in British hospitals would have a similar impact upon CNs' satisfaction levels.

Research which has examined the relationship between role pressures and job satisfaction using zero-order correlations with occupational groups other than nurses has produced equivocal findings because of the different measures used and occupational types and levels studied. With role conflict, for example, significant negative correlations with global and some faceted job satisfaction measures have been reported in government research and development employees (Miles, 1975, 1976; Keller, 1975), finance managers (Tosi, 1971), managerial and technical employees of a research and engineering firm (Rizzo et al., 1970), military and civil service personnel (Johnson & Stinson, 1975), school teachers (Tosi & Tosi, 1970), and manufacturing employees (Schuler, 1975). However, both

Keller (1975) and Rizzo et al (1970) found that the correlations between role conflict and some of the satisfaction facets were not significant, and this was supported by Hamner & Tosi (1974) with 'high' level managers.

Similarly, most previous research which has examined role ambiguity - satisfaction relationships has reported negative correlations, or positive role clarity - satisfaction relationships. For example, in a representative national American sample (Margolis et al., 1974), 'high' level managers (Hamner & Tosi, 1974), government research and development employees (Miles, 1975, 1976; Keller, 1975), scientists and engineers (Organ & Greene, 1974a & b), managerial and technical research and engineering employees (Rizzo et al., 1970), research and development supervisors and nonsupervisors (Miles & Petty, 1975), military and civil service personnel (Johnson & Stinson, 1975), black South African factory supervisors (Orpen, 1977), salesmen (Ivancevich & Donnelly, 1974), women school teachers (Paul, 1974), and manufacturing employees (Schuler, 1975). But as with role conflict, Keller (1975) and Ivancevich & Donnelly (1974) found that the correlations between ambiguity and some of the satisfaction facets were not significant and that has been supported by Tosi & Tosi (1970) with school teachers and Tosi (1971) with finance managers.

In spite of these apparently contradictory relationships, the general indication is one of a negative association between role conflict and ambiguity and some, if not all, satisfaction facets. The implications of this are that multidimensional indices of satisfaction are the measures of choice, occupational level appears to be an important moderating variable, at least in some occupations, and perhaps not all job pressures are counter productive. Pressures like high but realistic performance goals, a heavy workload and the demand for high quality workmanship, may be useful and be positively related to job satisfactions, but others like too little authority, lack of information, and conflicting job

expectations, may be dysfunctional (Burke, 1976).

Returning to the present study, the third hypothesis based on zero-order correlations was that perceived role conflict, ambiguity and job related tension would be related positively and perceived role clarity negatively to absence and propensity to leave. This was supported for propersity to leave but not for absence, since none of the coefficients was significant. Furthermore, the coefficients did not alter substantially when the effects of age, tenure, travelling distance to the hospital, and number of children were removed.

Lyons (1968, 1970) used four job-related tension items, three of which were used in the present study. He found in his 'intensive' sample of registered staff nurses, three of the four items correlated with propensity to leave (.19 to .26, p < .01) but none of the tension - absence (spells) correlations was significant. Lyons (1968) also found that the four role clarity items used in the present study correlated significantly with propensity to leave (-.18 to -.30, p <.01) and only one, 'clarity on limits of authority', correlated significantly with absence spells (-.29, p <.01). The results of the present study provide substantial support for Lyons' findings. Lyons emphasised three implications of his findings, all of which were related to organizational rather than personal factors and so could be influenced by the nursing management. First, clarity about rules and regulations and limits of authority were more important to wastage than clarity about how and what to do on the job. Second, voluntary wastage was less likely to occur if nurses could exchange views with colleagues in other departments whose jobs were related to Third, improving communication and coordination between the hospital personnel would help to increase the quality of care as well as reduce voluntary wastage. In his later study (1971) Lyons reported a correlation of -.27 (p <.01) between the role clarity index and propensity

to leave, which compares with -.23 (p <.01) in the present study.

The correlations in the present study between objective role conflict and ambiguity and propensity to leave (.27 and .24 respectively, both p < .01) support Brief & Aldag's (1976) and Schuler et al's (1977) findings with nursing aides (.23 and .25, p < .05). Unfortunately, Schuler et al did not measure propensity to leave in their other sample of nurses which included head nurses. Job-related tension did not correlate with voluntary termination in a sample of registered nurses, licensed practical nurses and nurse aides (Sheridan & Vredenburgh, 1978). Schuler et al (1977) used Rizzo et al's (1970) conflict and ambiguity scales, rather than Kahn et al's (1964) job-related tension index, with their nurse aides, and found that although both correlated with propensity to leave, only role ambiguity did so with actual termination.

On the whole, research with occupational groups other than nurses has supported the positive role pressure - propensity to leave correlations found in the present study: for example, with salesmen and repairmen (Kraut & Ronen, 1975), and with salesmen, supervisors and operating employees in an electronics firm (Ivancevich & Donnelly, 1974). Rizzo et al (1970) found significant correlations between role ambiguity and propensity to leave, but not with role conflict, with two samples of managerial and technical employees of a research and engineering firm; and Hamner & Tosi (1974) reported zero correlations between propensity to leave and both role conflict and ambiguity in 'high' level managers. Finally, in Paul's (1974) sample of school teachers, a job-related strain measure correlated negatively with propensity to leave in men but positively with propensity to leave in women.

Turning to absence - role pressure correlations in non-nurses, Ilgen & Hollenback (1977) found that, in their sample of women clerical workers,

the pressure they felt they were under to attend work ('job structure pressure') correlated negaitvely with the number of hours sick leave taken and with total absence (duration measure). Also, the workers' belief that absence was wrong ('value system pressure') correlated negatively with sick leave but not with unexcused absence (duration measure) nor with total absence; and their perceptions of their co-workers' acceptance of their absence ('co-worker pressure') correlated negatively with unexcused absence but not with sick leave or total absence. Subsequent multiple regression analyses revealed that the most powerful predictive equations of total absence contained job satisfaction (the MSQ) and the three pressure variables (R = .31, p <.05), and job satisfaction, perceived pressures and biographical variables (R = .41, p<.01). Both these equations retained most of their predictive power even when subjected to 'shrinkage' analysis. When job satisfaction and the biographical variables were used alone, the initial multiple correlation was significant (R = .28, p<.05) but the shrunken R was not (.22). Since none of the multiple correlations using biographical variables alone was significant after shrinkage, the authors concluded that these did not add much to the prediction.

In the present study, the number of absence spells taken by the CNs did not emerge as an important variable, although in hospital A the CNs who left their jobs had a significantly higher rate of absence than those who stayed (p.324). Since this was not supported in hospital B or the total sample, support cannot be given, from this study, to the model that specifies a continuum of progressive withdrawal which culminates in leaving the jcb altogether.

The final two hypotheses in the present study based on zero-order correlations involved satisfactoriness as rated by the CN's nursing

officer. The first hypothesised that satisfactoriness and satisfaction were positively related and although all the correlations with global satisfaction were positive and significant, only dependability and personal adjustment correlated significantly with intrinsic, extrinsic and general satisfaction as measured with the MSO. Furthermore, none of the coefficients was greater than .30. Slocum et al (1972) examined the relationship between performance as assessed by the supervisor and perceived need satisfaction using Porter's 'is now - should be' questionnaire. Their 'professional' sample consisted of head nurses, assistant head nurses and graduate staff nurses and a 'para-professional' sample included licensed practical nurses and nurse aides. For the 'professionals', only satisfaction with social and self-actualization needs correlated significantly with performance, and none of the correlations in the 'para professional' group was significant. Although different measures were used, this supports the weak confirmation of the satisfactoriness - satisfaction hypothesis of the present study. In another study with nurse aides (Brief & Aldag, 1976) neither satisfaction with work nor with supervision correlated significantly with performance as rated by the supervisor.

Sims & Szilagyi (1975) examined satisfaction (the JDI) and performance (supervisors' ratings) and other variables, in employees at different occupational levels in a medical centre: administrators, professionals including registered nurses, technical staff including licensed practical nurses, clerical staff, and service staff including nurse aides. The authors also used a leader reward behaviour scale, which indicated the extent to which the individual perceived that positive or negative rewards from his supervisor reflected his performance, accomplishment, etc, and therefore can be regarded as an indirect measure of performance. In the professional group, positive reward behaviour correlated positively with all the JDI satisfaction dimensions (.20 to .70, all p < .001) and

with performance (.36, p <.001), and with the technical group, it correlated with all the JDI dimensions (.20 to .47, p < .01 to < .001) except satisfaction with pay, and with performance (.30, p <.01). Unexpectedly, in the professional group, punitive reward behaviour correlated positively with satisfaction with promotion, but the coefficients with the other JDI dimensions and with performance were not significant. None of the correlations with punitive reward behaviour was significant in the technical group. It is interesting that all the significant correlations between punitive reward behaviour and the satisfaction dimensions were positive for the administrators, most were positive for the professionals, and most were negative for the technical and service groups. Work by the same authors (Szilagyi & Sims, 1975) showed that role ambiguity was highest in the administrators, and therefore, such employees may have found their roles so ambiguous that any clarifying feedback from their superior, whether positive or punitive, would be regarded as beneficial and therefore, satisfying. The authors examined this by splitting the administrators into high and low ambiguity groups, and they found some support for the hypothesis in that the correlations between punitive reward behaviour and satisfaction with work, supervision, and promotion were higher for the high ambiguity group.

Turning to the relationship between satisfaction and performance in occupational groups other than nurses, a significant positive correlation was reported with women first level supervisors in a public utility firm (Steers, 1975) in whom performance was rated by their supervisors and a global satisfaction measure used. Jacobs & Solomon (1977) found that global satisfaction and satisfaction with the JDI dimensions of promotion and supervision correlated significantly with performance (supervisor ratings) in a sample of salesmen and managers in a chemical firm, but satisfaction with work, pay and co-workers did not.

None of the significant correlations, however, was greater than .19. Subsequent moderated regression analysis revealed that the relation between satisfaction and performance increased when perceived reward and self-esteem were included as moderators.

In a sample of British bus conductors (Heron, 1954) satisfaction correlated significantly with a satisfactoriness composite, 'value to the employer'. Supervisor and peer rankings of performance were correlated with discrepancy scores from Porter's (1961) need satisfaction questionnaire (Lawler & Porter, 1967), and all the coefficients were

significant, with the highest emerging for self-actualization. Lawler & Porter maintained that there was greater support for the model that satisfaction is contingent upon performance rather than that it leads to good performance. Another study which found positive satisfaction-performance relationships was with women white collar workers in a manufacturing company (Beehr et al, 1976). Effort towards quantity and quality of work were measured rather than actual performance, and the former provided a zero correlation with job dissatisfaction and the latter a significant negative one. With salesmen and repairmen from five Western countries including the UK (Kraut & Ronen, 1975) overall satisfaction did not correlate significantly with a self rating of performance, but subsequent multiple regression analysis revealed that satisfaction with co-workers, security, physical conditions and benefits predicted performance in the salesmen, with a multiple correlation of .33. For repairmen the most contribution came from satisfaction with security, advancement, recognition, earnings and a desirable area to live in (R = .26). When the samples were combined and occupation and country of origin were included, the prediction of performance was substantially increased.

In conclusion, the evidence from the present study as well as from previous research suggests that some satisfaction dimensions correlate with performance, but, on the whole, the coefficients are relatively

low, and as with any correlational analysis, an established relationship is not necessarily causal.

The final correlational hypothesis indicated that satisfactoriness was negatively related to absence and propensity to leave. Rather more support for this emerged than for the satisfaction-satisfactoriness relationship, since four of the five satisfactoriness scales correlated significantly (-.20 to -.26, p <.05 to <.01) with absence spells (the exception was conformity), and three, dependability, personal adjustment and general satisfactoriness, correlated with propensity to leave (-.25 to -.31, p <.01). In Brief and Aldag's (1976) study of nurse aides and assistants, the correlation between self ratings of performance and propensity to leave was not significant (-.10), which was supported in the present study, but Brief & Aldag found that performance did correlate with actual termination (-.32, p <.01). However, Sheridan & Vredenburgh (1978) reported a zero correlation (-.02) between supervisory ratings of performance and voluntary termination in their study with registered nurses, licensed practical nurses and nurse aides.

The non-significant relationship between performance and propensity to leave found in the present study and with the nurse aides (Brief & Aldag, 1976) was confirmed with salesmen and engineers (Kraut & Ronen, 1975), using self ratings of performance and an 'intent to stay' measure. They computed rank order correlation coefficients, and although the magnitude of these was fairly high (.21 for salesmen, and -.39 for repairmen), they were not significant at the .05 level. As for absence, Heron (1954) found that supervisory ratings of satisfactoriness in a sample of bus conductors correlated significantly (in the expected direction) with the number of absence spells taken, and the number of times late for work. The correlations in the present study between performance, dependability (which included lateness) and general satisfactoriness and absence spells

support Heron's findings.

In summary, the hypotheses based on zero-order correlations were, on the whole, supported except for those which involved performance and absence. Absence was not, apparently, a critical variable in this sample of professional nurses with responsible jobs. Previous research which has found it to be an important correlate of employee attitudes (notably job satisfaction) has tended to focus on manual and non-manual workers in non-supervisory positions. Zero-order correlational analyses can only indicate associations between two variables. No directional or causal relationships can be inferred from these results, nor can mutual dependance on a third or moderating variable be excluded. The subsequent multivariate analyses performed in this study were necessary in order to establish whether or not certain relationships persisted when other variables were held constant, and whether predictive hypotheses could be supported.

Discriminant function analysis revealed that five satisfaction and role pressure variables, in combination, distinguished between likely stayers and likely leavers, with a 'hit' rate of 80%. The pressure variables were role clarity and job-related tension, and the satisfaction items were global, extrinsic and general satisfaction. Although not really comparable, because they used a stayed-left criterion and satisfaction (the MSQ) and biographical variables as predictors with mainly female employees of a discount store, Taylor and Weiss (1972) found that the analyses which included the satisfaction items, with or without biographical variables, best discriminated between the two groups. Furthermore, cross validation revealed that only three equations which included satisfaction remained significant. None of those which used only biographical variables did so. The total 'hit' rates were higher for the discriminant analysis which used the satisfaction items only, and the hit

rate for the original group was 83%, and for the cross-validation group, 81%. The authors concluded that "....satisfaction data alone were the most stable predictors of termination." (p.130). The implication pointed out by the authors was that the organization was in a position to predict that employees with satisfaction scores beyond a certain point would leave. If, therefore, attention was focussed on increasing satisfaction for these particular individuals, then they would be more likely to stay. Interestingly, most of the MSQ items which showed significant differences between the stayers and leavers were intrinsic satisfaction items, whereas in the present study, the level of extrinsic satisfaction was significantly lower in the CNs who left, but there was no difference between stayers and leavers on intrinsic satisfaction (see p.324).

Another study used discriminant function analysis on data collected from a group of psychiatric technician trainees (Porter et al., 1974). The criterion groups were again stayed-left, and the predictors consisted of 15 organizational commitment items and 5 job satisfaction items (the JDI). The questionnaires were administered at four different times, twice before and twice after the training period had finished, and discriminant analysis was performed on each time period. In the two time periods before training was completed, no difference emerged between the groups, but significant (p < .05) discrimination emerged between them for the two time periods after completion of training. Commitment to the organization was the most important predictor, followed by satisfaction with promotion prospects, the work itself, and supervision. For each time period, 21% of the variance in the predictors was relevant to the subsequent decision to stay in or leave the organization. The authors concluded that individuals who have relatively unfavourable attitudes to their job and organization are more likely to leave than those with favourable attitudes. Furthermore, they suggested that organizational commitment is more important than job satisfaction to the withdrawal

decision, and it may be a global concept of which satisfaction is a part.

Simple multiple regression analysis was used in the present study in an attempt to confirm the prediction of propensity to leave from the discriminant analysis, and to establish whether satisfaction could be predicted from propensity to leave, role pressure and biographical variables. (year qualified, age, tenure, absence spells). Propensity to leave was successfully predicted from the satisfaction, pressure and biographical variables, with a multiple correlation of .71 which accounted for 51% of the variance. Only two variables, however, global satisfaction and role clarity, made a significant contribution to the prediction. Global satisfaction contributed negatively to the regression equation, but the contribution of role clarity was positive even though the zero-order correlation coefficient had been negative. Since the size of the contribution made by role clarity (beta weight = .30) suggests that this unexpected result was an interesting interaction rather than a statistical artifact, one can speculate on its meaning. A similar finding was reported from multiple correlation analysis in a sample of men teachers (Paul, 1974), in which role clarity also emerged as a positive predictor of leaving intent. Paul found this puzzling but suggested that it may have indicated a style of supervision which was 'too close', and this resulted in a level of clarity which was high and disliked. In the present study, many of the CNs emphasised that after a few years in the job, they had mastered its complexities and the challenge had gone. This left them feeling 'in a rut' and restless, so that they began looking out for another job. It could be, therefore, that a high level of role clarity reduces the challenge of the job which results in a propensity to leave.

Lyons (1968) found that multiple correlational analysis did not add much more to the variance in propensity to leave than the bivariate

correlation, in his sample of registered staff nurses. He found that the highest multiple correlation of propensity to leave from any two independent variables was -.55 (satisfaction with the job and satisfaction with the hospital), which was similar to the zero order correlation of -.52 between propensity to leave and satisfaction with the hospital. The multiple correlation of .71 in the present study was much higher but the main predictor was global satisfaction which consisted of the two satisfaction items which best predicted leaving intent in Lyons' study. Lyons also used multiple correlation analysis to predict termination from 19 single item predictors (tension, clarity, satisfaction, communication, coordination, absence) and this demonstrated a multiple correlation of .57 which accounted for 32% of the variance in termination. Yet again, the two satisfaction items emerged as the most powerful predictors since the multiple correlation with these two alone was -.35. Only small increases in the amount of variance explained occurred when additional predictors were added. The explanation given by Lyons for the low predictive power of his independent variables was their multicollinearity. The present study overcame this to some extent by using as predictors indexes consisting of several related items rather than the items from each index separately.

Another study which included registered nurses, licensed practical nurses and nurse aides (Newman, 1974) reported a multiple correlation of .70 (p<.01) in predicting 'intent to resign' from attitudinal and normative items. This was virtually identical to the multiple correlation reported in the present study but, unfortunately, Newman did not specify which predictors made the most contribution. He went on to predict actual termination from the same items and found the most powerful predictive equation to consist of job satisfaction (the 5 JDI scales and the General Motors' Faces scale), attitude towards leaving, perceived expectations of colleagues towards leaving, and leaving intent. The multiple correlation was .48

(p < .01) which accounted for 23% of the variance. When corrected for 'shrinkage', this dropped to .41, accounting for 17% of the variance.

The attitudinal items which made the greatest contribution to an intent to stay prediction in salesmen and repairmen were mainly intrinsic satisfaction items (Kraut & Ronen, 1975). For the salesmen, satisfaction with the challenge of the job, with management relations and with advancement opportunities resulted in a multiple correlation of .32; and for the repairmen, a multiple correlation of .35 was derived from satisfaction with pay, skills utilization, manager and challenge. This was a multinational study, and when the samples were combined, there was a substantial increase in the intent to stay prediction when occupation and country were added to the satisfaction items.

Nicholson et al (1977) attempted to predict propensity to leave from satisfaction items (the Worker Opinion Survey, Cross, 1973) and attitudes towards influence in decision making, in a sample of steel workers in the North of England. The results showed that all the satisfaction items emerged as significant predictors with multiple correlations ranging from .61 to .64. Dissatisfaction with the work itself (intrinsic satisfaction) was the most powerful single predictor, with dissatisfaction with co-workers second, which indicates that job content and the social context are the two most important components of job satisfaction in relation to withdrawal intentions. Furthermore, perceived lack of influence and desire for involvement emerged as moderate predictors of propensity to leave. implication suggested by the authors is that it may be possible to reduce eventual terminations by matching the employee's occupational needs, expectations and ability to the demands of the job by effective selection, training and placement. This is an important and appropriate implication to be drawn from the present study.

Several studies have used actual termination as the behavioural criterion rather than leaving intention. In their study of hospital charge nurses, staff nurses and enrolled nurses in West Yorkshire (Mercer & Mould, 1976; Mercer & Long, 1977; Long & Mercer, 1977), Mercer and his colleagues found that job attitudes did not contribute much to the prediction. Intent to leave was by far the most powerful predictor since it alone accounted for 30% of the variance in turnover. When the following items were added: size of hospital, grade of nurse, tenure in present job, age, level of education, the existence of regular meetings to discuss work matters, attitude to the role of women in society, and promotion prospects, the prediction was increased to 53% of the variance. Except for attitudes to the role of women (ie home or career) and promotion prospects, attitudinal items did not emerge as predictors, and these two reflected a commitment to nursing as a career rather than dissatisfaction. In the present study, the biographical variables of age and tenure were not as powerful in predicting propensity to leave as they were in predicting actual termination in the West Yorkshire study. On an intuitive basis, it seems likely that the prediction of leaving intent should be dominated rather more than the prediction of actual termination by attitudinal items since less consideration need be given by the nurse to uncontrollable external variables which may intervene upon the final withdrawal decision. Mercer and his colleagues found no simple relationship between job satisfaction and termination in their nurses. Rather, a commitment to nursing and their hospital plus the intention to leave after a relatively short tenure, emerged:

'The conclusion has been that, while dissatisfaction enhanced the possibility of departure, satisfaction was far from being the prerogative of the stayers. To comprehend nursing turnover requires a deeper knowledge of the priorities which nurses have

in their work and non-work lives, and the general ease and desirability of movement that characterises such employment at specific points in time.'

(Long & Mercer, 1977, p.9)

In the present study, however, the results suggest that low levels of global satisfaction and high perceived role clarity did indeed make an important contribution to the CN's withdrawal decision.

Another study with non-supervisory registered nurses in an American hospital (Price & Bluedorn, 1976a) found that the addition of biographical variables (which included age and tenure) to 'determinants' and 'intervening' variables (which included job satisfaction), increased the amount of explained variance in turnover from 23% (p <.01) to 46% (p <.001). The satisfaction item which was significantly related to turnover was co-worker satisfaction, and work satisfaction just failed to reach significance. Finally, a composite of satisfaction (the JDI), biographical, and intent to remain variables predicted termination, with a multiple correlation of .50, in a sample of non-supervisory clerks in an American insurance company (Waters et al., 1976). As in the West Yorkshire study with nurses (Mercer & Mould, 1976), Waters and his colleagues found that future behavioural intention was a powerful predictor of termination.

In the present study, the prediction of general, intrinsic and extrinsic satisfaction from propensity to leave, role pressure and biographical variables resulted in multiple correlations of .72, .61 and .72 respectively (each p < .001). The amount of variance in the criterion explained by the predictors was 51% for general and extrinsic satisfaction and 37% for intrinsic satisfaction. Three independent variables made a significant contribution in the expected direction to the satisfaction predictions: for general and intrinsic satisfaction these were propensity to leave,

role clarity and objective ambiguity, and for extrinsic satisfaction, job tenure replaced role ambiguity. The direction of the job tenure contribution was negative, indicating that extrinsic satisfaction was greater with shorter tenure. Thus, as well as being a dependent variable, propensity to leave emerged as a powerful predictor of each satisfaction criterion.

Miles (1975) found that dynamic and cross-lagged correlations gave support for causal relations between role conflict and ambiguity and satisfaction. Although the direction of causality could not be inferred for the prediction with role conflict, the results suggested that ambiguity causes lower levels of satisfaction and may have a stronger effect than conflict on behavioural outcomes. In the present study, it was ambiguity rather than conflict which made a significant contribution to the prediction of general and intrinsic satisfaction

Kraut & Ronen (1975) found that five facet satisfaction items predicted overall satisfaction, but the multiple correlations were fairly low, .61 for salesmen and .58 for repairmen. And in a sample of non-managerial employees (clerks, custodians, manual labourers, road maintenance crews), Koch and Steers (1978) demonstrated that the job characteristics of autonomy, variety and responsibility were stronger predictors (R = .62, p < .001) of satisfaction than biographical variables, whereas the reverse was true in predicting attachment to the job.

In conclusion, the findings from the present study support to a large extent the results of previous work in nurses and other workers, although perhaps more emphasis was given by the CNs to the contribution of extrinsic rather than intrinsic satisfaction in the prediction of propensity to leave. The biographical variables did not make much contribution, except for tenure

in the prediction of extrinsic satisfaction, whereas, in studies which used termination rather than leaving intent as the criterion, biographical variables were relatively powerful.

Role clarity emerged as a significant variable since it featured in all the predictions, and it's obverse, role ambiguity, appeared in some. It is paradoxical that, from the multiple regression analysis, the contribution of role clarity to the prediction of both job satisfaction and propensity to leave, was positive. This suggests that a high degree of role clarity is a necessary prerequisite of job satisfaction, but when leaving the job is likely, it remains influential but as a positive predictor. A tentative explanation in terms of challenge is suggested: in the first few years in the job, the CN faces considerable challenge and may require a high degree of role clarity in order to cope with anxiety which the challenge brings. The consequence of this is satisfaction in Once she has been in the job for a few years, the high clarity becomes a negative influence since it reduces the amount of challenge present. The job has become straight forward but dull, and the likelihood of leaving is increased. This could be supported by the presence of low tenure as a significant predictor of extrinsic satisfaction, but one would also have expected tenure to have featured in the prediction of propensity to leave.

The results from this study can only be tentative since no cross-validation against a 'hold-out' sample or longitudinal analysis was made to establish whether the predictions persisted. Neither can the relationships suggested here be assumed without doubt to be causal, '... for although the conceptual framework for the investigation labels attitudinal variables as "independent" and behavioural variables as "dependent", the results, whether in the form of simple correlations or more complex multiple regressions, are in essence non-directional

associations. However, the inference of causality from attitudes to behaviour is in the present case the most plausible alternative to the null hypothesis....' (Nicholson et al., 1977). Neither can the results be generalised to all CNs in the general nursing division (excluding geriatric) of district general hospitals because the sample was not large enough and was not randomly selected from hospitals of this kind. At best, they can be applied to the two hospitals where the CNs worked.

8. COMPARISON OF THE LEAVERS WITH A SAMPLE OF 'MATCHED' STAYERS

8.1 Results

Comparisons were made between the scale scores of those CNs who left their jobs voluntarily during the 18 months following data collection and a 'matched' sample of CNs who stayed in their jobs. Omitted from this analysis were those who retired or were asked to leave, and those who were transferred or promoted within the general nursing division of the same hospital. Mann Whitney U one-tail tests were used to test the hypotheses that the leavers had lower satisfaction, higher perceived role pressures, need for clarity, absence and propensity to leave, than the stayers, and two-tail tests were used to determine whether the level of satisfactoriness differed significantly between the two groups. It was considered legitimate to adopt one-tail tests of significance for those comparisons where the results of earlier work have justified a directional hypothesis, but the literature concerning performance or satisfactoriness and wastage has reported equivocal results, and so two-tail tests were employed.

Details of the raw scores and statistical analysis are in Appendix 13 and the significance levels which emerged have been summarised in Table 134. In hospital A, none of the satisfaction measures distinguished between the two groups but in hospital B, extrinsic and general satisfaction were lower in the leavers than the stayers and this held true for the combined sample for extrinsic but not for general satisfaction (p<.08). Instead, lower scores emerged for the leavers on global satisfaction in the total sample. Both absence measures revealed significantly more spells taken by the leavers than the stayers in hospital A, but not in hospital B or both combined, although in the latter, significance was close (p<.06) for 'current' absence. Of the perceived role pressure variables, job-related tension

Table 134 . Significance levels resulting from comparison of scale scores of the leavers with a 'matched' sample of stayers, hospital A, hospital B, and the total sample.

(Mann Whitney U tests)

	hospital		
	А	В	A + B
global satisfaction	ns	ns	∠. 05
intrinsic satisfaction	ns	ns	ns
extrinsic satisfaction	ns	∠.05 -	<.05
general satisfaction	ns	<.05	ns
'past' absence ¹	<.01	ns	ns
'current' absence ²	<.05	ns	ns
propensity to leave	nis	<∙05	∠ • 01
job-related tension	ns	<∙05	<.05
role clarity	ns	• 05	ns
need for clarity	ns	ns	ns
objective role conflict	ns	<.01	• 001
subjective role conflict	<.05	<.05	• 01
objective role ambiguity	ns	ns	ns
subjective role ambiguity	ns	ns	ns
performance	-	.01*	-
conformity	-	ns*	-
dependability	-	ns*	
personal adjustment		ns*	-
general satisfactoriness	### PART OF THE PA	<.01*	
sample size : leavers stayers	9 - 10 11 - 12	21 - 24 26 - 28	30 - 34 37 - 40

all one-tail tests except those asterisked.

^{1 =} number of absence spells during the 2 years before data collection corrected for tenure less than 2 years.

^{2 =} number of absence spells during the 6 months before and the 6 months after data collection corrected for tenure less than 12 months.

and objective role conflict were higher in the leavers than the stayers of hospital B and the total sample, but not for hospital A, but subjective role conflict was higher in the leavers for all three samples. Role ambiguity did not differentiate between the groups, but role clarity was marginally lower in the leavers than the stayers in hospital B but not in hospital A or the combined sample.

Comparisons of the satisfactoriness scores were possible only in hospital B since the number of scales completed by nursing officers in hospital A was too small, but performance and general satisfactoriness were significantly lower in the leavers than the stayers.

The final comparison made between the leavers and 'matched' stayers was on their occupational need scores obtained from the Minnesota Importance Questionnaire (MIQ). Two-tail tests using the Kolmogorov-Smirnov two-sample test were employed to establish whether the leavers' scores on the importance attached to 21 job aspects were significantly different from the corresponding stayers' scores. The median MIQ scores of the leavers and the stayers in each hospital separately and combined, are presented in Table 135, and figures 13, 14 and 15. The median profiles for the leavers and the stayers were similar in the total sample and in each hospital separately, and in all of the comparisons the null hypothesis of no difference between profiles was accepted.

Although there were no significant differences between the leavers' and stayers' score profiles, the leavers gave higher importance scores than the stayers on most of the items. The greatest differences in scores between the leavers and stayers varied in each hospital. In hospital A, the stayers attached very low importance to being able to work alone ('independence') and getting recognition, whereas the leavers' median

Table 135 . MIQ median scores and ranges of the leavers and 'matched' stayers in hospitals A and B, and the combined sample

	-		-		-				-				1
		hospital	ital A			hos	hospital E	В		hospitals	Is A +		********
	le	leavers	sta	stayers	led	leavers	St	stayers	leavers	sus	ste	stayers	1
	M2	range	Σ	range	Σ	range	Z	range	2.	range	Z	range	1
ability utilization	1.7	.9 - 2.4	1.5	.7 - 3.5	2.1	1.0 - 3.5	1.9	.5 - 3.0	2.0	.9 - 3.5	1.7	.5 - 3.5	7-
achievement	1.7	1.2 - 3.0	1.7	1,1-3.0	2.1	.7 - 3.5	2.0	0-3.0	0.1	.7 - 3.5	2.0	0 - 3.0	T
activity	ο.	-1.0 - 3.5	4.	0 - 1.7	1.2	5 - 3.0	1.2	8-2.0	0.	-1.0 - 3.5	8.	8 - 2.0	1
advancement	8.	-1.0 - 2.7	.5	-1.5 - 2.3	1.0	8 - 2.4	9.	8 - 1.3	0.	-1.0 - 2.7.	9.	-1.5 - 2.3	1
authority	σ 1	-1.37	9.1	-1.6 - 1.4	1.2	9 - 1.6	5	-1.8 - 1.2	ا. ش	-1.3 - 1.6	1.5	-1.8 - 1.4	7
company policies	ω.	1-1.6	7.	4 - 1.6	6.	2 - 2.7	3.	6-1.7	8	2 - 2.7	10	4-1.7	1
compensation	1.1	1 - 2.2	ις.	-1.3 - 2.3	9.	-1.3 - 1.9	.5	-1.0 - 2.0	7.	-1.3 - 2.2	3.	-1.3 - 2.3	7
co-workers	1.	5 - 2.0	6.	8 - 2.2	9.	4-2.2	7.	-1.3 - 2.7	8	5 - 2.2	0.	-1.3 - 2.7	-
creativity	1.2	.7 - 1.6	1.0	6 - 1.6	1.2	.2 - 2.3	1.1	1-1.9	1.2	.2 - 2.3	1.1	6 - 1.9	7-
independence	ω.	-1.5 - 2.2	9	-1.6 - 1.0	.2	-1.2 - 2.2	1.2	-1.6 - 1.5	3.	-1.5 - 2.2	1.0	-1.6 - 1.5	1
moral values	4.	5-3.0	.5	7 - 2.4	.8	-1.3 - 2.7		4 - 3.2	7.	-1.3 - 3.0	9.	7 - 3.2	7
recognition	1.	8 - 1.8		7 - 1.5	1.0	-1.2 - 2.8	0	5-2.0	6.	-1.2 - 2.8	0	7 - 2.0	1
responsibility	1.6	7.2-2.7	1.0	1-1.8	1.4	9 - 3.2	٠. د.	5-2.0	1.5	9 - 3.2	1.2	5 - 2.0	
security	6,	.2 - 2.8	.7	2-2.0	1.2	6-3.2	7.	3 - 2.5	1.1	6 - 3.2	7.	3 - 2.5	1
social service	1.8	.6 - 3.2	2.3	.4 - 3.2	2.2	.3 - 4.0	2.0	.4 - 3.0	9.1	.3 - 4.0	2.0	.4 - 3.2	
social status	ci.	8 - 1.8	0	70.1-	ω.	-1.6 - 2.3	4	-1.7 - 2.2	σ.	-1.6 - 2.3	6.1	-1.7 - 2.2	T-
supervision – human relations	(0	2 - 1.7	1.0	0-2.8	0.	1.2 - 2.5	9.	7 - 1.7	0.	1.2 - 2.5	ω.	7 - 2.8	1
supervision - technical	1.0	5 - 2.0	6.	1-2.0	8.	7 - 1.5	.5	3-1.7	6.	5 - 2.0	9.	3 - 2,0	
variety	1.4	2-2.0	6.	1-2.0	1.1	.1-2.7	1.2	.1 - 3.2	1.3	2-2.7	6.	1.1 - 3.2	
working conditions	1.4	.6-2.7	1.1	-1.1 - 2.2	1.4	.5-3.0	1.1	1.3 - 2.2	1.4	.5 - 3.0	1.1	-1.1 - 2.2	,
autonomy	0.	.3 - 2.0	1.1	6-2.0	1.4	.2 - 2.4	8.	-1.0 - 2.0	1.2	.2 - 2.4	0	-1.0 - 2.0	,
sample size	10		12		20		23		30		35		-
							-		1			-	1

²M = median scores

¹MIQ = Minnesota Importance Questionnaire

Figure 13. Comparison of the median MIQ scores of leavers and 'matched' stayers, hospital A.

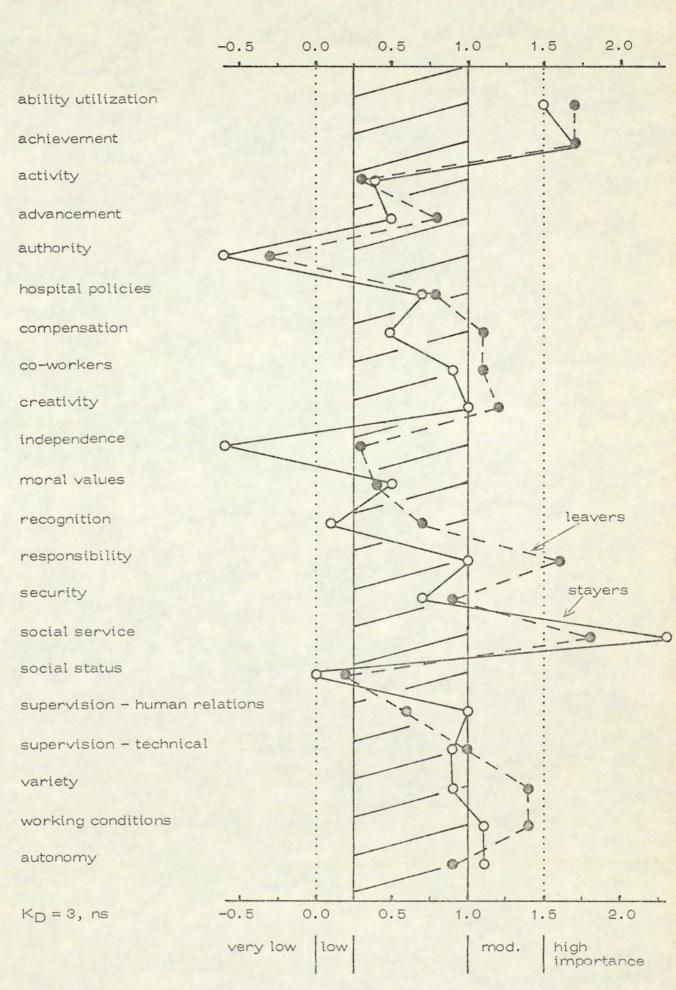


Figure 14. Comparison of the median MIQ scores of leavers and 'matched' stayers, hospital B.

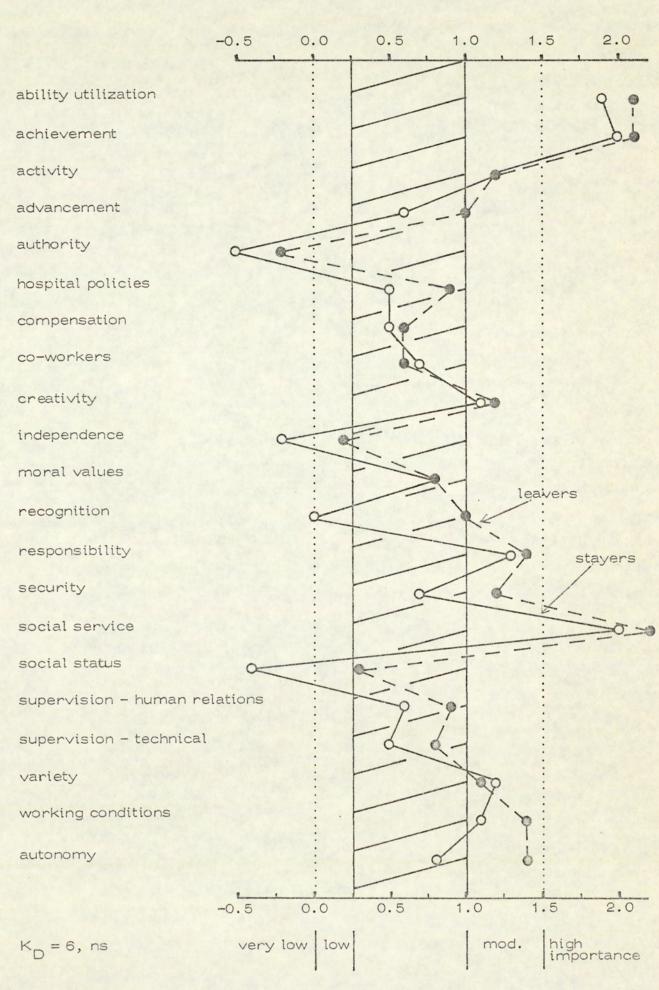
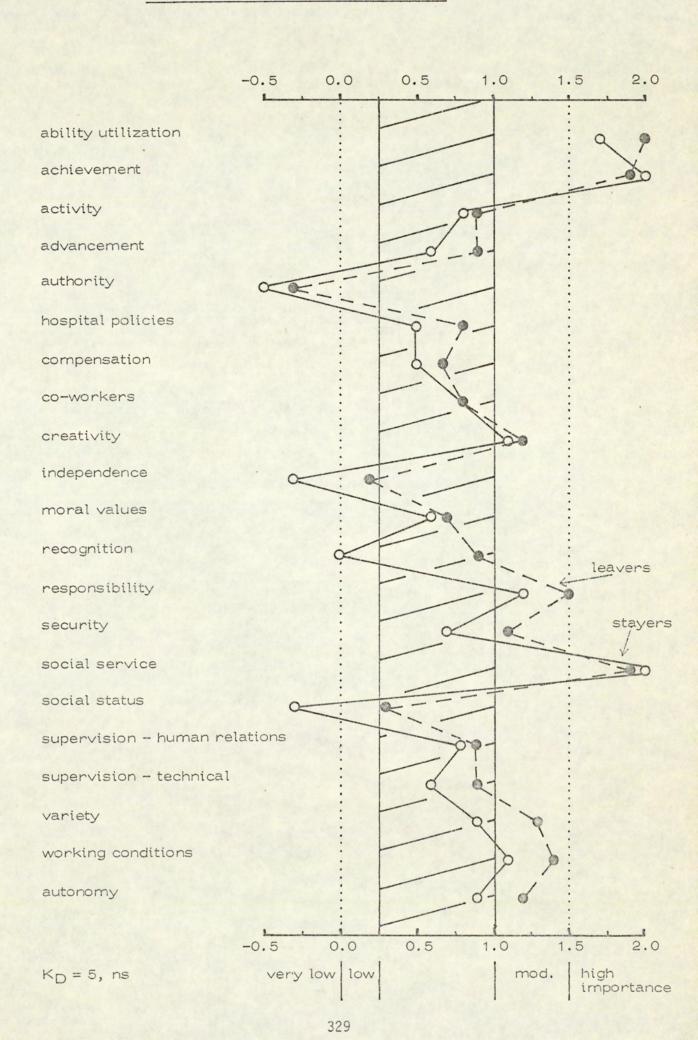


Figure 15. Comparison of the median MIQ scores of leavers and 'matched' stayers, total sample.



scores were in the neutral category (neither high nor low importance).

The items which were regarded with more importance by the leavers were pay ('compensation'), making one's own decisions ('responsibility') and being able to do something different every day ('variety'). In hospital B, the leavers attached more importance than the stayers to 'recognition', being able to plan work with little supervision ('autonomy') and job security. The stayers in hospital B attached very low importance to 'social status', but the leavers put this in the neutral category.

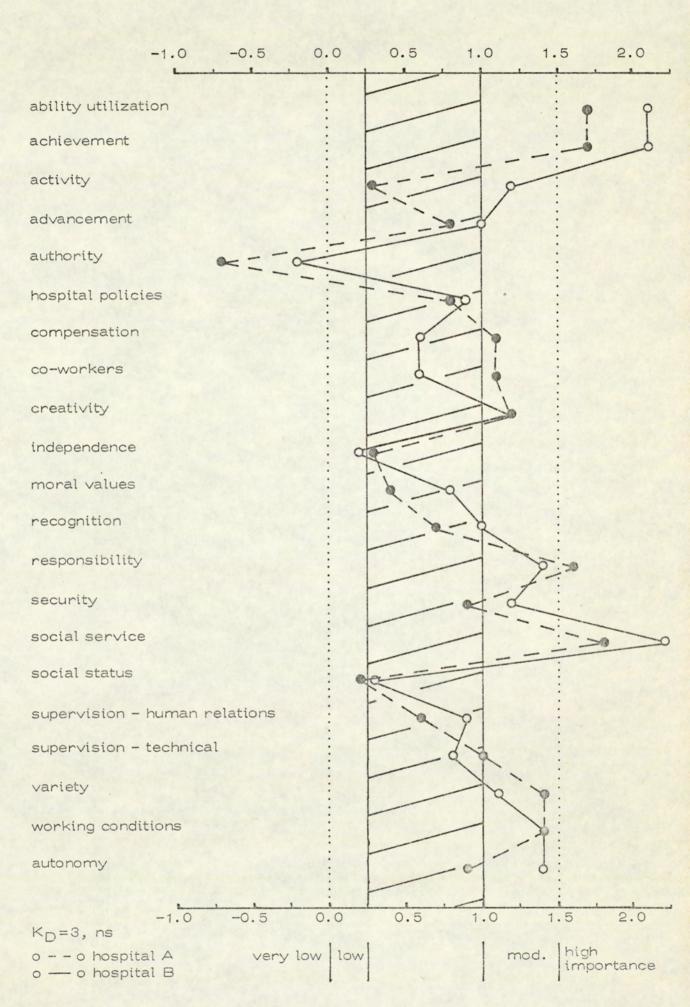
Finally, comparisons were made between the profiles of the leavers in both hospitals (Figure 16), and the differences between them were not significant. Of the 21 comparisons, the CNs in hospital B put greater importance than those in hospital A on 13 of them. In those comparisons that showed the greatest difference, the CNs in hospital B attached greater importance than those in hospital A to being busy all the time ('activity') and being able to plan work with little supervision ('autonomy'). The CNs in hospital A regarded pay ('compensation') and friendly colleagues ('co-workers') as more important than did those in hospital B. 'Authority' (I could tell people what to do) was given very low importance by all the leavers, but the score was lower in hospital A than B. The items which the leavers saw as most important were 'ability utilization', 'achievement', 'responsibility' (hospital A only) and 'social service'.

8.2 Discussion

The CNs who left their jobs voluntarily (ie excluding those who retired, were transferred or promoted in the same nursing division, were asked to leave) during the 18 months following questionnaire administration were 'matched' with a group of stayers on the following criteria:

marital status, hours worked, age, tenure, and where possible sex and type of ward. Their scores on the job satisfaction, role pressure,

Figure 16. Comparison of the median MIQ scores of leavers in hospital A with those in hospital B.



satisfactoriness and propensity to leave scales, and their absence rates, were compared using the Mann Whitney U test.

Although there was some variation between the two hospitals, the results with the total sample showed that the leavers' scores were significantly lower than the stayers' scores on global satisfaction and extrinsic satisfaction, and significantly higher on job-related tension, objective and subjective role conflict, and propensity to leave. The frequency of absence spells was significantly greater in the leavers than the stayers in hospital A only, and performance and general satisfactoriness were significantly lower in the leavers in hospital B (this was not tested in hospital A).

The intrinsic satisfaction scale did not differentiate the two groups, which suggests that the stayers' and leavers' score distributions were relatively similar on satisfaction with factors related to the content of the job ('ability utilization', 'achievement', 'creativity', 'responsibility', 'social service', 'variety', etc.). In contrast, the leavers were less satisfied than the stayers with those contextual features of the job which comprised the extrinsic satisfaction scale (opportunities for advancement, hospital policies and practices, pay, supervision and recognition).

These results to some extent support those of Nelson (1975), whose sample consisted of all nurses in one British hospital. He found that fewer leavers had favourable opinions of various job aspects ('richness' of job, training received for the job, job pressure, opportunities for advancement, relations with and faith in supervisors, and overall satisfaction with the hospital as a place to work) compared with two samples of stayers, 'stayers absent' and 'stayers not absent'. Unfortunately, the author reported percentage response rates only and did not use statistical tests of significance to see if his observed frequencies were significantly different from chance expectation.

In their study of trained nurses in West Yorkshire, Mercer and Mould (1976) found no evidence that satisfaction was lower in the leavers than the stayers. They used multivariate analysis techniques in an attempt to establish the predictors of turnover and they demonstrated that attitudinal variables such as satisfaction had much less effect on the prediction of leaving behaviour than personal and background variables. They did not distinguish between CNs, staff nurses and enrolled nurses in these analyses, nor did they isolate intrinsic satisfaction from extrinsic satisfaction. In the present study there was no evidence that satisfaction with nursing itself was lower in the leavers than the stayers, but dissatisfaction with the contextual factors of the job did appear to contribute to the leaving decision of some of the CNs. Thus, although the level of satisfaction in the present study may have carried greater significance than it appeared to do in the Yorkshire survey, the following summary by Mercer and Mould can also be supported.

'In consequence, there are may instances when the departure of trained nurses from a hospital will be evidence of their satisfaction with and commitment to nursing rather than the reverse. For those nurses who seek a career in the profession there is a strong expectation that they will move around from one institution to another gathering the wide range of experience which is necessary for entry into the more senior grades. Other nurses may leave because of the social constraints on women to have children and look after their family. It does not follow that they are necessarily dissatisfied with nursing. Clearly many look forward to being able to return when their children are old enough. Indeed it might make a more powerful case if one was to argue that whether female nurses stay or leave is a function of satisfaction or dis-satisfaction in the home rather than the opposite way round.' (p.196)

A study with newly qualified American army nurses (Nicholls, 1971) used leaving intention as the criterion, and found that the 'intending stayers' scored significantly higher (p < .001) than the 'intending leavers' and 'undecideds' on a satisfaction measure developed by the author which included intrinsic and extrinsic satisfaction items.

However, a study by Levine and Wright (1957) reported by Archibald (1971) found that there was no significant difference between American registered staff nurses who left and those who stayed on satisfaction with pay, working group, work pressures, and fatigue. The authors did find, however, that the leavers thought there was less communication between supervisors and some hospital departments and the 'working staff', than did the stayers.

Higher absence rates (frequency of spells) in leavers compared with stayers emerged with a sample of American staff nurses, and the voluntary leavers had a greater propensity to leave than the stayers (Lyons, 1968). This was supported in the present study for absence, but in hospital A only, and for propensity to leave in hospital B and the total sample.

Much more research has been published on the differences in work attitude scores between stayers and leavers in occupational groups other than nurses. For example, Porter et al (1974) studied job attitudes and turnover of psychiatric technician trainees in an American hospital for the mentally handicapped. Using discriminant function analysis in a longitudinal study, they found that organizational commitment and job satisfaction (using the JDI) successfully discriminated between the trainees who left and those who stayed but only in the two time periods immediately before actual termination. In these two time periods, the stayers had consistently more positive attitudes to their work than the leavers, and the authors concluded that job commitment and satisfaction

became more accurate predictors of leaving behaviour the closer the individual was to his leaving date.

Although Porter et al could not explain why differences emerged between the leavers and stayers, they referred to an earlier study (Porter and Steers, 1973) which put forward an expectancy explanation, in that the correspondence between expectations and actual experience was greater for those who stayed than for those who left. Porter et al (1974) referred to an earlier study by the same research team (Porter et al., 1972) which found that the difference between the stayers' and leavers' mean scores on organizational commitment increased over time, whereas the differences between stayers and leavers on the satisfaction measure (the Job Descriptive Index) tended to decrease over time, although fluctuations were considerable. The present study was conducted over one time period only, and so the results which emerged from the comparisons between those CNs who left and those who stayed must be accepted with caution.

Other studies which reported significantly lower satisfaction scores in leavers than stayers are Collett (1975) in British policemen, Wild and Hill (1970) in British female factory workers, Hulin (1966) in American female clerical workers, Koch and Steers (1978) in American public sector employees, Hellriegel and White (1973) in American public accountants, and Taylor and Weiss (1969) in American employees (mostly female) of a discount store. Koch and Steers (1978) found that 'job attachment' distinguished between stayers and leavers more significantly (p < .001) than satisfaction measured with the Job Descriptive Index, since the only JDI dimension which achieved a statistically significant difference was satisfaction with the work itself (p < .05). This supports Porter et al's (1974) conclusion of the superiority of job commitment over job satisfaction in distinguishing between attitudes of stayers and leavers. Although job

commitment was not measured in the present study, the significantly lower scores in the leavers compared with the stayers on extrinsic satisfaction does suggest that the CNs who left may have been less committed to the hospital itself and the staff in it, as reflected by their scores on satisfaction with the hospital policies and practices, supervision and pay.

9. AN INTERPRETATION OF THE CNs' ACCOUNTS OF THEIR JOBS

This section contains a summary of the findings which emerged from individual discussions with the CNs, along with some background information derived from the structured, self-completed questionnaires. Space is not available to do full justice to the wealth of interesting material which emerged from the interviews, but a taste of the quality and range of opinions expressed is provided by quoting some of the CNs in their own words. It is the convention in research papers that the results section should be separated from the author's interpretation and discussion of the findings relative to other research. Whilst this convention has been adopted in the earlier, more quantitative results sections, it has been ignored here because it would impart a degree of cold, quantitative detail on what is essentially a rich, subjective and anecdotal account. Although some factual information is presented here, details of the raw data have been removed to Appendix 14.

The strategy adopted in this section serves to illustrate the variation in method which exists in social science research. The methods used to obtain the results described in the earlier sections were heavily structured and theoretically based. In contrast, the interview was semi-structured and the CN was encouraged to enlarge upon items as she wished. This gave the CN more opportunity to express her own ideas than did the forced alternative response format of the rating scale. The use of both 'closed' and 'open' techniques has given the researcher both quantitative and qualitative material.

The questions included in the interview provided material which was classified into four main categories:

9.1 Organizational support

- 9.2 Careers and personal development
- 9.3 The job itself
- 9.4 Other organizational provisions

The questions were asked in a structured form and the respondent selected one of several (usually 5) response alternatives. This enabled frequency distributions of the scores to be tabulated, so providing a true picture of the number of positive and negative replies. The CNs were also asked to expand on their replies as they wished. These have been summarised by the author and certain points have been illustrated by quoting the CNs in their own words.

Comparisons were made between the hospitals on each question, and where the differences observed were statistically different from chance expectation, results have been given for each hospital, but when the differences were not significant, the samples have been combined.

9.1 Organizational Support

The 'Salmon' senior nursing staff structure affects the work of the CNs and they were asked for their opinions on 'Salmon'. Following this, the relationships which emerged from the perceived cooperation from the nursing management and the CNs' level of job satisfaction, perceived role pressures, satisfactoriness and propensity to leave are described. These results demonstrated how important the nursing officer was to the CN in her work, and so greater emphasis has been given to the nursing officer than to other members of the CN's role set.

.1.1 'Salmon' in practice

The CNs' opinions of the 'Salmon' structure were closely linked to their perceptions of the nursing administrators' roles, and many (56%)

were critical of 'Salmon' (see Table 164, Appendix 14). This supports the generally unfavourable balance of opinion towards 'Salmon' reported in earlier studies (Haywood et al., 1970; Wall & Hespe, 1972). The setting up of nursing units headed by a nursing officer, and the provision of a senior nursing staff career structure, were seen in the present study as definite advantages of the system. Some preferred it to the 'pre-Salmon' days because their senior nurses were more approachable, and the CNs welcomed the experience gained from 'acting up' for the nursing officer.

'At this hospital I'm very satisfied. I think it's a lot of improvement. At least our profession has a say, we are managing our profession. And the career prospect is wide open; if you want to go further, you can, whereas before, how many nurses dreamt of becoming assistant matrons and matrons? I am ambitious. I would like to go into administration.'

Other CNs preferred the old system in which, they maintained, the assistant and deputy matrons and matron herself, were well known, were more approachable, and dealt with problems promptly. They saw the present system as impersonal, confusing, extravagant in numbers of nurse administrators, and responsible for communication blockages and delays in decision-making. Considerable nostalgia was felt by young as well as older CNs for the old-style matron who was in charge of one hospital only, had provided a figurehead, had complete authority, and was known and respected.

'I think 'Salmon' ruined the nursing profession...It's so remote from the ward situation. I haven't seen anything good come out of it, except that they got rid of a few grotty old matrons. No, I don't like 'Salmon'. It knocked all the tradition, and just knocked the nursing profession to pieces....It's become

so impersonal. Matron came round and you told her what your grouses were, and she sorted it out more or less on the spot.

Now you've got to go to the number seventhe number eightthe number nine, the number ten, and administration (lay) is brought in. You could get over and done with it in five minutes ten years ago, and now it's about three months.'

'I personally think that to lose an absolute figure of authority as regards nursing staff in a hospital is a mistake. I think you should have a matron figure, very definitely. We know that we have nursing officers, senior nursing officers and all the rest of it, but they don't carry the same authority that matron had, because they themselves have no authority.

.... And the ward sister doesn't have much authority.

Fourteen years ago I was a ward sister. I did refer to matron occasionally, but you had authority, there was no question of it at all. Sometimes you went to your deputy matron, and sometimes straight to matron, and she knew you and all your staff. And you could go direct to the hospital secretary and action was immediate. You couldn't do that now.'

The nursing officer was seen as a person with responsibility but no authority, with the result that problems had to be passed to higher levels before decisions could be made. Subsequent delays and distortion of information were thus inevitable. Although many CNs appreciated that they did not understand the nursing administrators' roles, they saw the system as excessively hierarchical with too many 'sevens' and 'eights'. Some thought the nursing officers should go, leaving the CN with more responsibility and autonomy. Others saw no need for the senior nursing officers, but that the nursing officer's role could be enlarged and made

more satisfying. A frequently expressed view was that the nursing officers had too much clerical work, work which could be undertaken by a competent secretary, which would allow them time to make use of their clinical expertise and become nurse consultants.

'I don't think they're working number sevens, patientwise.

I think they could come in and do far more than they do. I

worked at the maternity hospital as a student nurse, and the number seven's there were clinical sevens. They worked on the wards

.... and it managed quite well. They did their own paper work and it left them plenty of time spare to actually work on ward tasks.... Perhaps they would say that they can't do more but I think they could do a lot more.'

Several writers have emphasised the misconceptions which have emerged about the 'Salmon' structure (Report of the Committee on Nursing, 1972; Wall & Hespe, 1972; DHSS/Welsh Office, undated; Nursing Mirror, 1976; Auld, 1976). The Report of the Committee on Nursing, for example, acknowledged that it was generally thought that 'Salmon' had increased the number of nursing administrative posts, had reduced the scope for clinical career advancement, and had enticed the best nurses away from the patient so reducing standards of patient care. In fact, the information collected from the 'Salmon' pilot schemes showed that the proportion of CNs and staff nurses relative to administrators was larger than before.

The Report emphasised, too, that the introduction of the nursing officer's post provided more senior posts which retained a clinical content:

'....The Nursing Officer post is often a combined clinical/managerial post and there are now significant numbers of Nursing Officers carrying out jobs with considerable clinical content'. (para 530).

One development which occurred with the introduction of 'Salmon' was that CNs were expected to widen their experience by 'acting up' for

their nursing officers. Although some CNs in this study enjoyed this, others resented it, maintaining that they did not gain experience because all they had to do was to find out how many beds on the wards were empty, and this was a nuisance when they were busy. This was considered a justifiable complaint in an earlier study (DHSS/WO, undated). If these duties could be enlarged to make use of their clinical abilities, the CNs felt they would gain useful experience and would be keen to 'act up', providing they could ensure that their wards were left adequately staffed. Several felt, however, that the CN should not be expected to do this and nursing officers should 'act across' for each other.

'I've always felt that Salmon in theory, I was quite impressed with it, but in practice it has let me down completely. I understand Salmon and I would like it done properly, but I have never seen Salmon in action as it is supposed to be. The acting up and down bit: I quite enjoy acting up, on condition I have a responsible person plus enough staff left on my ward. But I feel quite nervous about it. Not so much the acting up itself, but about leaving my patients when I am running a 33 bed ward with the minimum of staff on in the evening, and many, many procedures happening in the ward by the doctors, and perhaps with 7 or 8 doctors in, doing things like lumbar punctures, admitting perhaps 10 or 11 patients in one evening There's an awful lot to an admission of a patient. I quite enjoy doing it if I don't have the ward to run ... I find that when I'm acting up, I'm not called that much for anything of an important nature. Most of the time is taken up finding out how many beds they've got.... how many empties.'

In general, most of the CNs were critical about 'Salmon' and found the constraints imposed on them by the system extremely frustrating.

It may be that the conflicts and resentment which followed implementation

occurred, for example, because it was introduced too quickly and with insufficient explanation and consultation. The assistant matrons who had to move into the new, controversial nursing officers' posts were not prepared for the role, and did not have the necessary recent clinical experience to equip them for developing a clinical/management role which would complement rather than interfere with the CN. The result was that the nursing officer found herself in an ill defined, ambiguous job which was resented by the CNs and scorned by the medical staff.

.1.2 The relationship between nursing management support and CN job attitudes, perceptions and behaviour

The opinions which emerged about 'Salmon' have led the writer to focus on the nursing officer as the principal 'significant other' in the CN's 'role set'. The opinion of the CNs towards other members of her role set have been summarised below.

How did the perceived cooperation from the nursing management relate to the CNs' levels of job satisfaction, perceived role pressures, satisfactoriness and propensity to leave? If significant associations appeared then the sources of some of the difficulties may be identifiable and subsequent improvement possible.

In the questionnaire the responses to the following cooperation questions were correlated with the scale scores:

'How much contact do you have with your nursing officer?'

'How much feedback do you get from your nursing officer on how well you are doing?'

'How much contact do you have with the nursing administrators above number 7 (nursing officer)?'

Responses were scored on a 5-point scale with 1 = almost none,

3 = a moderate amount, and 5 = a great deal. Kendall's Tau correlations

between the scores on these items and the scale scores are detailed in

Table 136.

None of the coefficients was very high, the highest being .28 (p < .001) between amount of perceived contact with the nursing officer and extrinsic satisfaction. All the satisfaction measures correlated significantly and positively with nursing officer contact, and the correlations with the role pressure variables were significant with the exception of the two conflict measures. Contact with the nursing officer correlated positively with role clarity and negatively with job tension, objective role ambiguity and subjective role ambiguity. Positive correlations emerged between nursing officer contact and performance, dependability and general satisfactoriness, and the greater the perceived contact with the nursing officer, the less was the likelihood of leaving the job (p = .01).

Feedback from the nursing officer on progress was positively associated with global, extrinsic and general satisfaction, negatively associated with both ambiguity measures and with propensity to leave. The conflict, tension, and satisfactoriness correlations did not reach significance.

The amount of perceived contact with nurse administrators senior to the nursing officer correlated only with global, extrinsic and general satisfaction and none of these exceeded .15 (p < .05).

These results indicate how important the nurse administrators, particularly the nursing officer, were to the CN. This was particularly the case with job satisfaction, perceived role ambiguity and propensity

Table 136 . Correlation coefficients (Kendall's Tau) between perceived contact with colleagues and job satisfaction, perceived role pressures, satisfactoriness and propensity to leave (N = 99-129)

	feedback from	amount of perceived contact with:	
	nursing officer	nursing officer	senior nurse administrators
global job satisfaction	16*	21***	15*
intrinsic satisfaction	ns	19**	ns
extrinsic satisfaction	26***	28***	15*
general satisfaction	23***	26***	14*
job-related tension	ns	-18**	ns
role clarity	ns	25***	ns
objective role conflict	ns	ns	ns
subjective role conflict	ns	ns	ns
objective role ambiguity	-25***	-18**	ns
subjective role ambiguity	-24***	-14*	ns
performance	ns	19*	ns
conformity	ns	ns	ns
dependability	ns	24***	ns
personal adjustment	ns	ns	ns
general satisfactoriness	ns	22***	ns
propensity to leave	-20**	-17**	ns

to leave. It seems that the nursing officer was in a position to increase the clarity of the CN's job and her level of job satisfaction by providing feedback on how well the CN was coping with the job, and being available when required. Where this kind of feedback and contact were not forthcoming, then the likelihood of the CN leaving her job was raised. Increasing the effectiveness of communication between the substantial proportion (46%) of CNs who regarded this as less than adequate and their nursing officers, should be a priority. The position with the more senior nursing managers was not as important to the CNs' well-being.

Although most of the CNs did not wish for more contact with the senior nurse administrators, 52% maintained that the cooperation they received from them was, at best, only fairly adequate. As with nursing officer contact, such problems are avoidable and amenable to correction.

During the interview, the CNs were asked how much contact they had with various groups of workers in their role set and to what extent this was sufficient; and in one of the questionnaire items (Appendix 3, item 26) they indicated how well colleagues from other departments cooperated with them in their work. Tables 165 and 166 in Appendix 14 contain the score distributions of these items.

In view of the opinions already expressed about 'Salmon', how did the CNs perceive their working relationship with their nursing officers?

Two-thirds of the CNs indicated that they had a lot of contact with their nursing officers and this was sufficient for most (over 80%) of them. When asked how they felt about the kind of communication received from the nursing officer (Appendix 3, item 28), only 15% said this was inadequate (see Table 167, Appendix 14).

The remarks from a CN working on a medical ward in hospital B sum up the opinions of many CNs who were happy with the working relationship they had with their nursing officers:

'Quite a lot (of contact). She comes up twice a day that I can rely on, and usually more. I can't say I've experienced any problems getting hold of the nursing officer I have at the moment. I don't think, with this nursing officer (I need) any more contact at all because she's got her finger on the pulse anyway, but I've had a lot of nursing officers in the past, and if they spent all day on the ward they wouldn't know what was going on. I've seen my nursing officer roll her sleeves up and come and do the backs with me, and know which backs need doing I think, they should be consultant nurses, you should be able to draw on (their expertise).'

Other CNs, however, preferred to see the nursing officer as little as possible; that is, only when their workload was so heavy that they needed more nurses on the ward. They did not feel that it was necessary to discuss clinical matters with the nursing officer.

'No, I'm quite happy I don't have any problems from running my ward point of view, I wouldn't require her. The only time I do need my nursing officer is if I'm desperate for staff, and very rarely do I get them. I was told that I had my quota. I can get through to the nursing officer but I can't always get what I want. Most of the other things I get myself because I feel I can handle anything of that nature. But I cannot get staff because that is out of my control I'm pinned to the floor.'

Some CNs had experienced considerable role ambiguity and reduction in their span of control since the introduction of the nursing officer,

and they found that a certain amount of autonomy had disappeared.

'I think it's a disadvantage, in many ways, having her on the premises. She, at the moment I think, is a little bored, hasn't got enough work ... and she tends to be in each of the areas quite regularly. She's a good nursing officer but she tends to interfere a little bit in some ofthe jobs you really should be doing....

She makes me very unsure of what my job description is. I think we should have nurses... administrators ... and teachers, and they should stick to their own sphere. The sisters are really the top of nursing. (Since the introduction of nursing officers) our self-esteem has gone in many ways; we have been stripped of our responsibility.'

The problem that nursing officers in charge of multiple specialty units have in being sufficiently knowledgeable in all the specialties to provide advice on clinical matters, has been discussed by Wilson-Barnett & Hancock (1978). Many of the CNs suggested that the nursing officer was not someone whom they could turn to in order to discuss clinical nursing problems:

'(We have) very little contact, solely because I don't think she knows a great deal about coronary care. I think she's a little afraid of the unit, particularly the instruments and the machinery ...it's quite understandable...and being in the older age group too. I think it's important that the nursing officer should be interested in and have a great deal of contact with any unit - very, very important.'

It seems that the nursing officer must be extremely skilled in giving the CN the necessary support required to deal with problems, and yet not be seen to be 'interfering'. The nursing officer was not

regarded as having a clinical role, and any attempt to offer nursing advice was viewed by some of the CNs as an invasion of their clinical territory:

'It depends on individuals. At the moment our nursing officer is OK, but the last one, I didn't want any contact with. I think it just depends on personality. I think if the nursing officer's post is going to work, you've got to have the contact but not the interference. The present nursing officer is a 'Salmon product' but the last one was a regraded assistant matron.'

Much less contact was experienced with the senior nursing administrators compared with the nursing officers. (see Table 165 Appendix 14). Eighty nine percent of the CNs in hospital A compared with 65% in hospital B said they had very little contact with their senior colleagues, and the difference observed between the hospitals was significant (p < .05). Most of the CNs (hospital A, 76%; hospital B, 81%) however, required no more or only slightly more contact compared with 24% in hospital A and 19% in hospital B who would have liked considerably more. Forty eight percent of the total sample thought the nursing administrative staff, in total, cooperated very well with them in their work, but 16% thought that they did not cooperate well (see Table 166, Appendix 14).

Those CNs who were relatively happy with their working relationships with the senior nursing officer ('Salmon' grade 8) and the divisional nursing officer ('Salmon' grade 9), did not feel that frequent contact was necessary because communication through the various management grades was successful:

'Very little (contact) with the eight and nine. I know who the DNO (District Nursing Officer) is. We have meetings with the nine You can't get in touch with them because obviously you have

to go through the right channel. I can't think of anything that would make me want to go to the eight or nine without going through the seven.'

However, where communication through the grades was not regarded as successful, the CNs were vocal in their criticism:

'Perhaps we haven't had as good communication as we could have had with folks higher up. Perhaps decisions have been made on our behalf without our knowledge...Slightly more (contact) would be sufficient... Also, what you would like to see is when they do know about a problem they do alter things. So often, and there again, it's probably financial, but problems are known, they are discussed, bits of paper are written to people... and they are complained about, and the problem remains. I don't know if it is not said loud enough, but it is said often enough. Nobody seems particularly bothered about altering it...'

One CN pinpointed a common problem, that ward-based nurses do not understand the role of the nurse administrator, and so cannot appreciate their problems:

'I think the ward sister and anyone under her, doesn't know what administration is. I don't know what the nine does, or the eight does all day. I probably would be most surprised, I'm sure that they're busy. But they're in an entirely different world than we are. I don't think we can understand their problems...they say you can't do this, you can't do that, and we don't understand why. It all seems red tape....I don't think we're taught to understand the system....I'd like to know what they did. I'd be interested to have 'a day in the life of a senior nursing officer', and I think perhaps people would understand administration a lot better if they could do this.'

In summary, most (65%) of the CNs had considerable contact with their nursing officers and only a minority (15%) regarded this as insufficient. The majority were satisfied with their working relationship with the nursing officer, who visited them regularly, was available when required, did not interfere but helped out when busy, and encouraged frank discussion through unit meetings.

Others were less satisfied, and although they might have seen the nursing officer for fleeting visits, found it difficult to contact her/him at other times, and criticised the delays involved in getting, for example, essential equipment. They recognised that the reason for these delays might be shortage of funds but some of them did feel that more pressure could be exerted by the nursing officer upon the hospital administration to reduce these delays. Although realising that the nursing officer's workload may have been too heavy, several CNs would have welcomed more help from them when particularly busy. They expressed the importance of nursing officers being 'clinical' rather than 'administrative', so that they could help with nursing care and teaching, discuss nursing problems, and retain patient contact and their familiarity with constantly changing nursing and medical techniques. It may be that these CNs did not make it clear to the nursing officers that such help would be appreciated, and that the nursing officers were reluctant to encroach upon the CNs' territory.

The opinions of doctors and CNs concerning the role of the nursing officer and the conflict experienced by nursing officers themselves, has been stated forcibly by Mulligan (1972):

'....ward medical and nursing staff (have been provided) with an abundance of opportunity for sustaining their assertions that nursing officers are in the first place undesirable or unnecessary, and subsequently they are ineffective. They have at the same

time provided the nursing officers with equal opportunity for a much needed retreat from hostility and criticism, and the insolubility of problems whose only hope of solution lay in the development of close working relationships and visible involvement in the ward situations, to facilitate constructive intervention before the event (both by joint discussions and training of sisters) rather than angry and abortive confrontation afterwards.' (p 164-165)

In view of the complexity and ambiguity of the role of the nursing officer, the findings of the research in progress under the direction of Deborah Jones at Chelsea College is awaited with interest. This is a DHSS sponsored project in which the role(s) of the nursing officer is being studied.

There was much less contact between the CNs and the nursing administrators senior to the nursing officer. Most said they had very little contact with their senior and divisional nursing officers, but this was satisfactory because information filtered successfully through the nursing officer. Some, however, would have liked more contact so that they and their staff would know who the nursing administrators were and have a clearer understanding of their roles. Several CNs felt that the senior and divisional nursing officers were too isolated from the nurses and patients, and found it irritating to 'have to go through so many channels' to get to the 'nine' or 'ten', which resulted in delays. Direct access was apparently discouraged, and although some found the meetings held by the divisional nursing officer useful, others found that they could not attend these through pressure of work.

9.1.3 Other members of the CN's role set

The other groups of staff who were thought to work fairly closely with the CNs were nurse teachers, doctors, paramedical staff, hospital

administrators, ancillary workers and ward clerks. The findings which emerged from discussion with the CNs about their working relationships with these groups have been summarised here, since lack of space precludes inclusion of all the information collected. Raw data on the score distributions can be seen in Appendix 14, Tables 165 and 166.

Nurse teachers

The clinical teacher was introduced to help the CN with her teaching responsibilities and to move some of the practical teaching from the classroom to the clinical areas. Regular contact with teachers in the clinical areas was not very common, especially in hospital A. Those CNs who did see the teachers however, were generally much happier than before with their links with the school and found that the clinical teacher relieved them of a considerable amount of teaching and ward work. recognised the need for much more contact with these teachers, whom they considered should be entirely ward based so that a joint teaching programme between the school and the clinical areas could be developed. CNs on night duty, in the theatres, accident and emergency, and outpatient departments expressed a wish for clinical teacher contact. Some, especially those on night duty, felt out of touch with current nursing procedures and would have welcomed collaboration with a clinical teacher to ensure that the methods they used were similar to those taught in the school. They recognised, too, that such a person would help ease the apprehension of learner nurses starting work in these areas for the first time.

It was not unusual to find that the CNs did not see teaching as part of their role, and criticised the teachers for failing to demonstrate correct procedures to the learners.

'I think that they (teachers) should come in to see how we actually do the job. A lot of the procedures have to be done

at 6 am, preparation for x-rays and things like that, and, so they ought to be there to show (the learners) properly.'

There is evidence that clinical teachers themselves feel that they should be released from the school and should be spending much more time in the wards and units (General Nursing Council, 1975). There was considerable feeling in the GNC survey, that the clinical teachers should be ward based. It may be that this would reduce the 'education/service conflict' reported by teachers in that study. This was the highest ranking 'dissatisfier' given by tutors and senior tutors, and the second highest given by clinical teachers and principal tutors.

Doctors

The interface between nursing and medical staff is of special interest because the two groups are complementary parts of the patient care team. What was the nature of the relationship between these groups, as perceived by the CN?

This relationship was usually seen as being quite good, although a lack of teamwork and mutual support was described by a theatre CN. She maintained that the consultant surgeons adopted an aloof and superior position:

'I'd like a situation where there is more understanding between the nursing staff and doctors, there doesn't seem to be much contact. The consultants are treated very much as gods here, which I find a bit foreign. I was a theatre sister at hospital——and——and they weren't gods, you could talk normally to them...we'd have coffee together. Everybody scurries to their little corners here, it's very strange. I don't think the consultants here would support the sisters, and I don't think as a consequence, the

sisters would support the consultants.'

The excessive amount of time taken up to accompany doctors on ward rounds was a frequent complaint. This was anticipated as a problem by Pembry (1978) but it was made explicit by only 16% of her ward CNs.

'The registrar and houseman come round daily. The only thing
I say here is that I think that it is a pity that they couldn't
come round as a group....it is a waste of time, mine and theirs.
This is the only complaint I've got. I have mentioned it several
times, but they say one is in fracture clinic, and the other is in
casualty and they just can't do it.'

Ensuring that housemen visited when requested sometimes presented problems:

'With the registrar, a lot (of contact). Housemen...they're never around when you want them. You often have to wait exceptionally long times for them to answer their bleeps and finally get to the wards, and more often than not you have to tell them it's urgent so that you finally get them down....

I would like them to be more thorough in their work. I'd like them to be in contact, and I'd also like to know that they are definitely coming when I bleep them. The housemen are very inexperienced and rely on the sisters' advice, and often their English is poor.'

The ability of inexperienced housemen to cope with emergencies was questioned, which put considerable responsibility on to the CN. At times the CN had to disobey hospital policy which resulted in role conflict, as illustrated in this account:

'Really, the only time we bother them is if we are worried about someone, and especially the housemen - they don't really know what to do. I think they are a big frightened, and they seem to take their time. They don't seem to appreciate the urgency.

They do tend to put on us a bit. Like, we take the bloods for them, and it's really their job and we may not have time. And they'll tend to give a lot of messages over the phone, and sign it when they come up, which we don't like...Like giving I.V. drugs in an emergency. They'll tell you what to give over the phone and we're not really supposed to do it. But, we do do it, we've got to do it. I think we do a lot for them and it does put us in conflict. I think if we had some sort of proper cover, this is what we'd like. They say they will cover you, but when it comes to it, would they really?'

Verbal drug prescribing was, apparently, not uncommon and put the CNs, particularly those on the night shift, in considerable conflict. This practice puts the CN in a difficult position since she must either insist that the doctor, over whom she has no authority, prescribe the drug in writing, or she must disobey a hospital policy. There was no guarantee that a doctor would accept responsibility for a subsequent error. In Pembry's (1978) study, 38% of the ward CNs found it a problem to get '....doctors to keep to the drug rules.' (p.148)

The suggestion that housemen should make routine rounds of the patients with the CN at night might reduce the incidence of verbal prescribing, and more contact and cooperation can be gained from the doctors if the CN takes the initiative.

'I requested the other day that I should see more of the registrar at night... on 'take' nights especially. A past registrar would come in at 10 pm and do a round and teach...and I used to enjoy

that round. I have approached the present one now and have suggested that he teach the learners when doing procedures, and he does come now. I am winning, but he said to me, 'You know, you're the only one who has mentioned this to me in two years.' Somebody has got to be stimulated to ask the doctors...I would like very much more (contact). I think we should work as a team very much more.'

Frequently mentioned was the problem of bed availability.

'I have a great deal of contact which is absolutely necessary, but with consultants which do not belong to my ward, and who are just borrowing beds (I would like) less, definitely. But for the regular consultants on my ward, I'm happy as it is.... I have a lot of 'lodgers'....I've 33 beds and my consultants have a fantastic (patient) turnover. They believe in organizing patients so that they make the beds ready for the following 'take' the next day.... What happens is the consultants make beds available, I go off happy that I've got beds for the following day, and I come on the next morning and my beds are gone. They've all been filled up with 'foreigners'....This is where I find I'm under pressure. Nine times out of ten, I'm finding that I must put up extra beds....down the middle of the ward....It's bad for the patients....and for the nursing staff I find it very difficult.... I've brought this to the attention of the consultants. They are very much aware of this....but seemingly, they can't control this situation.... I find it's very awkward....because you're told to book patients, then you can't take them.'

The use and misuse by doctors of available beds was a major problem for the CNs in Mulligan's study (1972) and some aspects of the hospital's admission and discharge policy were identified as problems by Pembry's (1978) ward CNs. Fifty eight percent of the 50 CNs in her sample were critical when 'admissions (arrived) before their beds were ready', 28% specified 'the number of patients transferred to or from the ward', and 20% regarded 'patients being discharged at too short a notice' as problems. 'Patients who should really be in other wards' and 'having to have extra beds in the ward' were not endorsed as problems, however (p.148).

Paramedical staff

Generally, cooperation with the paramedical staff was regarded as adequate, although there was not much evidence of interdependent team work, particularly with the medical social workers:

'I find social workers don't consult us very much. They come to the ward, but go straight to the patients notes. They don't tend to keep us informed of what is going on. They tend to go more to the medical staff, and I think we need to know as much as the medical staff. They come to the ward, but they tend to ask to see the doctor.'

This aloofness of social workers supports the observation made by Mulligan (1972) that CNs thought the paramedical staff preferred separate identities rather than a team approach to patient care. The physiotherapist and the dietician also tended to work closely within their specialties without collaborating with the nurses:

'Very little (contact) on the whole. I'd like more time to be able to spend with them, and more time to be able to send a nurse with people like physiotherapists, but there isn't a lot of time. It usually ends with one or other doing it, hardly ever both together. I think a nurse could learn a lot from a physiotherapist

....The dietician also....she does tend to come on the ward when you ask her to come, and she will chat to the patient about it, and perhaps leave a leaflet. And she will go, and she probably won't come again unless you ask her to come...it would be helpful if she did come more often, but she probably hasn't got the time ...but I think it would be beneficial not only for the patients but for the nurses to learn about diets.'

It is somewhat shortsighted for paramedical staff, who visit each ward perhaps once or twice a day, to fail to include the nurse in their planning and delivery of patient care, because it is the nurse who can continue that care when the paramedical specialist is not available.

Hospital administrators

Perceived contact with the hospital administrators was minimal in both hospitals with over 90% of the sample indicating that they had almost none or very little. Many of the CNs had no idea who the hospital administrators were and what their role was. Others were aware that orders for and queries about items of equipment had to go through their nursing officers before reaching the hospital administrator, which resulted in oversights and delays. The CNs maintained that they were not themselves allowed to contact the administrators. Strong criticism came from about 20% of the CNs who objected to being informed rather than consulted about plans and decisions which affected them directly. Except for a few CNs who made a point of contacting a hospital administrator whenever they failed to get cooperation from the back-up services (laundry, supplies etc), their main problems involved delivery of the wrong kind of equipment and delay in its arrival, because all requests had to go through the nursing officer.

'No contact with them....Sometimes you need equipment, and you should go through your nursing officer, but it's not always possible. The messages are not passed on. So if you could see them yourselves, go straight to them, it would be better. You've got to go through your nursing officer and then he's got to see them, then you don't get (the equipment), so you ring Mr_____ (hospital administrator). It all takes a long time, whereas if you could go straight to Mr_____ it would be better....Perhaps it's the money, I don't know, but it would be nice to be told why we can't have it.'

Several CNs pointed out that there would be no problem if meetings could be held between the CNs, nursing officers and hospital administrators, or if the lay administrator could visit the wards and departments regularly. The paediatric unit in hospital B had recently been assigned its own hospital administrator who regularly visited these wards, with the result that problems were sorted out very quickly. This lack of liaison between CNs and hospital administrators has been supported by Mulligan (1972).

Ancillary staff

Although services provided by the ancillary staff were generally considered to be adequate, difficulties were experienced with the porters, the domestic and the kitchen staff at times. For example, sometimes it was difficult to get hold of a porter because none was available or they refused to accept a job because their shift was near its end; the standard of ward cleaning had apparently deteriorated since the CNs had relinquished their authority over the cleaning staff to domestic supervisors, who were reluctant to criticise their cleaners and risk a confrontation; and in hospital A particularly, clashes with the kitchen staff occurred through their apparent inability to send to the wards the type and quantity of food ordered.

'Cleaning staff - you tend to get to know your own, and the supervisors do come up each day to ask if everything's alrightWhen I was a student nurse, Sister used to be in charge of the cleaning of the ward and things were much better. There's a vast deterioration. And they've got little lists everywhere, of what each set of domestics is supposed to do and they won't do other than that, and they frequently don't do half of what they're down for. The supervisors just pop in and say 'Is everything alright?'....In a way, I would like to return to Sister having control of the domestics, but in another way, I feel there is so much work and pressure at the moment, you have so little time to go round checking the sinks and so on.....The supervisors don't check the sinks etc, really, they just ask if everything's alright.'

Pembry (1978) found that 'ward services and maintenance' was the category which included the greatest proportion of problems as perceived by her sample of ward CNs, and 56% identified 'getting the ward cleaned properly' as a major difficulty.

Ward clerks

Only two of the ward CNs in hospital A enjoyed the services of a ward clerk. In hospital B, clerks were employed from 9 am - 12 pm on most of the wards and were strongly appreciated and regarded as essential to the smooth running of the ward. The ward clerk scheme was introduced as a result of the recommendations of the Farrer Report (DHSS, 1968), and had apparently been running for about six months on a trial basis to establish whether or not they would relieve the CN of some of her clerical work. The preference for some flexibility in their hours was expressed, but most of the CNs' replies were enthusiastic:

'She's excellent....I'd like her in the afternoons instead of the morning, perhaps from 10 till 2 pm because then the rounds have finished a short while after she comes on duty. She can make the appointments, sort out the mess that occurs over lunch time and get ready for the next lot.'

Interestingly, none of the CNs in hospital A, who did not enjoy the services of a ward clerk expressed the need for one, though such a service might have relieved the CNs of some of the administrative workload and released them for the nursing care and teaching which they considered so important.

The author is aware that the bias towards negative accounts in this summary of perceived cooperation with other members of the CN's role set may have given an erroneous view of the working relationships between these hospital groups. Human nature is such that when asked about one's job, it is always easier to be critical than impressed. Although the CNs did tend to dwell on frustrating aspects of the job, they also took pains to emphasise that they were, on the whole, content with their work and thought their hospital a happy place to work in.

9.2 Careers and Personal Development

The CNs were asked what they thought about the career opportunities offered by the 'Salmon' system. This was linked to questions on the hospital's staff appraisal scheme and the facilities it offered for course secondment. Finally, they were asked to outline their future plans.

.2.1 Careers with 'Salmon'

Most (77%) of the CNs agreed that the 'Salmon' structure provides nurses with good career prospects, but only if a career in administration

were desired. Apart from a few (7%), they said they were not interested in promotion to a nursing officer's post because they would lose their close patient contact which was the part of the job that provided most satisfaction. A 'clinical' nursing officer's post was considered attractive but rare, most of these posts being regarded as 'administrative'. Although some (36%) were content to remain in their present jobs, others were restless, feeling that they should progress, but not interested in any of the conventional avenues of advancement, which they identified as administration, teaching, community work or research. The CN level was seen as the most senior position a nurse can reach and practise 'nursing' and this was endorsed by the CNs in the Yorkshire study (Mercer & Mould, 1976). The need was expressed in the present study for the introduction of a clinical 'ladder' alongside the administrative hierarchy, which would give the clinical nurse financial recognition and perhaps the prospect of progressing to a clinical nurse consultant.

'They've been talking about it here. They want me to apply (for a seven's post) but I don't know if I'd be really happy sitting in an office all day twiddling about with figures.

A clinical seven would be very nice, but they are few and far between.'

'Soon I will hit the financial ceiling and be stuck. I don't think the number seven should necessarily be senior to the sister, because a lot of them haven't got the same type of experience simply because they've removed themselves from the ward scene more quickly, if they're really interested in admin. It's an entirely different job. But if there was a clinical ladder, no-one would go into admin. and the sister's post would be blocked. But the older sister would probably tire of the

pace and remove herself anyway, so the problem would work itself out....I must admit, a year ago I wouldn't have considered admin. because I'd be taken away from the patient, but now I am beginning to think about it.'

Recognition of the clinical expertise of CNs was emphasised in the Report of the Committee on Nursing (1972):

'In our view, recognition should be accorded to exceptional abilities and multiple responsibilities, and we recommend that some ward sisters by virtue of proven expertise....should be accorded increased status and reward within the line structure. This increased status and reward should be secured either by an extension of the existing concept of the role of the Nursing Officer,....or by appropriate recognition of special services within the ward sister grade.' (para 542)

Something similar was supported by Mulligan (1972):

'Much has been said of the failure of the Salmon recommendations to provide satisfying clinical advancement for nursing staff.

It is suggested that a satisfying joint clinical/management role, such as is enjoyed by senior medical staff, is already within the reach of senior nursing staff, within an amended Salmon structure....' (p.433)

2.2. Performance appraisal

The system of performance appraisal adopted by an organization should be part of an individual's personal development and career structure, and should be seen to be adequate and fair. The CNs were asked how much feedback they received on their performance from the

nursing officer and whether or not this was sufficient. The score distributions on this question and those on the formal staff appraisal system in the hospital are in Appendix 14, Table 168.

Over half (54%) the sample maintained that they had minimal feedback from their nursing officers, and a third (32%) would have welcomed more guidance on their progress.

This requirement was in addition to the 'appraisal' system in operation, of which 74% were aware. This system was very similar to that experienced by student and pupil nurses who were given reports by the CNs which assessed their progress in each clinical area experienced.

The nursing officers completed similar reports on their CNs most of whom (54%), in hospital B especially, had not seen them when completed.

Thus, the kind of appraisal system implicit in the work by Jones and Rogers (1976), where the role encumbent and her senior officer together discuss her (the encumbent's) progress, and develop a mutually agreed plan of action to improve both performance and satisfaction, was not in evidence in either hospital.

2.3. Course secondment

The perceived opportunity for secondment on to management courses varied significantly (p<.01) between the hospitals, there being less apparent opportunity in hospoital B compared with A (see Table 169, Appendix 14). It was generally felt, in both hospitals, that it was policy to second CNs on to first-line management courses, although many were critical that they had not been given the opportunity to go. It was pointed out that by the time they were seconded they were experienced CNs and derived less benefit from the courses than they would have done had they gone earlier. The course was seen as likely to be most useful to junior CNs and staff nurses, and senior CNs should

be able to attend middle-management courses if they were thinking of going into administration.

'I have been on a first line management but I think people aren't being sent on them at the moment. I don't know if it's a problem of finance....I think management courses should be earlier in your career. I felt that mine wasn't really a great deal of use to me because I'd already been a ward sister a year then. They should come when you're a staff nurse really.' (hospital A)

'You've hit another (sore point): I should think, of the ten night sisters in the office, only one has been on a management course. We keep on saying we want to go on them but we don't get there; and a lot of the girls on days, some of the staff nurses are going; some of the sisters who have just been 'made up' (ie promoted to sister) are going. And those of us who have been sisters for four or five years haven't had a chance.' (hospital B)

Most of the CNs felt they should attend a first-line management course, but whether they derived any benefit from it or had been able to implement change in their work as a result of it, is more doubtful.

'I've been on a first line, years ago. I don't think it did
me a lot of good. I went on the course and felt quite
enthusiastic about it, and then came back and found I couldn't
implement half the things that I'd learnt on the course. Really,
it made me a bit frustrated with the whole lot. It all
seemed very feasible there, the tutors were businessmen and they
said it can work if you do it this way....But of course it didn't.

I tried but I seemed to be banging my head against a brick wall, so I gave up.' (hospital B)

The difficulties of introducing change were confirmed by a study designed to evaluate these courses for newly appointed CNs (Davis, 1972). Davis interviewed 88 CNs three months after they had attended the course, and found that 24% had gained nothing from the course, 19% had found it useful but too theoretical and not applicable to them, 30% had become aware of the importance of management in their role, 5% were waiting to make changes, and 9% had tried to implement change but had been unsuccessful. This left only 13% who had either responded to changes initiated by others or had initiated and implemented change themselves. Davis concluded that the courses were not succeeding because they focussed on nurses at a junior management level who were expected to initiate change in a discouraging and resistant environment. Furthermore, the CNs were given no preparation for the course, were not aware of its objectives, and found it difficult to relate its industrial orientation to the clinical reality of their work environment. In another study (Williams, 1969), the author concluded that training in social and interpersonal skills may be more appropriate for CNs than 'management training'.

A greater proportion of CNs in both hospitals in the present study saw very little opportunity for secondment on to any course which was not a management course, and this included study days, lectures, conferences etc. There was, however, perceived to be more opportunity in hospital A compared with B (p < .01), and twice as many CNs in hospital B (62%) compared with hospital A (30%) would have liked more opportunity (see Table 169, Appendix 14). A number of CNs, particularly in hospital A had done the ward teaching course, the nurse assessment course,

a stoma course, ENT courses, family planning, the diploma in nursing etc.

In hospital A the notable exception was the coronary care course, and although the CNs appreciated that the nursing administration was taking a risk in seconding nurses who might subsequently leave without guaranteeing a period of service on their return, several CNs strongly resented the fact that they were unable to educate themselves in the specialty they had chosen. This was regarded as a short-sighted policy as it would encourage CNs to leave for jobs in other coronary care units where secondment was encouraged. Furthermore, qualifications in coronary care would, it was said, result in a greater understanding of the subject and hence an improved standard of nursing care.

'I've done a ward teaching and an assessor's course...I have once or twice asked to go on a recognised coronary care course, one with Clinical Board approval, but I was told by the Divisional Nursing Officer that on two occasions they've sent people, and after spending a year or two years away, they've failed to come back. So they've had one or two kicks in the teeth If the Divisional Nursing Officer is going to have this lack of confidence and not make the staff feel welcome, he is not going to keep the staff, so they're going to go away. He is his own worst enemy.' (hospital A)

'If there are things you want to go on, there's not a lot of difficulty. Since August I've been on a 2-day teaching course, 3-day family planning course, 8 practical 3-hour sessions on family planning, 2 weeks obstetric experience, and I hope to do more. I would like a lot more, but what I did I think

was very good. I think all the knowledge you can possibly cram in in your specialty is going to help.' (hospital A)

In hospital B, it was generally felt that there was a moderate amount of opportunity for secondment in specialist fields such as orthopaedics, ENT, paediatrics and stoma care, and the policy that all CNs should pursue the assessor's course was being introduced. It seems that secondment on to the diploma of nursing course was more difficult, however, and several CNs resented that they were not allowed to take time off for this even if prepared to pay the fees themselves. The need was expressed for a greater number of lectures and study days to keep up to date with change, and although some found the regular lectures arranged by the school to be useful, others seemed either unaware of them or considered them inappropriate to their needs.

'Lack of secondment facilities for the diploma in nursing and clinical teachers course. I want to do both courses and then take over the ITU (Intensive Care Unit) clinical teacher's job when the present one leaves. Everyone except nursing administration supports the idea, and I am planning ahead without success or encouragement. As far as I can see, the whole hospital is short-sighted about a lot of things. They tend to cross their bridges when they come to them, they don't tend to be very far sighted.'

Fifty-one percent of the sample held no other nursing qualification than SRN which goes some way to support Mulligan's (1972) harsh contention that the paucity of advanced educational and professional qualifications held by the CNs, together with an absence of management training '... leads to doubts concerning their capacity to execute satisfactorily the responsibilities with which they are charged.' (p.280)

The nurse administrators in the Scottish study (Hockey, 1976) were

apparently unanimous in their conviction that nurses should be 'kept up to date' by secondment on to courses in for example, paediatric, opthalmic and orthopaedic nursing, and should be encouraged to attend lectures and conferences. Whether the necessary funds were available to send all nurses who expressed the need for such training, is not clear.

A forceful statement about course secondment facilities was made by the Report of the Committee on Nursing (1972, para 608). The Committee felt that insufficient effort was made to inform nurses of the courses available and of the facilities which existed for secondment and payment of expenses. The recent document by the Royal College of Nursing which submitted evidence to the Secretary of State for Social Services about the state of nursing (Royal College of Nursing, 1978) emphasised the variation that occurs between health districts in their provision of post-basic education facilities. It pointed out, in comparison, that medical staff are entitled as a condition of service to have time and payment for approved study. The document recommended that mandatory refresher courses should be introduced for all qualified nurses engaged in professional practice.

There was considerable evidence in the present study that CNs were neither told of suitable courses, nor were they given monetary assistance or study leave to attend courses which did not have a specialist nursing component (eg The Diploma in Nursing). Although the opportunities to attend specialist courses were considered, with a few exceptions, to be reasonably good, there was little evidence that doubts expressed above by Mulligan in 1972 are now unfounded.

2.4 Future plans

Although 69% of all the CNs indicated that their immediate plans were 'to continue as I am' (Table 170 Appendix 14) only 36% intended to

stay put or had no plans for the longer term. Of the 64% who had longer term plans, 46% intended to continue in nursing by taking further training, taking another CN's post elsewhere, seeking promotion as a nursing officer, or nursing abroad. The remaining 18% planned to leave nursing because they were near retirement age or were intending to become pregnant. Some of the 13% who were planning to start a family or increase an existing one intended to return to nursing when these commitments permitted it. There was virtually no evidence, therefore, that any CN was sufficiently disenchanted with nursing to wish to leave it altogether, and those who did express dissatisfaction with their hospital and made plans to leave, nearly all moved to another nursing job. Some of those who had no plans for the future were restless and felt they should move but were not enthusiastic about any of the normal opportunities for advancement. These CNs really wanted to remain in their present posts but had reached the salary ceiling and did not relish what could be another 30 years without an increase of status or salary in real terms.

'I don't know to be honest. I've got plans to do something, I'm just waiting for something that appeals to me to turn up. I know what I could do, but I don't want to do any of it. I'd like to stay where I am, I think, but I don't think I can afford to financially. Everything's getting more expensive and my salary's not changing....I'd like to be paid what my nursing officer is paid.... continue to increase as I go on.'

About a third of the CNs in the SCPR survey (1971) did not think their career prospects were very good, and this was largely because they saw teaching and administrative posts as less attractive than direct patient care. 60% of the full-time hospital CNs thought they would be in the same job in two years' time. Twenty four percent had

immediate leaving plans: 9% intended to give up work, 7% were going abroad, 4% planned to move into community nursing, and 4% intended to take a non-nursing job. These percentages were slightly larger than those of CNs in the present study who had immediate plans to leave.

When the CNs were asked if they would choose nursing given the opportunity to turn the clock back, 75% (97) said they would, 10% (13) said they would not, and 15% (20) were not sure. The 25% who were uncertain or would not have nursed again were asked what they thought they would have done instead. Most (11) selected some other health care profession (medicine, physiotherapy, radiography, social work, dietetics, vetinary surgeon) or teaching (9), four chose dress or interior design, and the remainder (9) either selected some other occupation (eg journalism, chartered accountant) or did not know.

In summary, the dissatisfactions expressed by the CNs might have been sufficient to stimulate movement to a nursing job in another location, but there was no evidence that they led to an exodus from nursing altogether.

9.3 The Job Itself

Two aspects of the CN's job which emerged in pilot interviews as the most important parts of the job were undertaking basic nursing care and teaching the student and pupil nurses. The CNs were asked how much time they had for these activities and whether this was sufficient. Their opinions on the adequacy of numbers of nurses and the level of patient care provided by the hospital were also sought.

Although most of the CNs felt that they had a considerable amount of time for direct patient contact and basic nursing care (see Table 171,

Appendix 14), a large minority (41%) would have welcomed more time. This was less, however, than the 52% of Scottish CNs and teachers who said they needed more time (Hockey, 1976).

The change to 'patient allocation' from task-centred nursing seems to have reduced the amount of clerical work for one CN:

'We are doing 'patient allocation' which means that the nurses are doing much more office work...they write their own Kardexand we have a ward clerk now....so we don't get so much office work, and I can spend more time with the patients and the nurses.'

Most of the wards, however, ran a 'task allocation' organization, and the following comment was typical:

'The job description consists of so much of everything else that your basic nursing care is one of the things that are omitted. It would be a good thing if you could combine the teaching and the nursing care, but you can't, you have to use the learners as cheap labour. The sister ought to be in the ward more...A lot of basic nursing care you don't see the nurses do it - you're just not there to supervise it or to see the standard...the standard tends to slide.'

The conflict between managing the nursing services on the ward and being involved in direct patient care was demonstrated in this account.

'I'd like more time to actually talk to my patients. I don't get enough time to just sit down and talk to them...I've got a lot of thoughts on it, because I think, when you take a senior post you become far more management orientated anyway, and I think with nursing you've got a conflict...there's a constant

conflict...because you've trained as a nurse and then get a (sister's) post and everybody says you're a manager...and no-one says that it is quite acceptable for you to be doing management. There's a lot of stigma attached to sisters...they feel wrong if they're sat in the office...you get a guilt complex. I think management has become far more important over the last couple of years, and it's going to become more important. I like to divide my time. I don't think you always can do, but I think that not enough sisters appreciate that management has got to be done.

Time for teaching the student and pupil nurses was apparently difficult to fit into the working day (or night) especially in hospital A, when half (51%) the sample said they had very little time for teaching (compared with 27% in hospital B) and 78% said they would like more time. The differences between the hospitals was significant (p < .05, see Table 171 Appendix 14). In the theatre unit in hospital B, there seemed to be more than enough time for teaching.

'A lot of time....We're so well staffed....too many trained staff to my mind....so I've got time to spend with the students.

There are days when I go home and I wouldn't have 'scrubbed' all day.... so you get fed up. We don't go above establishment admittedly, but there are still too many, and the quota of work has gone down.'

There were CNs who made sure they fitted in some teaching sessions each day.

'I teach quite a lot because I like teaching. I have a teaching report every afternoon. Sometimes it's only half an hour; more often than not it's la hours. I get my staff nurses doing

trolleys and procedures....And I say to a doctor, 'You're having this nurse for such and such a procedure and she's never seen it before. Tell her what you're doing...I've got two extremely good housemen who are all for this sort of thingThe practical things the staff nurses do mostly, but if I'm on a late shift, I find I can do most things myself, like catheterization.

I'd like to have some formal time for teaching...I'd rather the nurses stayed on the ward and were taught what was relevant to the patient they were nursing at the time, than go off to the school for 2 hours of my time a week, and learn about orthopaedics or something. I would like ward based teaching where the sister, the tutor and the doctor all collaborated...I'm sure it would work better. We have a very good relationship with the dietician as well - she helps with teaching.'

Other CNs were not able to maintain a regular teaching commitment.

'Actually working on the wards with the nurses. I think that's basically an important role for sisters but I find there just isn't time. I'm basically very interested in teaching anyway, but with pressures of office work, telephones etc. there just isn't time....We spend an hour every day, giving the report, and we cover a particular topic, but we get constant interruptions.... I very rarely have time to teach in the ward.'

'Oh absolutely none (time for teaching). If they want to keep a decent nursing standard, naturally, I would like more (time). Since we've now been 'Salmonized' and we are supposed to be into 'Briggs', I would suggest I had a definite teaching period in the afternoon, and make it a specific time. The nurses

should therefore be extra to the basic ward staff, as 'Briggs' recommended....I have managed to get in a bit of teaching but that has always been in my own time, I have given up my lunch time, or my coffee break.'

The administrative workload, clerical duties, telephone calls, organizing and coordinating staff, numerous doctors' rounds, too few nurses and rapid patient turnover were considered to be responsible for the insufficient time available for direct nursing care and teaching.

This was supported by 86% of the 50 ward CNs in Pembry's (1978) study who endorsed 'interruptions from the telephone' as a major work problem (p.148). Furthermore, up to 56% of the hospital CNs in the SCPR survey (1971) said that they had performed tasks in the previous week which should have been done by messengers, clerks, domestics, doctors and less qualified nurses. The lack of sufficient opportunity for talking to the patients, getting to know them and discussing their problems with them, was emphasised in the present study and several CNs expressed concern that they were unable to spend sufficient time working on basic nursing procedures with learners to ensure that standards were maintained.

The increased demand on the CN's time was emphasised in the Report of the Committee on Nursing (1972). The Report emphasised that the increase in complex medicine and the reduction in the length of patient stay have put severe pressure on the nurses and yet there has been no corresponding growth in personnel development as is the case in industry.

Six years later, there does not appear to have been much improvement (Royal College of Nursing, 1978):

'Increased workloads reduce the time available to trained staff to teach and supervise nurse learners gaining practical experience. RCN members, in commenting on standards of care, regretted the fact that routines were so rushed that learners were neglected, or were taught short cuts in order to complete the necessary ward duties. In many instances the ratio of qualified to unqualified nurses was completely inadequate.' (p.33)

Many CNs regarded basic nursing care as the most important part of the job, and experienced conflict between the perceived need to practice what they had been trained to do and the requirement to fulfil a managing role. Some, in fact, had deliberately chosen to work in intensive and coronary care units or on night duty so that they could devote most of their time to direct care. It does seem that most CNs can be classified into either 'practical nurses' where the difference between their job and that of the other nurses working in the clinical area is very small, or 'managers', where that difference is large and the CN regards herself as an organiser, coordinator and supervisor. Most of the CNs in this study appeared in the first category, but some were 'managers' and a few combined both. This confirmed the findings of Williams (1969) and more recently, Pembry (1978). Pembry distinguished between 'manager' and 'non-manager' CNs and found that, using management oriented classification criteria (a nursing round of the patients, work prescription to the nurses, allocation of nurses and patients, and accountability reports from the nurses), only 9 (18%) of the 50 CNs in her sample behaved like managers. These 9 CNs succeeded in differentiating their role from that of the other ward nurses, whereas the role of the remaining 41 CNs was very similar to that of the other nurses. Pembry demonstrated that the orientation of the 'manager' CN was related to individualised patient care rather than task-centred care, since '....organisation of the nursing in relation

to individual patients was not observed to occur when the ward sister behaved like the ward nurses and occupied a virtually non-differentiated role in the nursing team.' (p.235)

The most popular times for teaching were during the afternoon report session, during visiting hours and when working with learners on nursing procedures. Although some of the CNs did not like teaching groups of learners, others did and would have welcomed the opportunity to take part in more formal teaching. They would have preferred more ward-based lectures and seminars on topics appropriate to the ward, and organised by the doctors, CNs, tutors, clinical teachers and paramedical staff, all involved as a team.

Two-thirds (67%) of the CNs in hospital B were satisfied with the number of nurses available to staff their wards and units compared with only one third in hospital A, a difference which was significant (p < .01, see Table 172 Appendix 14). A shortage of nurses appeared to be a persistent problem in hospital A, whereas in hospital B, staffing levels were said to be up to establishment figures in most units and there were, sometimes, too many nurses on duty. There was general agreement that there is an optimum staffing level and mix and too many nurses can be as troublesomeas too few. The impression gained was that, on the whole, the overall level of nursing staff was regarded as sufficient, but surpluses and shortfalls occurred regularly because of the pattern of duty rotas, absence, and work scheduling (much of the routine work has been completed before the afternoon period of staff overlap). According to the literature, short-term absence in nurses is increasing and is following the upward trend evident in industrial workers (Clark, 1975, Macleod Clark and Redfern, 1978; Redfern, 1978).

The CNs were asked how satisfied they were with the level of patient care provided by their hospital, and nearly one third (31%) were not

satisfied (see Table 172 Appendix 14).

'They haven't the amenities. Starting with the building - it's dreadful. They haven't the equipment...No privacy for a patient. The new outpatients is super. This is what it can be....I think learners today are forgetting patient care, they are continually having to be pulled up...the small necessities of life - mouthwash, cutting nails - they seem to be doing things automatically and not thinking. I think the standards have fallen even though academic qualifications have gone up....It is a fact that you have to teach them that it is important, just the patients' comfort as well as those high flung operations.'

Summing up, concern about standards of nursing care has been expressed by the Royal College of Nursing (1978):

'There is much evidence to suggest that ward staff do not always have time to carry out basic nursing routines. Some, such as hand washing after toilet, mouth hygiene, pressure sores relief, appear to be neglected or rushed or not done as often as necessary. Counselling of patients is a low priority where workloads are high.' (p.33)

9.4 Other Organizational Provisions

The CNs were asked to comment on various facilities provided by the hospital for the welfare of staff, such as health care, residential, canteen, nursery, social and personnel services. As many as 40% were not very satisfied with the facilities available (see Table 169 Appendix 14). The health care facilities in both hospitals were appreciated and, on the whole, considered to be quite good. Some of the CNs in hospital B were impressed by the service the health centre offered, informing staff of

the importance of routine chest x-rays, cervical smears etc and providing a counselling service and slimming club. No mention was made of a preventive service of this kind in hospital A. It may be that in hospital B only trainee nurses were informed regularly of the preventive health services, because a considerable number of CNs, particularly those who had not trained there, criticised the health centre's apparent failure to provide information on its services or to perform medical examinations on new staff. Apparently all that was required was a completed health declaration form. Criticism was widespread in both hospitals of the provision of 9 to 5 facilities for a 24-hour nursing service. Health care of staff at night fell to the night nursing officers and the accident and emergency department. Unfavourable comparisons were made with the 24-hour occupational health service provided by large industrial organizations.

In hospital A the staff facilities which came in for most criticism were residential accommodation and the canteen service. The nurses' residence was considered to be as good as could be expected in what was an old and inadequate building, but some thought the canteen to be appalling with regard to the quality and presentation of food, the lack of space in the dining room, and the long queues which built up over lunch-time. There was barely time, it seems, to bolt one's food before being due back at work. Unfavourable comparisons were made with the other general hospital in the group to which hospital A belonged. There, food was said to be of high quality and the service excellent even though both hospitals came under the same catering management. In contrast, the provision of a nursery for the children of staff at hospital A was strongly appreciated.

In hospital B a new staff canteen had recently been built and this was seen as a great improvement over the old one, but there was some criticism over food prices and the service, which was considered to be slow and inefficient. Many CNs did not eat the canteen food, preferring to bring their own sandwiches, and they would have welcomed provision of a rest room where they could buy coffee and eat their own food. The lack of a nursery at hospital B was considered to be short sighted since it would enable many nurses with young children to return to work. It might be, however, that in the present climate of economic stringency, additional nurses could not be employed, but even so, a nursery was considered necessary for the children of staff who were unable to find places in local authority nurseries and who had difficulty in finding child minders during school holidays. Hockey (1976) found that the availability of nursery facilities varied considerably, and there was little agreement amongst the respondents that such a facility was necessary. The majority considered the provision of creches to be the responsibility of the local authorities rather than individual hospitals. The community nursing administrators were generally of the opinion, however, that staff without young children should be employed.

Most of the CNs in both hospitals knew that personnel departments had been established but very few had any idea of their function and regarded their nursing officers as their personnel officers. The majority would have appreciated some information about the function of 'Personnel' so that they would know whom to contact if the need arose.

Concluding this chapter on the CNs' accounts of their jobs, several points should be made. Although the writer has attempted to provide a balanced picture between positive and negative perceptions, there is a greater emphasis on negative ones. It is much easier to recall aspects

of the job which lead to frustration than to emphasise the good points.

No apology is given for dwelling on the criticisms because it is only when these are made explicit that possibilities for change and improvement can be discussed. Secondly, the opinions and perceptions documented here were those of one group of workers in a complex organization.

No attempt was made to see how they compared with the perceptions of the other member of the CN's role set. Finally, these were subjective perceptions which demonstrated to what extent a sense of well-being existed in CNs employed in two hospitals. Generalizations cannot be made to CNs doing similar jobs in similar organizations nor can these findings be assumed to be 'true' without further research which is methodologically rigorous.

10 CONCLUSIONS

This study was concerned with the attitudes, perceptions and opinions of the hospital CN and the relationship of these, if any, to satisfactoriness and withdrawal from the job. This concluding chapter is divided into two parts. The first refers to the conclusions and recommendations drawn from the results of the study, and in the second, some theoretical and methodological implications are discussed.

0.1 Empirical Conclusions

1.1 Occupational needs and their correlates

What do hospital CNs value in their jobs and were those things which they considered to be important provided in their work? The CNs valued, in particular, the opportunity to be able to use their skills and abilities, to gain a sense of achievement from the job, and to do things for other people. Still important, although less so, was to be able to try out their own ideas, to be given the freedom to make their own decisions, to have reasonable working conditions, and to have the opportunity to plan work with little supervision. Those that the CNs considered unimportant were having authority over people, being able to work alone, and having a high status in the community. The findings suggested that, on the whole, the CNs' occupational needs were provided by the job, although there was some discrepancy between what they considered important and what was provided on the following items: 'ability utilization', 'pay', 'creativity', 'responsibility', and 'working conditions'.

To what extent did the discrepancies between the occupational needs considered important by the CNs and the rewards provided in the job relate to their levels of job satisfaction and propensity to leave? Six needs - rewards discrepancy variables were significantly related to intrinsic,

extrinsic or general satisfaction, and five of those six discriminated between the CNs when the sample was split into 'high' and 'low' satisfaction groups. The multiple correlation coefficient for general satisfaction was only moderate, however, at .49, and the amount of variance in the criterion explained by the predictors was only 24%. The 'hit' rate on the discriminant function analysis was 74% for general satisfaction.

These results suggested that if the needs - rewards discrepancy were reduced (ie by increasing the rewards) on two variables in particular, dissatisfaction would decrease. The two variables were 'compensation' (my pay compared with that of others) and 'supervision - technical' (the competence of my nursing officer in training the staff). It is interesting that pay occupied such an important position for an occupational group which traditionally has been assumed to adopt altruistic rather than materialistic values, but nurses have been struggling like many others to survive the effects of inflation. The hospitals in which the CNs worked cannot take individual action over their salaries, but a national campaign is in progress (eg Nursing Times, 4 January, 1979) which is urging the government to accept nurses as a 'special case' so that they can be given a pay rise in excess of the current 5% pay policy.

The emergence of the 'supervision - technical' discrepancy variable as contributing to dissatisfaction supports the negative opinions held by many of the CNs about the competence of the administratively oriented nursing officer in practical nursing matters. Those CNs who were critical of the 'Salmon' hierarchy felt that these nursing officers had insufficient up-to-date clinical nursing knowledge to enable them to help the learners develop their competence as nurses. Most of the CNs

saw the preparation of student and pupil nurses as their and the nurse teachers' responsibility, yet the number of clinical teachers in the wards and department was sparse, and the CNs were well aware that they had insufficient time to teach. If the preparation of nurses for the nursing officer's role were improved by enabling them to up-date their clinical nursing knowledge, the respect held by the CNs for them may increase.

The 'Salmon' Committee certainly saw the nursing officer as having a wide professional function which included teaching trainees:

'The Nursing Officer will act as a consultant in nursing practice, and develop new ideas and methods in the <u>unit</u>. ... She will participate personally in the training of the nursing staff and in the practical training of students and pupil nurses allocated to the unit.' (Report of the Committee on Senior Nursing Staff Structure, 1966, para 5.37. Emphasis in original.)

The ambiguity of the nursing officer's role emerged clearly from the discussions with the CNs. Except for those in the accident and emergency department and in the operating theatres, the nursing officers were seen as administrators with a minimal clinical role. This was not the role recommended by the 'Salmon' Committee which emphasised a strong clinical content as well as administrative and personnel functions.

Many of the CNs did feel that the nursing officers should help them with nursing care and teaching, and should be capable of discussing nursing problems with them. This would give relatively inexperienced CNs support and would ensure that the nursing officers retained close patient contact and their familiarity with techniques of nursing care and medical treatment. Yet there was also evidence that the nursing officer was seen to reduce the CN's sphere of authority and encroach upon her

clinical territory. Thus the nursing officer had to achieve a delicate balance between support and advice on the one hand, and interference on the other.

The CNs' criticisms of the role of the nursing officer in particular and the 'Salmon' structure in general may have been due more to the way the system was introduced and the lack of preparation of the nurses who moved into the new management posts, than to the principles of the system as envisaged by the 'Salmon' Committee. The research being undertaken by Deborah Jones and her colleagues at Chelsea College may support the impressions given by the CNs in this study.

Did the needs - rewards discrepancy variables discriminate between intending stayers and leavers? Of the 21 discrepancy variables, six contributed to the discriminant function, and the 'hit' rate was 74%. In four of these variables ('creativity', 'ability utilization', 'hospital policies and practices' and 'compensation') the mean occupational needs exceeded the rewards and the discrepancy was larger for the intending leavers than the stayers on each variable. This suggests, therefore, that providing the CNs with more opportunity to try out their own ideas, enabling them to make greater use of their abilities, and by ensuring that the hospital was seen to administer its policies fairly, then the likelihood of CNs leaving for negative reasons would fall. Ensuring that the CN was paid well in comparison to other workers is, however, outside the control of the organization, but the current national pay campaign may be successful.

The needs - rewards discrepancy variables which emerged from the multiple regression analysis as being significantly related to propensity to leave were 'activity', 'achievement', 'ability utilization' and 'hospital policies and practices'. The multiple correlation was .46

which accounted for only 21% of the variance in the criterion.

The contribution of 'ability utilization' and 'hospital policies and practices' was positive indicating that the more the rewards were perceived as falling short of the CNs' requirements, the greater was the likelihood that the CNs would leave. As with the discriminant functionanalysis, this suggests that if the CN was given freedom to make greater use of her abilities, and had some influence on deciding policy and practice within her sphere of responsibility, then her decision to leave might be reversed.

The negative contribution of the 'achievement' discrepancy variable to propensity to leave was perplexing, particularly when the contribution of 'ability utilization' was positive. An explanation in terms of locus of control and attribution theory is suggested. Gaining a sense of achievement from the job may be seen as an internal condition within the CN's control and which can be influenced by her behaviour, but being given the opportunity to use her skills and abilities may be regarded as outside her control. If the CN attributes her ability to gain a sense of achievement to herself, then she is more likely to persist at the job and strive to reach this goal. If she maintains that it is the organization which has control over the extent to which she can make use of her skills and abilities, then her experience of underutilization may encourage her to leave for a more challenging post.

The implications from these findings are that administratively oriented nursing officers should be encouraged to involve themselves more in practical nursing so that their clinical credibility as perceived by the CNs is increased and so that they can take a greater part in the professional training of students and pupils. The means by which such a recommendation were to be implemented would require careful handling,

however, because there was evidence that the nursing officer was required to walk a tightrope between giving professional advice and support on the one hand, and not encroaching upon the CN's clinical territory on the other.

The second recommendation which emerged from these results also lies in the hands of the nursing administration. Providing the CN with more autonomy, more opportunity to use her abilities, and enabling her to contribute to appropriate policy decisions might encourage her to stay rather than leave. If these were implemented, however, the CN would have to recognise that she was fully accountable for her decisions.

1.2 Satisfactions and pressures

As with individuals in other occupational groups, the CNs were mostly satisfied with their work in general, since 45% scored in the top third on both the global satisfaction and the Minnesota general satisfaction There was a statistically significant difference, however, between the hospitals on the global satisfaction index, since only a quarter of the CNs in hospital A compared with half in hospital B scored in the top third. The item responsible for this difference was 'satisfaction with the hospital as a place to work', and over half the CNs in hospital A thought it only a fair or a poor place. It can be concluded then that even though the level of satisfaction with nursing was high, the environment in which the CNs worked did present them with certain problems. The results of the multidimensional satisfaction measure (the MSQ) confirmed this since the CNs derived greatest satisfaction from items intrinsic to the work itself, such as 'social service', 'security', 'ability utilization' 'achievement', 'variety' and 'responsibility'. They were relatively dissatisfied with

contextual factors, such as the hospital's policies and practices, the perceived expertise of the nursing officer in handling staff, recognition for doing a good job, pay, and opportunities for advancement.

The findings which emerged from the role pressure measures showed that perceived conflict and ambiguity with some aspects of the job were relatively high. Nearly three-quarters of the sample experienced moderate or high levels of job-related tension and role conflict, although perceived ambiguity from the job was, on the whole, low. Those aspects of the job which presented problems can be divided into those which related to the workload, and those which referred to organizational support. The principal problems with the workload were that it was too heavy so resulting in a reduced quality of work, and this was exacerbated by insufficient manpower at times, particularly in hospital A.

The factors which related to aspects of organizational support presented the CNs with many more problems, and this confirms the dominance of contextual factors as the main source of dissatisfaction. Relatively high levels of experienced role conflict came from organizational aspects such as having to work with groups which operated differently, receiving incompatible requests from two or more people, and finding that certain things they did were accepted by some people but not by others. They also found themselves having to bend the roles on occasion, they had to do things against their better judgement, and they had very little influence over the decisions made by management. The role ambiguity experienced related to uncertainty about their responsibilities and limits of authority, and their colleagues' expectations of them, not knowing how their nursing officer evaluated their work, and not receiving all the necessary information to do the job.

The opinions expressed by the CNs about the 'Salmon' structure and the cooperation they received from other individuals pinpoint the

specific frustrations encountered which were implicit in the satisfaction and role pressure scale scores. There was widespread criticism of the 'Salmon' structure as it had been implemented, because the number of levels in the hierarchy through which messages had to be communicated resulted in distortion of information and delays in decision-making. The close proximity of the nursing officer to the CN meant that a successful working relationship between these two grades was essential for the wellbeing of the CN. Perceived contact with the nursing officer correlated significantly and positively with job satisfaction, role clarity and satisfactoriness (mainly dependability) and negatively with job-related tension, role ambiguity and propensity to leave. Feedback from the nursing officer on the CN's performance correlated significantly and positively with job satisfaction, and negatively with ambiguity and propensity to leave.

The implications for nurse managers are clear but it may be that they do not realise how influential the nursing officer is to the CN's wellbeing. If communication and cooperation between the nursing officer and CN were improved, then the CN's role clarity would increase, and so too her satisfactoriness and satisfaction. Furthermore, the tensions experienced in relation to the job would decrease and the CN would be less likely to leave her job.

The other workers who sometimes hindered rather than helped the CNs in their delivery of patient care were the doctors. The number of 'rounds' was much greater than necessary because each houseman and registrar tended to visit the wards separately rather than together. This caused considerable fragmentation of the CN's work but the doctors apparently found it difficult to visit at the same time because of other commitments. The demands on the CN's time caused by frequent interruptions from visitors to the ward could be reduced if the system

of care delivery were based on patient rather than task allocation. If one nurse were made responsible for the total care of one or a few patients, or if the CN delegated direct responsibility for a group of patients to a team leader, then the visiting doctor could discuss a patient and his treatment with that nurse rather than with the CN. This kind of work organization would require the CN to give the team leader or single nurse much more responsibility than is common with the system of task allocation, but the nurse would also have to be explicitly accountable for her actions.

Other difficulties which the CN had to endure were the inexperience of some housemen, and the relatively common practice of verbal prescribing, especially at night. This was contrary to hospital policy and there was no guarantee that the doctor would take the responsibility for errors made. Finally, the loss of available beds booked for patients who were admitted from the waiting list rather than as emergencies, was extremely irritating for the CNs. What happened was that the doctor responsible for admitting patients would override previous plans and fill the available beds with 'lodgers'. This is a difficult problem because beds must be found for patients requiring urgent hospital care, but it did present the CNs with problems and caused considerable anxiety and bewilderment for the waiting list patients for whom other beds had to be found or their admission cancelled.

The amount of organizational and coordinating work experienced by the CNs was such that they were unable to spend sufficient time doing what many regarded as the most important part of the job, and that was giving direct nursing care to the patients, and supervising the learners. There was very little evidence of Pembry's (1978) 'manager' since a frequently expressed view was that the CNs wanted to do what they had been trained to do, and that was to nurse patients.

The multiple regression analyses showed that the three satisfaction criteria (intrinsic, extrinsic and general satisfaction) were significantly related to role ambiguity, role clarity, propensity to leave, and tenure in the present job (extrinsic satisfaction only). The contribution of all the variables was negative, except for role clarity, where it was positive. Thus, the direction of the contribution was as expected for each variable except, perhaps, for tenure, where the shorter the tenure, the higher was extrinsic satisfaction. The multiple correlations were .72 for extrinsic and general satisfaction and the amount of variance explained was 51% in both cases. The statistics were lower for intrinsic satisfaction, the multiple correlation being .61, and R², 37%. These results demonstrate the importance of role clarity to the CN's job, since, if clarity is high (and ambiguity, therefore, low), satisfaction would result.

The implications of these results seem to be that although the level of job satisfaction was high, many of the aspects of the job which presented problems for the CN could be resolved with a change in work organization and greater collaboration between health care workers.

If the CN became a skilled manager in Pembry's terms, she would retain close patient contact and her responsibility for the delivery of patient care; and yet, because she has been able to relinquish many tasks to the nurse in charge of the patient, she could be spared the task fragmentation common in the job of ward CN. Such change would require full commitment and cooperation from other health care workers, but given this, the challenge of delivering high standard care to the patient could be achieved and with it, satisfaction and fulfilment for the CN.

1.3 Withdrawal from the job

When this study started, in the Autumn of 1974, the nursing administrators in the two hospitals were concerned about their inability

to retain registered nurses. Was wastage in CNs working in the general nursing division too high, and what was the pattern of wastage over subsequent years?

In fact, in both hospitals wastage was highest in 1974 (A = 28%, B = 36%), and it fell during 1975 and 1976 but increased slightly in 1977. These rates were higher than those in CNs working in West Yorkshire (Mercer & Mould, 1976). Clearly, it is necessary to collect wastage (and stability) data over more years than was possible in this study, so that the trends can be charted and understood and can be related to the consequences of mobility and stability experienced in each organization. Attempting to establish national norms for different grades of nurse in different nursing specialties is probably unwise because local circumstances will ensure that optimum levels will vary across organizations. The levels of wastage computed over the years in this study and the views expressed by the nursing management suggested that an acceptable rate per annum in hospital A was between 15 and 20% and for hospital B, 20 to 25%. Follow-up studies would be necessary in order to confirm these levels and the aim should be to establish optimum rates which maintain a balance between on the one hand, stability and continuity of care for patients, and on the other, the injection of new ideas and change leading to improvements in care.

The absence picture confirmed that reported in previous research with nurses and other occupational groups. One day spells accounted for about half the total number taken, and over 70% of all the spells in each hospital were of one, two or three days' duration. The average number of spells per CN per year was 2.1 in hospital A and 2.5 in hospital B. It is gratifying to be able to conclude that absence, as measured in this study, did not feature as a particularly important variable. This is not to say, however, that the frequency of absence spells was not unacceptably high in certain hospital units or in

certain individuals. Further research which could probe absence in greater detail than that examined here would be necessary before such a conclusion could be drawn.

The association between absence and wastage was zero in hospital A and a curvilinear one in hospital B, and so did not provide support for the Tavistock theory that these are alternative forms of withdrawal and negatively related. Nor was there support for absence being part of a continuum of alienation which ends in the individual leaving the organization.

Turning to propensity to leave, the results indicated that about 40% of the CNs were intending to leave their jobs or were, at least, uncertain about staying. The number who did in fact leave during the 18 months after questionnaire administration was 36, which was 28% of the original sample. Of these, 13 (36%) left for 'unavoidable' reasons (pregnancy, moving house, retirement, or being asked to resign), 10 (27%) left for career reasons (further training and experience, promotion), and 6 (17%) left because they were dissatisfied or needed a change. In the West Yorkshire study, Mercer and Mould (1976) found that 16% of their CNs left their jobs in the 12 months after data collection, which appears to be somewhat fewer than the number who left in the present study. The findings from the two studies do suggest that more CNs in the West Midlands sample than in West Yorkshire left for further training and experience or because they were dissatisfied or needed a change. Since the median tenure in the job was only 20 months, the conclusion is that there exists a strong 'mobility culture' in CNs in order to gain more experience in their chosen occupation rather than to leave nursing altogether. Those who were planning to leave nursing intended to have children and probably return later on. There was some evidence that changing jobs every few years was seen by the CNs as the only option open to them if they wanted to progress in their careers but did not want

promotion which took them from the patient.

Were the leavers unhappier in their jobs than the stayers? The leavers were significantly less satisfied on extrinsic satisfaction which emphasised environmental factors, but the difference between the groups was not significant for intrinsic satisfaction. This supports the conclusion that the CNs were committed to nursing but some left because they were disenchanted with their specific working environment. The other factors which distinguished significantly between the leavers and stayers, and which probably contributed to the leavers' dissatisfaction, were the significantly higher leavers' scores on job-related tension and role conflict.

The general opinion of the 'Salmon' structure as a career ladder was that it did provide good administrative career prospects but was not attractive for those CNs who wanted to advance and yet retain direct patient contact. The nurse who wanted to continue nursing was discriminated against financially, since the CN's pay scale is short. Those CNs whose salary was their sole source of income and who had reached the top of the scale, felt they had little choice but to move on to the administrative or teaching scales if they were to keep up with rising living costs.

Financial prospects apart, those CNs who felt restless and needed a change might have been happier if there had been more opportunity to attend courses, lectures and study days. These might have helped the CN to keep up to date, to enlarge her own job and to replace the challenge she had lost through routinization and familiarity. The opportunity to attend specialist courses was seen to be reasonably good in hospital A, but less so in hospital B, particularly for the Diploma in Nursing course. As for lectures and study days, lectures were given which anyone could attend, but these were more likely to be medical than nursing lectures.

The opportunity to attend the first-line management course was regarded as fairly good, although by no means all the CNs had been on one. They thought that they should attend management courses, although their usefulness was questionned since it was not always easy for the CN to adapt industrially oriented management ideas to her own work, and her own organization may not have welcomed new ideas or facilitated change. The uselessness of acquiring such training when working in an environment with a senior management which was unsympathetic to change, was emphasised by Williams (1969). The suggestion made by Williams that CNs would gain more if they received training in social and interpersonal skills rather than the ineffective training they do receive on management courses, is a sound one. Such a training, however, would be more appropriate in basic rather than post-basic courses.

Discriminant function analysis showed that role clarity, job-related tension, and global, extrinsic and general satisfaction discriminated successfully between likely leavers and likely stayers, with a 'hit' rate of 80%. This confirms the dominance of extrinsic over intrinsic satisfaction in the decision to leave the job.

The prediction of propensity to leave from satisfaction, role pressure and biographical variables showed that only two, global satisfaction and role clarity, made a significant contribution. The multiple correlation was .71 and this accounted for 51% of the variance in propensity to leave. The direction of the global satisfaction contribution was negative, as expected, but although the simple correlation between role clarity and propensity to leave was also negative, when combined with global satisfaction its contribution became positive. This suggests that high satisfaction combined with relatively low role clarity is associated with the likelihood of staying in the job, and conversely, low satisfaction with relatively high role clarity is related to propensity to leave.

It is puzzling that role clarity should make a positive contribution to both satisfaction and propensity to leave. A tentative explanation in terms of challenge and tenure is suggested. It may be that in the first few years in the job, role clarity is a necessary requirement for job satisfaction because the job is unfamiliar and challenging but not without some anxiety for the CN. After a few years, however, the amount of challenge and anxiety have decreased and a high degree of role clarity has become counterproductive, the job provides insufficient challenge, and the propensity is to leave for more exciting work. If this is the case, the nursing management must be differentially sensitive to the needs of the CNs according to their length of time in their present jobs. In her first months and years, the CN requires clear guidelines about the policies of the hospital which affect her, about the limits of her authority, about what to do and how to do it, and to know how well she is doing. In subsequent years such clarity becomes a negative influence, and the CN needs fresh challenges.

The conclusion drawn from these findings is that although wastage from the hospitals was probably not excessive and may have been too low in some years, some of those CNs who did leave may have done so because the organization failed to give them sufficient opportunity for personal career growth. These CNs may have been those whom the nursing management could ill afford to lose because they were looking for new challenges, wanted to initiate change which would improve patient care, and were not prepared to coast along and perpetuate the status quo. It may be that attending a course, taking on a teaching commitment, or learning about research and carrying out a project related to her work would give the CN the challenge she seeks. Enlarging the CN's job in ways such as these should be within the scope of the nursing officer's role, and such sensitivity to the needs of the CN may increase her respect for her

senior colleague, and may encourage those CNs who are most valuable to the nursing management and to the patient, to stay.

The results which emerged from the multivariate techniques are interesting, but it must be emphasised that the conclusions drawn are tentative and cannot be generalised from this sample of CNs. The lack of opportunity in the present study either to validate the results against those from a 'hold-out' sample or to use a longitudinal research design means that the results obtained are entirely sample-specific. Having said that, however, the explanation given for the positive effect of role clarity upon both satisfaction and propensity to leave is intuitively appealing, and it does correspond with the impression given by many of the CNs who had been in their jobs for two or three years. They said that they were 'in a rut' and felt they should move, but did not know where they should move to.

1.4 Differences between the hospitals

The score distributions which emerged in response to each item were examined for each hospital separately as well as for the combined sample. Comparisons were made between the hospitals and, on the whole, the differences observed were not statistically significant. Those which were significantly different did, however, cast hospital A, the smaller hospital, in a less favourable light than hospital B. The CNs in hospital A were less satisfied with their hospital as a place to work, were less clear about their limits of authority, were more likely to feel unable to get hold of information necessary for the job, were less certain that they had divided their time properly, and were more likely to say that they had an insufficient number of nurses working for them. They also experienced more conflict than those in hospital B in that they said that they did things which were accepted by one person but not by others, and they felt they had very little influence with the more

senior nurse managers.

These differences between the hospitals suggest that the CNs in hospital A had less confidence in their management and felt that they did not receive sufficient organizational support. The conclusions made by Revans (1964) that uncertainty and anxiety were functions of communication blockages between the different management levels in the hospital hierarchy tended to be supported. It is not the size of the hospital which is important, but the management approach adopted by the nurse administrators, and the nature and amount of organizational support perceived by the CN to exist. Such support can be provided and can be just as, if not more, effective in the large hospital which is divided into lively, semi-autonomous units, compared with the small hospital which has a less enlightened management approach.

0.2 Theoretical and Methodological Conclusions

Did the results support the relationship between the variables as hypothesised in the model (p loo)?

There was some support for the theory of Work Adjustment since six of the needs-rewards discrepancy variables made a successful contribution to the satisfaction prediction, but only three were significantly related to propensity to leave. More support may have emerged if those discrepancy variables which demonstrated that the needs exceeded the rewards had been treated separately from those where the rewards exceeded the needs, since the former were likely to be associated with dissatisfaction and the latter with satisfaction.

The relationships between variables which emerged from the simple correlational analysis did support the hypotheses, except for most of

those with absence and some with satisfactoriness. Satisfactoriness did not influence the relationship between the needs-rewards correspondence and satisfaction, and neither did family pressures (number of children) or travelling difficulties (distance to work) influence the withdrawal decision.

Multivariate analyses demonstrated that not all the variables which appeared from the simple correlations to make a significant contribution did so when the effect of other predictors was simultaneously taken into account. The significant correlates of job satisfaction which emerged from multiple regression analysis were role clarity, tenure and propensity to leave. In the case of propensity to leave, only clarity and global satisfaction were significant correlates, although discriminant function analysis demonstrated that role clarity, job-related tension, and job satisfaction distinguished significantly between likely stayers and leavers. The success of the predictions was quite high, since the multiple correlations reached .72 for general satisfaction and .71 for propensity to leave, and the variance explained by the predictors was 51% for both criteria.

Propensity to leave emerged as a powerful independent as well as a dependent variable, since it featured in the prediction of satisfaction.

Causal direction cannot be accepted as conclusive, however, even though the independent variables are often called predictors, because the analyses were based on correlational techniques.

How successful were the questionnaire scales with this sample of CNs?

The Minnesota Satisfaction scales did demonstrate the expected 'ceiling effect', especially in the Intrinsic Scale. With most of the

scores distributed around the 'satisfied' end of the continuum, a response scale which had a wider range of satisfied than dissatisfied response categories would have been more sensitive. The Minnesota research team have acknowledged this but have not yet introduced their more appropriate response scale to the short form of the MSQ. This researcher was reluctant to use the long form MSQ and risk a high proportion of non-responders because of the time required to complete lengthy questionnaires.

The Role Conflict and Ambiguity Scales were superior to the Job-Related Tension Index because conflict and ambiguity had been shown by Rizzo et al. (1970) to be independent dimensions. The JRT did, however, contain several items which were not included in the other two scales, such as those which referred to the workload, opportunities for advancement, and feedback from the nursing officer. These items were relevant to the CNs' job perceptions and so inclusion of the JRT was justified.

Another point about the Conflict and Ambiguity Scales was the significance of obtaining a subjective score from the difference between the 'desirability' and 'how true?' ratings. This score showed how the level of perceived pressure varied for individuals, and for most of the items the subjective score was lower than the objective score derived from the 'how true?' scores alone. These scales with both ratings were developed by Rizzo and his colleagues in the early 1970s, yet, to this author's knowledge, no study which has used the 'desirability' rating has been published. This may have been due to difficulties experienced by the respondents in completing the 'desirability' rating. In the present study, the researcher found it necessary to administer the 'desirability' rating to each CN individually because many of them made errors in selecting the scores that they intended. This may be why researchers have not used this rating, but this point was not conceded

by Professor House (one of Rizzo's colleagues) in a letter written to the author in reply to questions concerning the difficulties experienced with this rating.

The conclusion reached by this author is that, although 'subjective' conflict and ambiguity scales have an advantage over 'objective' scales in that they reflect individual variation, the 'desirability' rating must be administered, to CNs at least, on an individual basis in order to avoid unintended error. The need for individual administration does suggest that further research is required to develop a subjective scale which contains unambiguous and easily understood items.

This study involved the use of a number of existing attitude scales, scales which were considered to be relatively reliable and valid.

The scale scores provided a rough idea of the levels of job satisfaction, role pressure etc. experienced by CNs, but the information provided by the scales would have been superficial if they had not been supported with interview material. Furthermore, each scale contained some items which were relevant to the CN, but others that were less so. Thus, if the whole scale were to be used as an index, all items had to be included even though some were redundant. The length of the whole questionnaire might, then, have been longer than was wise.

The author questions whether it is feasible to develop standard scales which can be used across different occupations or even across different organizational levels within the same occupation. It may be that a standard scale is an impossibility, and one appropriate to each occupational level must be developed using factor analytic techniques. Another possibility is that a core of items suitable for all occupations could be identified, and in addition, items which were known to be appropriate to specific occupations could be included in the standard scale. This would, however, require an enormous research programme.

The conclusion reached by this author is that the attitude scales used in this study did provide worthwhile material because the CNs were also given the opportunity to discuss their jobs freely and at length. Attitude scales provide quantitative information which is amenable to analysis, whereas unstructured interview material obtained from a large group of people is very difficult to handle.

The limitations of this study were that the sample was small, it was not selected in a way which ensured that it was representative of the population, and the data were collected at one time period. Therefore, the results cannot be generalised to all general hospital CNs, and it is not known how the feelings of those CNs who did participate varied over time. Furthermore, the study focussed on one type of individual in a complex organization, and no attempt was made to compare the CN's attitudes, perceptions and opinions with those of others in her role set, or to verify some of the CNs' responses through observation.

A meaningful approach to further research in this area would be to follow the recommendation of Kasl (1978). He argued in favour of longitudinal studies which relate to the occurrence of actual events or changes likely to influence individual health and well-being. Such 'natural experiments' would enable limited descriptive cross-sectional correlational research designs to be replaced by a method which makes explanation possible.

The approach taken in this study is considered to be justified because it is only when the needs of the CN are recognised and described and the things that satisfy or frustrate her are understood, that it is possible to make improvements. The CN is the nurse responsible for delivery of care to the patient and it is she who can directly influence standards of care. Very little research has been done in this country

on the CN even though she plays such an important role in the care of the hospital patient. She deserves some attention, and the aim of this study has been to provide a small contribution to that end.

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APPENDIX 1.

minnesota satisfaction questionnaire (short-form)



Vocational Psychology Research
UNIVERSITY OF MINNESOTA

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minnesofa safisfaction questionnaire

Ask yourself: How satisfied am I with this aspect of my job?

The purpose of this questionnaire is to give you a chance to tell how you feel about your present jab, what things you are satisfied with and what things you are not satisfied with.

On the basis of your answers and those of people like you, we hope to get a better understanding of the skings people like and dislike about their jobs.

On the next page you will find statements about your present job.

- · Read each statement carefully.
- · Decide how satisfied you feel about the aspect of your job described by the statement.

Keeping the statement in mind:

- -if you feel that your job gives you more than you expected, check the box under "Very Sat." (Very Satistical);
- -if you feel that your job gives you what you expected, check the box under "Sat." (Satisfied);
- -if you cannot make up your mind whether or not the job gives you what you expected, check the box under "N" (Neither Satisfied nor Dissatisfied);
- -if you feel that your job gives you less than you expected, check the box under "Dissat." (Dissatisfied);
- -if you feel that your job gives you much loss than you expected, check the box under "Vary Dissett." (Very Dissettified).
- Remember: Keep the statement in mind when deciding how satisfied you feel about that aspect of your job.
- · Do this for all statements. Please answer every item.

Be frank and honest. Give a true picture of your feelings about your present job.

Very Sat. means I an Numeans I can' Dissat. means Very Dissat. r	Very Saft means I am very satisfied with this aspect of my job. Saft means I am satisfied with this aspect of my job. N means I can't decide whether I am satisfied or not with this aspect of my job. Dissaft means I am dissatisfied with this aspect of my job. Very Dissaft means I am very dissatisfied with this aspect of my job.	spect o	of my jo	-á		
On my present job, this is how I fee 1. Being able to keep busy all the time	On my present job, this is how I feel about 1. Being able to keep busy all the time	Very Dissat.	Dissot.	z 🗆	į 🗆	\$ E
2. The chance to work alone on the job	c alone on the job		0			
3. The chance to do dif	The chance to do different things from time to time					
4. The chance to be "s	The chance to be "somebody" in the community					
5. The way my buss handles his men	andles his men					
6. The competence of 1	The competence of my sugervisor in making decisions					. []
7. Being able to do thi	Being able to do things that don't go against my conscience					
8. The way my job pro	The way my job provides for steady employment					
9. The chance to do th	The chance to do things for other people					
10. The chance to tell people what to do	people what to do		Ö			
11. The chance to do so	The chance to do something that makes use of my abilities					
12. The way company p	The way company policies are put into practice					
13. My pay and the amount of work I do	mount of work I do					
14. The chances for adv	The chances for advancement on this job					
15. The freedom to use	The freedom to use my own judgment					
16. The chance to try m	The chance to try my own methods of doing the job					
17. The working conditions	itons		0			
13. The way my co-worl	The way my co-workers get along with each other					
19. The praise I get for doing a good job	r doing a good job					
20. The feeling of accor	The feeling of accomplishment I get from the job	□,	. 🗆			
		Diezol.	Dissot.	z	Sot.	Sof

MINNESOTA IMPORTANCE QUESTIONNAIRE

1975 Revision

Directions

1,50

The purpose of this questionnaire is to find out what you consider important to you in your ideal job, the kind of job you would most like to have.

On the following pages are groups of five statements about work.

- -- Read each group of statements carefully.
- their importance to you in your ideal job,
 using the number "1" to indicate the statement
 which is most important to you in your ideal job,
 the number "2" to indicate the statement
 which is next most important to you, and so on,
 using the number "5" for the statement least important
 to you in your ideal job.
- -- Write down your rankings in the appropriate spaces on the answer sheet.

Please turn to the next page for instructions on how to mark your answer sheet.

Vocational Psychology Research
Work Adjustment Project
Department of Psychology
University of Minnesota

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How to Mark the Answer Sheet

First of all

Print your name in the space provided and fill in the other information requested.

To fill in the answer sheet

- -- Start where it says "begin page 1."
- at the left side of the boxes stand for the statements in your booklet. -- There is a box for each of the statements in each group. The letters
- -- For example, your ranking of a group of statements might look like this:

(answer sheet) (booklet)

group

On my ideal job ...

group

I could be busy all the time.

the job would provide for steady employment.

I could do things for other people. 0

I could try out some of my own ideas. my boss would train the workers well. d.

all the time" the most important (ranked "1") to you in your ideal job; This means that, of the five statements, you consider "I could be busy "I could try out some of my own ideas" the next most important (ranked "2"); and so on.

You will find some of the rankings more difficult to make than others, but it is important that you rank every statement in each group.

important, and so on, to "5" for least important to you in your ideal job. Remember: "1" = most important to you in your ideal job; "2" = next most On your answer sheet enter your rankings of statements for each group.

group

On my ideal job

- I could be busy all the time.
- I could do things for other people.
- I could try out some of my own ideas. 00
- my pay would compare well with that of other workers. p.
- the job would provide an opportunity for advancement.

On my ideal job ... group 2

I could do things for other people.

- I could do something different every day.
- c. the jobacould give me a feeling of accomplishment.
- my boss would train the workers well, d.
- the company would administer its policies fairly.

group 3

On my ideal job ...

- a. I could do the work without feeling that it is morally wrong.
 - my boss would back up the workers (with top management). b.
- I could do something different every day. 0
- I could do something that makes use of my abilities. d.
- I could be busy all the time.

dnois

On my ideal job ...

- a. the company would administer its policies fairly.
- b. I could try out some of my own ideas.
- c. I could do something that makes use of my abilities.
- my co-workers would be easy to make friends with.
- I could be "somebody" in the community.

to "5" for least important to you in your ideal job. Remember: "1" = most important to you in your ideal job; "2" = next most On your answer sheet enter your rankings of statements for each group. important, and so on,

On my ideal job ...

- my boss would train the workers well. .
- I could plan my work with little supervision. 9.
- my boss would back up the workers (with top management). .
- I could try out some of my own ideas. 0
- the job would have good working conditions. .

On my ideal job ...

group

- I could get recognition for the work I do. 00
- I could do the work without feeling that it is morally wrong. 0.
- I could plan my work with little supervision. ċ
- I could do things for other people. Ġ.
- my co-workers would be easy to make friends with

group

On my ideal job ...

- my boss would back up the workers (with top management).
- the company would administer its policies fairly. b.
- my pay would compare well with that of other workers. 0
- I could get recognition for the work I do.
- I could tell people what to do.

group 8

On my ideal job ...

- I could do something different every day.
- my co-workers would be easy to make friends with,
- I could make decisions on my own. :
- the job would have good working conditions. P.
- my pay would compare well with that of other workers. 0

so og, to "5" for least important to you in your ideal job. Remember: "I" = most important to you in your ideal job; "2" = next most On your answer sheet enter your rankings of statements for each group. and important,

group 9

On my ideal job ...

I could do something that makes use of my abilities.

- I could tell people what to do.
- the job would have good working conditions.
- the job would provide for steady employment. q.
- I could do things for other people.

group 10

On my ideal job ...

- I could make decisions on my own.
- I could be busy all the time. b.
- the job would provide for steady employment. ů,
- the company would administer its policies fairly. d.
- I could plan my work with little supervision.

group

On my ideal job ...

- the job could give me a feeling of accomplishment.
- I could make decisions on my own. . q
- I could tell people what to do. 0
- I could do the work without feeling that it is morally wrong. d.
- I could try out some of my own ideas.

group 12

On my ideal job ...

- my co-workers would be easy to make friends with.
- the job would provide for steady employment.
- the job would provide an opportunity for advancement. 0
- my boss would back up the workers (with top management). d.
 - job could give me a feeling of accomplishment. the

(1)

On your answer sheet enter your rankings of statements for each group.

Remember: "1" = most important to you in your ideal job; "2" = next most important, and so on, to "5" for least important to you in your ideal job.

group 13

On my ideal job ...

a. I could plan my work with little supervision.

b. the job would provide an opportunity for advancement.

c. I could be "somebody" in the community.

d. I could tell people what to do.

. I could do something different every day.

group 14

On my ideal job ...

a. my pay would compare well with that of other workers.

b. the job could give me a feeling of accomplishment.

c. I could work alone on the job.

d. I could plan my work with little supervision.

.. I could do something that makes use of my abilities.

group

On my ideal job ...

a. I could tell people what to do.

b. my boss would train the workers well.

c. my co-workers would be easy to make friends with.

d. I could be busy all the time.

I could work alone on the job.

group 16

On my ideal job ...

a. the job would provide for steady employment.

b. my pay would compare well with that of other workers.

c. my boss would train the workers well.

d. I could be "somebody" in the community.

e. I could do the work without feeling that it is morally wrong.

On your answer sheet enter your rankings of statements for each group. Remember: "1" = most important to you in your ideal job; "2" = next most important, and so on, to "5" for least important to you in your ideal job.

200

group 17

On my ideal job ...

a. I could work alone on the job.

b. I could be "somebody" in the community.

c. I could do things for other people.

d. my boss would back up the workers (with top management).

I could make decisions on my own.

group 18

On my ideal job ...

. I could try out some of my own ideas.

. I could get recognition for the work I do.

. I could do something different every day.

d. I could work alone on the job.

e. the job would provide for steady employment.

group 19

On my ideal job

a. the job would provide an opportunity for advancement.

b. I could do something that makes use of my abilities.

c. I could get recognition for the work I do.

. I could make decisions on my own.

. my boss would train the workers well.

group 20

On my ideal job ...

a. the job would have good working conditions.

b. I could work alone on the job.

c. the company would administer its policies fairly.

the job would provide an opportunity for advancement.

I could do the work without feeling that it is morally wrong.

On your answer sheet enter your rankings of statements for each group. Remember: "1" = most important to you in your ideal lob; "2" = next most important, and so on, to "5" for least important to you in your ideal lob.

group 21

On my ideal job ...

- a. I could be "somebody" in the community.
- b. the job would have good working conditions.
- c. I could be busy all the time.
- d. the job could give me a feeling of accomplishment.
- e. I could get recognition for the work I do.

Please check your answer sheet to see that you have ranked every statement in each group. Then, please continue on the next page.

On this page consider each statement and decide whether or not it is important to have in your ideal lob.

3

- -- If you think that the statement is important for your ideal job, mark an X in the "Yes" box on your answer sheet.
- -- If you think that the statement is not important for your ideal iob, mark an X in the "No" box on your enswer sheet.

On my ideal job it is important that:

- 1. I could do something that makes use of my abilities.
- The job could give me a feeling of accomplishment.
- 3. I could be busy all the time.
- 4. The job would provide an opportunity for advancement.
- 5. I could tell people what to do.
- . The company would administer its policies fairly.
- '. My pay would compare well with that of other workers.
- 8. My co-workers would be easy to make friends with.
 - 9. I could try out some of my own ideas.
- 10. I could work alone on the job.
- 11. I could do the work without feeling that it is morally wrong.
- 12. I could get recognition for the work I do.
- 13. I could make decisions on my own.
- 14. The job would provide for steady employment.
- 15. I could do things for other people.
- 16. I could be "somebody" in the community.
- 17. My boss would back up the workers (with top management).
- 18. My boss would train the workers well.
- 19. I could do something different every day.
- 20. The job would have good working conditions.
- 21. I could plan my work with little supervision.

Please check your answer sheet to see that you have marked only one choice for each of the 21 statements.

answer sheet Minnesota Importance Questionnaire 1975 Revision

Vocational Psychology Research Elliott Hall University of Minnesota Minneapolis, Minnesota 55455

Name

Middle

Last

Today's Date

19

Circle the number of years of school you completed

Date of birth

19

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Graduate of Professional School

Sex: (check one) Male

Female

Occupation						How long	have you beer	in this occu	upation?	years	ı	month
begin page		begin page 2	group 5	begin page 3	group 9	begin page 4	group 13	begin page 5	group 17	begin page 6	gro	oup 21
	group 2		group 6		group		group		group	begin 1 page 7 2	yes	on
t C			a b c d				b c d		a t	5	yes	
ē	group 3		group 7		group 11		group 15		group 19	7	yes yes yes	no
t. 					<u>Б</u>				— b— с — d	11	yes yes	no no
	group 4		group 8		group 12		group 16		group 20	14	yes yes	no
ŀ			b c		a b		a b c		a	17	yes yes	no no
end of page	1	end page 2	d	end page 3	d	end page 4	d	end page 5	d - e	19	yes	no no
				-						end 21	yes	no

APPENDIX 3

THE QUESTIONNAIRES

There are three questionnaires attached: The Job and Hospital Questionnaire, the Minnesota Importance Questionnaire, and the Minnesota Satisfaction Questionnaire.

If this study is to prove beneficial to nurses and to your hospital, it is crucial that the information you give be as accurate as possible. This is not a test; there are no "right" or "wrong" answers. The important thing is that you answer the questions the way you see things or the way you feel about them.

Instructions

- 1. Please answer the questions in order.
- 2. Most of the questions can be answered by placing a tick against one of the responses provided. For questions which require a different response, appropriate instructions are given. If you do not find the exact answer that fits your case tick the one that comes closest to it, or write in your answer.
- 3. Specific instructions are given with the Minnesota Questionnaires which are designed for any worker in any kind of organisation. Consequently you will need to modify some of the questions. For example, for "he" or "his", read "he" or "she" or "his" or "hers" for "company" read "hospital", for "boss" read "nursing officer".
- 4. Feel free to write in any explanations or comments that you may have in the left hand margins or on the back of the guestionnaires.
- 5. Please do not write in the right hand margins.
- 6. Please answer all the questions.

Office Use Only	
H:	
S:	
Date:	
	NAME

			Off		e U	
		H:	н:	1	2	
		S:	s:			1
THE	JOB AND HOSPITAL QUESTIONNA	IRE				_
I.	How often do you feel bothe	red by:			3	4
1.	Being unclear on just what responsibilities of your jo			Γ	5	
	() (). () l 2 3 never rarely sometimes r	() () 4 5 ather nearly all often the time				
2.	Not knowing what opportunit or promotion exist for you?			Г	6	
	() () () 1 2 3 never rarely sometimes r					
3.	Not knowing what your nursing you, how she or he evaluate			Γ	7	
	() () () 1 2 3 never rarely sometimes r			I		
4.	The fact that you can't get to carry out your job?	information needed			8	
	() () () 5 4 3 nearly all rather sometime the time often	() () 2 1 es rarely never				
5.	Not knowing just what people expect of you?	e you work with		Г	9	
	() () () 5 4 3 nearly all rather sometime the time often	() () 2 1 es rarely never				
6.	Feeling that you have too he that you can't possibly find working day or night?				10	
	() () () (1 2 3 never rarely sometimes r) () 4 5 ather nearly all				

		Office Use Only
7.	Thinking that the amount of work you have to do may interfere with how well it gets done?	11
	() () () () () 1 2 3 4 5 never rarely sometimes rather nearly all often the time	
8.	Feeling that you have to do things on the job that are against your better judgement?	12
	() () () () () 5 4 3 2 1 nearly all rather sometimes rarely never the time often	
9.	Thinking that you will not be able to satisfy the conflicting demands of various people over you?	13
	() () () () () () l 2 3 4 5 never rarely sometimes rather nearly all often the time	
II.		
10.	How clear are you about the limits of your authority in your present job?	14
	() () () () () 1 2 3 4 5 not at all not too fairly clear on very clear clear most things clear	
11.	Do you feel you are always as clear as you would like to be about how you are supposed to do things in your job?	15
	() () () () () () l 2 3 4 5 not at all not too fairly clear on very clear clear clear most things clear	
12.	Do you feel you are always as clear as you would like to be about what you have to do in your job?	16
	() () () () () 5 4 3 2 1 very clear on fairly not too not at all clear most things clear clear clear	
13.	In general, how clearly defined are the policies and the various rules and regulations of the hospital that affect your job?	17
	() () () () () l 2 3 4 5 not at all not too fairly clear on very clear clear most things clear	430

	Office Use Only
III.	Only
14. How important is it to you to know exactly what the limits of your authority on a job are?	18
() () () () () 5 4 3 2 1 very important fairly not very not at all important important important	
15. How important is it to you to know, in detail, how you are supposed to do a job?	19
() () () () () 1 2 3 4 5 not at all not very fairly important very important important important	
16. How important is it to you to know, in detail, what you have to do on a job?	20
() () () () () 5 4 3 2 1 very important fairly not very not at all important important important	
17. How important is it to you to know how well you are doing?	21
() () () () () 1 2 3 4 5 not at all not very fairly important very important important important	
IV.	
18. On the whole, what do you think of this hospital as a place to work?	22
() () () () () () () 1 2 3 4 5 6 7 a very a poor a a fair a good a very an poor place rather place place good excellent place place place place place	
19. Considering your job as a whole, how well do you like it?	23
() () () () () 5	
v.	
20. If you were completely free to choose, would you prefer to continue working in this hospital or would you prefer not to?	24
() () () () () ()	
prefer very prefer don't care prefer prefer very much to to either way not to much not to continue here here don't care prefer prefer very either way not to much not to continue here	431

		Only
21.	How long would you like to stay in this hospital?	25
	() () () () () () 1 2 3 4 5 for as long for for a I would I would as I can quite little like to like to work a while longer leave as longer soon soon as possible	
22.	If you had to leave work for a while (for example, because of pregnancy) would you return to this hospital?	26
	() () () () () () 5 4 3 2 1 definitely probably perhaps, probably definitely would not would would would return return look around return return first	
23.	How likely are you to leave your job in the next 12 months?	27
	() () () () () () 5 4 3 2 1 definitely probably uncertain probably definitely will leave will leave will not leave leave	
24.	Why are you likely to stay or leave?	

Office Use

VI.

25. How well do the following people from different departments cooperate with you in your work? (tick one for each type of staff)

			cemely ell	ve		fai we	rly		ry	not all			
A.	Medical staff	()	()	()	()	()		28
В.	Nursing Administrative Staff	()	()	()	()	()		29
C.	Nurse tutors	()	()	()	()	()	I	30
D.	Hospital Administrative Staff	()	()	()	()	()		31
E.	Clerical and Secretarial Staf:	f ()	()	()	()	()		32
F.	Laboratory Staff	()	()	()	()	()		33
G.	Staff from Xray Department	()	()	()	()	()		34
н.	Staff from Pharmacy Dept	()	()	()	()	()		35
J.	Kitchen staff	()	()	()	()	()		36
К.	Staff from other wards	()	()	()	()	()		37
L.	Other (please specify)	()	()	()	()	()		38

VII.

26. In general how accessible to you are the policies and various rules and regulations of the hospital that affect your job? 39

() () () () () ()

5 4 3 2 1

always or often usually sometimes seldom or nearly accessible access-accessible never always ible accessible accessible

27. In general, how do you feel about the kind of communication which you receive from your nursing officer? 40

() () () () () () () l 2 3 4 5 inadequate rather fairly very completely inadequate adequate adequate

		Office Use Only
VIII	Now, some questions about yourself	41 42
28.	In what year did you qualify as a SRN?	
29.	Did you have any other full-time job prior to training as a nurse?	43
	1. Yes () 2. No ()	
29A.	If yes, what sort of job was it?	
30.	How many hours per week do you work?	44 45
31.	Are you a senior or junior sister?	46
32.	On what shift(s) do you usually work at present?	47
	 early shift only () 	
	2. late shift only ()	
	3. early and late shifts ()	
	4. early late and split shifts ()	
	5. a conventional day () (ie. approx 9am - 5pm)	
	6. nights ()	
	7. other (please specify)	
33.	Have you been in continuous employment in nursing since qualifying, or have you had any breaks, that is spent more than 6 months at a time away from nursing?	48
	<pre>1. I have never been out of nursing () Go to Q36 since qualifying</pre>	
	2. I have had one break only ()	
	3. I have had two breaks ()	
	4. I have had three or more breaks ()	
34.	What were the reasons for having your breaks? (tick yes or no for each item) 1 2	
	A. Getting married Yes () () B. Starting a family () () C. Husband/wife moving () () D. Wanted a rest from work () () E. Disliked nursing work () () F. Disliked nursing pay () () G. Wanted to get out of nursing () () H. Travel () () J. Other (please specify)	50 51 52 53 54 55 56

A.B.C.D.E.G.	Why did you return to nursing? (tick yes or no for each item) 1 2 yes no Able to leave family () () Family/own health improved () () Wanted a stimulating job () () Needed the money () () Wanted independence () () Wanted to make use of nursing training () () To make friends () ()	Card No:4 1 2 3 4 5 6 7 8 9 10 11 12
Н.	Other (please specify)	13
36.	How far do you live from the hospital? () () () () 1 2 3 4 less than 1-4 5-9 10 miles one mile miles or more	
	How do you find travelling to work? 1. easy or fairly easy () 2. difficult ()	14
3	7A. If difficult, why is this?	
38.	Have you any of the following educational qualifications? (tick yes or no and number obtained) 1 2 39	
А. В. С.	<pre>Yes No number obtained CSE/GCE O Levels/ general matric ()() A. () GCE A Levels/higher grade ()() B. () degree ()() subject(s)</pre>	38A 15 38B 16 38C 17 38D 18
D.	other (please specify)	39A 19 39B 20
40.	Have you any professional qualifications other than SRN?	21
	A. 1. Yes () 2. No () B. If yes, what are they	22
41.	What is your marital status?	23
	<pre>1. single 2. married/cohabiting () 3. widowed/divorced/separated()</pre>	

Office Use

		Office Use Only
42.	How many children do you have?	24
	() () () () () O 1 2 3 4 none one two three four or more	
42A.	How old are your children, if any?	
43.	What is/was the occupation of your husband/wife/ partner? (if housewife, unemployed, retired or student please indicate)	25 26
44.	What is your nationality?	27
45.	Finally, if you could go back to when you were at school, would you still choose nursing as a career?	28
	() () () 1 2 3 yes no not sure	
45A.	If no or not sure, what would you have liked to have done?	
		I come to the second

Thank you very much indeed for your help.

If you have any more comments to make about the questionnaire, or about points which have or have not been raised, please mention them here or on the back of the questionnaire.

APPENDIX 4

ROLE CONFLICT AND AMBIGUITY SCALES

The statements listed on the next page will describe some specific characteristics about your particular job. They will appear as follows:

	Job Characteristic	How True Desirability
1.	Having enough time to complete my work	
2.	Knowing what my responsibilities are	5 ————————————————————————————————————
one	each Job Characteristic, you are rating in Column (A) and one in lowing rating scales:	
For	Column (A): Rate how true the your particular job	
	Definitely Not true of my Job 1 2 3 4	Extremely True 5 6 7 of my Job
For	Column (B): Rate whether the clor undesirable one	Management or for the contract of the contract
	Extremely Undesirable Condition 1 2 3 4	Extremely Desirable

Read each characteristic, and select the scale number that best reflects your opinion. Enter the number you select in the appropriate column.

JOB	CHARACTERISTIC	(A) How True?	(B) Desirability
1.	Clear, planned goals and objectives for my job.	4	5
2.	I have to do things that should be done differently.	6	7
3.	I know that I have divided my time properly.	8	9
4.	I receive an assignment without the manpower to complete it.	10	11
5.	I know what my responsibilities are	12	13
6.	I have to bend a rule or policy in order to carry out an assignment.	14	15
7.	I work with two or more groups who operate quite differently.	16	17
8.	I know exactly what is expected of me.	18	19
9.	I receive incompatible requests from two or more people.	20	21
10.	I feel certain about how much authority I have.	22	23
11.	I do things that are apt to be accepted by one person and not by others.	24	25
12.	I receive an assignment without adequate resources and materials to execute it.	26	27
13.	Explanation is clear of what has to be done.	28	29
14.	I work on unnecessary things.	30	31
15.	I don't have much say or influence with my co-workers.	32	33
16.	I don't have much say or influence with higher management	34	35

Polytechnic of the South Bank



Department of Nursing and Community Health Studies
Head of Dept: Miss G M Owen, M Phil BSc (Hons) SRN SCM HV Tutor's Cert RNT

Dear

As you know, I am undertaking a research study into the attitudes of sisters and charge nurses to their jobs and their hospital. Now that you have left your job, I should be most grateful if you would tell me your reasons for leaving, why you actually made the decision to go.

As before, I shall treat all the information that you give me with absolute confidentiality and your identity will not be revealed. Nothing will reach the nursing administration of your last hospital.

This information is important as it may show how the attitudes of those who decide to leave their jobs differ from the attitudes of those who stay.

Please list your reason(s) below and return the slip to me in the enclosed stamped addressed envelope.

Thank you very much for your help.

Yours sincerely,

	· Sally J. Redfern.	
My reason(s)	for leaving my last job at Hospital were: -	No:
		nayayetayan igan yan eta daga midayengan genina wanabara da indi mesam asoomiya angineg tanye eta midahinad
Several to the second supplies and the second supplies of the second		en den estado en al marca de estado en en el Servicio de entrensa de entre de tentra en precionario de entre d
and the second s		

APPENDIX 6.

minnesota satisfactoriness scales



Vocational Psychology Research
UNIVERSITY OF MINNESOTA

Copyright 1965

Employee Name		-	-	
Rated by Date			1	
Please check the best answer for each question Be sure to answer all questions				
Compared to others in his work group, how well does he	not as	about the	better	
1. Follow company policies and practices?				
2. Accept the direction of his supervisor?				
3. Follow standard work rules and procedures?			0	
4. Accept the responsibility of his job?				
5. Adapt to changes in procedures or methods?		0	0	
6. Respect the authority of his supervisor?		0	0	
7. Work as a member of a team?				
8. Get along with his supervisors?		0		
9. Perform repetitive tasks?	0	0		
10. Get along with his co-workers?				
11. Perform tasks requiring variety and change in methods?				
	not	about		
Compared to others in his work group	poos	seme	better	
12. How good is the quality of his work?				
13. How good is the quantity of his work?	0			
		not		
If you could make the decision, would you	yes	sure	00	
14. Give him a pay raise?				
15. Transfer him to a job at a higher level?		0	0	
16. Promote him to a position of more responsibility?		0		

Please check the best answer for each question Ba sure to answer all questions

			apour	
Compared to	Compared to others in his work group, how		the	
often does he		less	same	more
17. Сот	17. Come late for work?	0	0	
18. Becc	18. Become overexcited?	0		0
19. Becc	Become upset and unhappy?			
20. Neer	20. Need disciplinary action?		0	0
21. Stay	21. Stay absent from work?			
22. Seen	22. Seem bothered by something?			
23. Соп	23. Complain about physical ailments?			D
24. Say	24. Say 'odd' things?	0		0
25. Seer	25. Seem to tire easily?		0	
26. Act	26. Act as if he is not listening when spoken to?		0	
27. Wan	27. Wander from subject to subject when talking?			
28. Now effect into and subdetect into and subdetect to transition to the property of the prop	28. Now will you please consider this worker with respect to his overall competence, the effectiveness with which he performs his job, his proficiency, his general overall value. Take into account all the elements of successful job performance, such as knowledge of the job and functions performed, quantity and quality of output, relations with other people (subordinates, equals, superiors), ability to get the work done, intelligence, interest, response to training, and the like. In other words, how closely does he approximate the ideal, the kind of worker you want more of? With all these factors in mind, where would you rank this worker as compared with the other people whom you now have doing the same work? (or, if he is the only one, how does he compare with those who have done the same work in the past?) In the top X	erall co	ompeten rail value rail value others, rate the ide vould yourd your would your would your world your world you would you w	ce. the solution the job prople prople prople sal, the our rank work?
Inth	In the lowest 1/4			0

APPENDIX 7

THE BRITISH 'ORP'

On the attached sheet is a list of statements about jobs. Please rate each statement according to the extent to which you think it describes the sister's (or charge nurse's) job. To do this use the following rating scale:

1 2 3 4 5 6 7

Not at all Descriptive of the Sister's job Highly Descriptive of the Sister's job

Your rating can range from a score of 1, which means that the statement is not at all descriptive of the sister's (or charge nurse's) job, to a score of 7, which is highly descriptive of his/her job. The intermediate numbers represent scores falling between these two extremes. For each statement please select the scale number which best reflects your opinion.

For example: statement No.12 is "receive recognition for the work they do". If you feel that sisters do receive quite a lot of recognition but this isn't highly descriptive of the job, select scale number 5 or 6. On the other hand, if you feel that sisters do not receive much recognition for the work they do, ie. that the statement is not very descriptive of the job, select scale number 2 or 3. Enter the number you select in the space beside each statement.

As far as possible, please rate each statement according to a sister's overall work. Try not to confine yourself to a specific sister's job or for example, to certain times of the day or night. It is your overall impression about what the job provides which is important.

	1	2	3	4	5	6	7	
De	t at al scripti the	ve						Highly ciptive of the
Si	ster's	job					Siste	c's jol
Si	sters a	nd Cha	rge Nur	ses on	this jo	ob:	Scale	Numbe:
1.	Make	use of	their	indivi	dual ab	ilities		
2.	Get a	feeli	ng of a	accompl	ishment		_	
3.	Are b	usy al	1 the t	ime				
4.	Have	opport	unities	for a	dvanceme	ent		
5.	Tell	other	workers	what	to do			-
6.			gement s fairl		adminis	ters	<u>-</u>	
7.	Are p worke		ll in o	compari	son with	h other	-	
8.		co-wor ds wit		no are	easy to	make	_	_
9.	Try o	ut the	ir own	ideas			_	
10.	Do th	eir wo	rk alor	ne			_	
11.		rk wit ly wro		eeling	that it	is	_	_
12.	Recei	ve rec	ognitio	on for	the wor	k they	do	
13.	Make	decisi	ons on	their	own		_	
14.	Have	steady	employ	ment			_	
15.	Have peopl		here th	ney do	things	for othe	er _	
16.	Have		sition	of "so	mebody"	in the	-	
17.			g office top ma			up their	_	
18.		nursin well	g offic	cers wh	o train	their	_	_
19.	Have	someth	ing di	fferent	to do	every da	ay	
20.	Have	good w	orking	condit	ions			
21.	Plan	their	work w:	ith lit	tle sup	ervision	n _	

Finally, an optional question:
Which nursing area or unit is your responsibility?

If you have any comments please note them here.

. Thank you very much for your help.

THE INTERVIEW SCHEDULE

	H:
NAME:	n:
DATE:	
н:	1 2
S:	
DELIVER OR COLLECT Q:	4
	1
About your work	
1. How much time do you have in your job for basic nursing care? (show response card)	5
2. How much more time would you like, if any? (show response card)	6
3. How much time do you have in your job for teachi the learner nurses?	.ng 7
4. How much more time would you like, if any?	8
About your colleagues	
5. How much contact do you have with your nursing officer?	9
6. How much more contact would you like, if any?	10
7. How much contact do you have with the nursing administrators above number 7?	
8. How much more contact would you like, if any?	12
9. How much contact do you have with the hospital administrators?	13
10. How much more contact would you like, if any?	14
11. How much contact do you have with the nurse tuto and clinical teachers?	ors 15

12.	How much more contact would you like, if any?	16
13.	How much contact do you have with the medical staff?	17
14.	How much more contact would you like, if any?	18
15.	How much contact do you have with the paramedical staff (physiotherapists, radiographers, dieticians, social workers, pharmacists, pathologists, etc.)?	19
16.	How much more contact would you like, if any?	20
17.	How much contact do you have with the ancillary staff (porters, domestic, etc.)?	21
18.	How much more contact would you like, if any?	22
19.	How much contact do you have with the clerical and secretarial staff? (ward clerks, admission clerks, doctors' secretaries)	23
20.	How much more would you like, if any?	24
21.	How satisfied are you with the 'Salmon' system of nursing administration at this hospital? (show response card)	25
22.	Do you think it provides nurses with good career prospects or not?	26
	Yes No Other Don't know 1 2 3 4	
23.	Why do you say this? (prompt: Would you think of going up the ladder, or would you rather stay where you are?)	
24.	Do you think there are too many nurse administrators, too few, or just the right number?	27
	Too few Just right Too many Don't know 1 2 3 4	
25.	How much feedback do you get from your nursing officer on how well you are doing? (Prompt: By feedback I mean praise/appreciation and criticism.)	28

26.	How much more feedback would you like, if any?	29
27.	Is there a system of staff appraisal for sisters and charge nurses at this hospital?	30
	Formal reports Discussion Other Don't know 1 2 3 4	
28.	Do you see your reports or not? Yes No 1 2	31
29.	How satisfied are you with the number of nurses that you have to staff your ward/unit/dept.?	32
30.	How satisfied are you with the level of patient care that this hospital provides? (Prompt: total patient care rather than nursing care only.)	33
31.	How satisfied are you with the way in which this hospital looks after its staff? (ie. health care, canteen facilities, personnel dept., social facilities, nursery facilities, etc.)	34
32.	How much opportunity is there in your job for secondment on to management courses?	35
33.	How much more opportunity would you like, if any?	36
34.	How much opportunity is there in your job for secondment on to other courses (such as specialist nursing courses)?	37
35.	How much more opportunity would you like, if any?	38
36.	What are your future plans? Are they on this list? (present list)	39 40
	(short term/long term?)	
	Ol to continue as I am	
	O2 to have a child	
	03 to take another sister's post elsewhere (probe)	
	O4 to take further training (probe) O5 to seek promotion as a nursing officer	
	Of to go abroad (probe)	

07 retiring soon

08	no plans		
09	other (please	specify)	

Is there anything else you would like to talk about?

Thank you very much for your help.

RESPONSE CARDS

Response Card A. (Questions 1,3,5,7,9,11,13,15,17,19, 25,32,34)

How much do you have?

- 1. almost none
- 2. very little
- 3. a moderate amount
- 4. quite a lot
- 5. a great deal

Response Card B. (Questions 2,4,6,8,10,12,14,16,18,20, 26,33,35)

How much more would you like, if any?

- 1. no more
- 2. slightly more
- 3. more
- 4. much more
- 5. very much more

Response Card C. (Questions 21,29,30,31)

How satisfied are you?

- 1. not satisfied
- 2. only slightly satisfied
- 3. satisfied
- 4. very satisfied
- 5. extremely satisfied



THE UNIVERSITY OF ASTON IN BIRMINGHAM

APPENDIX 9: INTRODUCTORY LETTER

Gosta Green, Birmingham B47ET / Tel: 021.359 3611 Ex

Dear Sister/Charge Nurse,

I am conducting a study into the perceptions of hospital nurses in the charge nurse grade, and I should be most grateful if you would be prepared to take part. The aim of the study is to learn more about how sisters and charge nurses feel about their jobs and the hospital they work in, and why they decide to stay in or leave the hospital.

I am a registered nurse and am now a research officer at the University of Aston. This project is spensored by the Department of Health and Social Security.

I hope you will agree to complete some questionnaires and to discuss important issues in more detail with me. The questionnaires will take you approximately 30 minutes to complete, and the discussion will involve about an hour of your time, to be arranged at a time convenient to you.

I shall treat all information that you give as privileged and absolutely confidential. I shall collect your completed questionnaires and take them to The University of Aston for analysis. At no stage will the identity of individuals or the hospital be revealed. None of the questionnaires, once filled in, will be seen by anyone in this hospital.

In order to match the questionnaires with the discussions, I must be able to identify you, and so your name will appear on the questionnaires. However, as soon as the matching process has been completed, your name will be cut off and discarded.

A report on the findings of the study will be made available to all those who took part.

I do hope you will feel able to help.

Yours faithfully,

Sally J. Redfern

Table 137. Distribution of CNs' global job satisfaction item and index scores in hospitals A and B and the combined sample

			Hospitals	tals			difference
	A+B	В	A		B	8	between
	freq.	%	freq.	%	fred.	%	
Overall satisfaction with hospital: poor/very poor place to work: fair place: good/excellent place to work:	39 85	4.6	ω <u>σ</u> π	8.1 51.4 40.5	3 20 70	3.3 21.5 75.3	$\chi^2 = 12.61$ df = 1 p<.001
Overall satisfaction with job: don't like it much: like some things, dislike others: like it quite well: like it very much:	2 4 4 4 1 L L L L L L L L L L L L L L L L	1.5	0 0 0 0 0	8.1 32.4 59.5	2 11 32 49	2.1	$\chi^2 = 1.00$ df = 2 ns
Global satisfaction index (2–12) ¹ : low (4–6) ² : medium (7–9): high (10–12):	655	49.9	0 0 0	5.4	39 4	4.3 41.9 53.8	F = 7.34 p<.01
Sample size	130-131		37		93-94		

= in this and subsequent tables, the numbers in the parenthesis adjacent to the index name indicate the possible score range.

2 = in this and subsequent tables, the actual score range has been divided into 3 equal categories representing low, medium and high scores.

 $\frac{\text{Table 138}}{\text{And B, and the combined sample}}.$

MSQ* item label				Hos	spitals			Di fference	
and explanation	score	A	+ B		A		В	between	
		freq.	%	freq.	%	freq.	%	hospitals	
1. activity	1/2**	11	8.3	2	5.4	9	9.5		
(keeping busy	3	13	9.9	2	5.4	11	11.6	χ2=2.62	
all the time)	4	84	63.6	24	64.9	60	63.2	df = 2	
	5	24	18.2	9	24.3	15	15.8	ns	
2. independence	1/2	13	9.9	7	18.9	6	6.3		
(the chance to	3	32	24.2	9	24.3	23	24.2	χ2=4.95	
work alone)	4	73	55.3	17	45.9	56	58.9	df= 2	
	5	14	10.6	4	10.8	10	10.5	ns	
3. variety	1/2	9	6.8	3	8.1	6	6.4		
(the chance to do different things)	3	8	6.1	3	8.1	5	5.3	2=1.44	
direcent dilings)	4	82	62.1	20	54.1	62	65.3	df = 2	
	5	33	25.0	11	29.7	22	23.2	ns	
4. social status	1/2	2	1.5	0	-	2	2.1		
(the chance to be	3	28	20.9	11	29.7	17	17.9	Z2=1.81	
'somebody')	4	82	61.2	22	59.5	60	63.2	df = 2	
	5	20'	14.9	4	10.8	16	16.8	ns	
7. moral values	1/2	4	3.0	2	5.4	2	2.1		
(able to do things	3	23	17.4	6	16.2	17	17.9	$\tilde{\lambda}^2 = 0.54$	
that don't go against	4	86	65.2	25	67.6	61	64.2	df = 2	
conscience	5	19	14.4	4	10,8	15	15.8	ns	
8. security	1/2	2	1.5	1	2.7	1	1.1		
(job provides	3	8	6.1	4	10.8	4	4.2	χ2: 3.04	
steady employ- ment)	4	71	53.8	17	45.9	54	56.8	df = 2	
	5	51	38.6	15	40.5	36	37.9	ns	
9. social service	1/2	1	0.8	0	-	1	1,1		
(chance to do	3	1	0.8	1	2.7	0	_	×2=1.21	
things for others)	4	51	38.6	12	32.4	39	41.1	df = 2	
	5	79	59.8	24	64.9	55	57.9	ns	
10. authority	1/2	3	2.3	2	5.4	1	1.1		
(chance to tell	3	36	27.3	8	21.6	28	29.5	χ2=0.88	
people what to	4	82	62.1	25	67.6	57	60.0	df = 2	
do)	5	11	8.3	2	5.4	9	9.5	ns	
11. ability utilization	1/2	8	6.0	3	8.1	5	5.3		
(chance to use	3	4	3.0	1	2.7	3	3.2	72=1.68	
abilities)	4	76	57.6	18	48.6	58	61.1	df = 2	
	5	44	33.3	15	40.5	29	30.5	ns	
15. responsibility	1/2	11	8.3	6					
(freedom to use	3	9	6.8	4	16.2	5	5,3	$\chi^2 = 5.90$	
own judgement)	4	87	65.9	22	10.8	5 65		df = 2	
	5	25	18.9	5	59.5		68.4	ns	
C an all the					13.5	20	21.1		
6. creativity	1/2	15	11.4	6	16.2	9	9.5	~ O	
(chance to try own methods)	3	20	15.2	8.	21.6	12		$\chi^2 = 3.38$	
	4	83	62.9	18	48.6	65	68.4	df = 2 ns	
· · · · · · · · · · · · · · · · · · ·	5	14	10.6	5	13.5	9	9.5		
20. achievement	1/2	9	6.8	4	10.8	5	5.3	70	
(feeling of accomplishment)	3	5	3.8	1	2.7	4	4.2	X2=2.10	
	4	66	50.0	21	56.8	45	47.4	df = 2	
	5	52	39.4	11	29.7	41	43.2		
intrinsic Satisfaction									
index (12 -		6	4.0		10.0				
low (28 - medium (38 -	1	6	4.6	15	10.8	2 44	2.1	F=1,46	
high (49 -		67	50.7	18	48.6	49	51.6	ns	
THE RESIDENCE OF THE RESIDENCE AND ADDRESS OF THE PARTY O		132		37		95		THE RESERVE AND PARTY AND ADDRESS OF THE	

Table 139. Distribution of CNs' extrinsic satisfaction item and index scores in hospitals A and B, and the combined sample

Item label and			hos	spital	ls			difference
explanation	score*	A + F	3		A	.]	3	between
		freq	%	freq	%	freq	1 %	hospitals
5. supervision -	1/2	27	20.4	9	24.3	18	18.9	
human relations (way nursing	3	19	14.4	9	24.3	10	10.5	X = 5.40
officer handles	24	66	50.0	17	45.9	49	51.6	df = 2
20411	5	20	15.2	2	5.4	18	18.9	
6. supervision -	1/2	20	15.2	9	24.3	11	11.6	
technical (compe- tence of nursing	3		18.9	4	10.8	21	22.1	$\chi^2 = 4.66$ df = 2
officer in making	- 4	66	50.0	21	56.8	45	47.4	ns
decisions	5	21	15.9	3	8.1	18	18.9	
12. company poli-	1/2	28	21.2	12	32.4	16	16.9	
cies and practices (way hospital	3	48	36.4	12	32.4	36	37.9	$\chi^2 = 3.91$ df = 2
policies are put	4	55	41.7	13	35.1	42	44.2	ns
into practice)	5	1	0.8	0	-	1	1.1	
13. compensation	1/2	24	18.2	8	21.6	16	16.8	
(my pay and amount of work I do)	3	19	14.4	3	8.1	16	16.8	x2 = 1.81
	4	70	53.0	55	59.5	48	50.5	df = 2
	5	19	14.4	4	10.8	15	15.8	
14. advancement	1/2	22	16.7	8	21.6	14	14.7	
(chances for advancement)	3	27	20.5	4	10.8	23	24.2	$\chi^2 = 3.28$
	4	71	53.8	21	56.8	50	52.6	df = 2
	5	12	9.1	4	10.8	8	8.4	
19. recognition	1/2	25	18.9	9	24.3	16	16.8	
(praise for doing a good job)	3	29	22.0	8	21.6	21	22.1	$\frac{x^2}{df = 2} = 1.01$
	4	66	50.0	17	45.9	49	51.6	ns
	5	12	9.1	3	8.1	9	9.5	
Extrinsic satisfac index (6								
low (9	- 15)	13	9.9	6	16.2	7	7.4	F = 3.59
medium (16	- 22)	66	49.9	15	40.5	51	53.7	ns
high (23	- 29)	43	40.1	16	43.2	37	38.9	
sample size		132		37	on manage and confidence and a second	95		

^{*} l = very dissatisfied; 2 = dissatisfied; 3 = neither satisfied nor dissatisfied; 4 = satisfied; 5 = very satisfied

Table 140. Distribution of CNs' satisfaction with working conditions and co-workers, and the general satisfaction index scores in hospitals A and B and the combined sample.

MSQ item label			ho	spita	als			difference
and explanation	score	A +	В'	P		E	3	between hospitals
•		freq	. %	free	1. %	freq	1. %	
17.								and the second s
working conditions	1/2	27	20.5	10	27.0	17	17.9	
	3	25	18.9	8	21.6		17.9	Z2 = 2.01
	4	66	50.0	14	37.8	52	54.7	$\mathcal{X}^2 = 2.01$ $df = 2$ ns
	5	14	10.6	5	13.5	9	9.5	
18.			Maragana Assa - V	**************************************		-map is, desposes	2 Decreto Aconomic	Committee of the state of the s
co-workers (way	1/2	13	9.8	5	13.5	8	8.4	
co-workers get along with each	3	17	12.9	5	13.5	12	12.6	$\chi_{df}^2 = 0.84$
other)	4	83	62.9	55	59.5	61	64.2	df = 2
	5	19	14.4	5	13.5	14	14.7	
general satisfaction index (20 -								and indicate global supplementary and a state of all distances and an analysis.
low (42 -	59)	6	4.7	5	13.5	1	1.1	
medium (60 -	78)	67	50.6	18	48.6	49	51.6	F = 2.59
high (79 -	96)	59	45.1	14	37.8	45	47.4	ns
sample size		132		37		95		

Table 141. Distribution of those occupational need (MIQ) scores which comprised the Intrinsic satisfaction scale, hospitals A, B and the combined sample

			Difference						
Occupational need (and content of item)	score*	A + B		А		В		between hospitals	
		freq.	%	freq	%	freq.	1 %		
1. ability utilization	<0.0	1	0.9	1	2.9	0	-		
(could make use of	0.0-0.3	Ö	-	0	-	0	-	F=6.13	
abilities)	0.4 - 0.9	8	7.0	3	8.6	5	6.3	p ≤ ⋅ 01	
	1.0 - 1.5	30	26.1	12	34.3	18	22.5		
	>1.5	76	66.1	19	54.3	57	71.3		
2. achievement	<0.0	1	0.9	1	2.9	0	_		
(could get feeling	0.0 - 0.3	1	0.9	0	-	1	1.3	F=0.90	
of accomplish- ment)	0.4 - 0.9	4	3.5	0	-	4	5.0	ns	
Theric)	1.0 - 1.5	26	22.6	12	34.3	14	17.5		
	>1.5	83	72.2	22	62.9	61	76.3		
3. activity	<0.0	16	13.9	5	14.3	11	13.8		
(could be busy all	0.0 - 0.3	14	12.2	7	20.0	7		F=3.05	
the time)	0.4 - 0.9	32	27.8	11	31.4	21	8.8		
	1.0 - 1.5	28	24.4	7	20.0	21	26.3	ns	
	>1.5	25	21.7	5	14.3	20	26.3		
5. authority	40.0	69	60.0	24	68.6	45	56.3		
(could tell people	0.0 - 0.3	20	17.4	.5	14.3	15	18.8	F=0.71	
what to do)	0.4 - 0.9	19	16.5	4	11.4	15	18.8		
	1.0 - 1.5	3	2.6	1	2.9	2	2.5	ns	
	≥1.5	4	3.5	1	2.9	3	3.8		
9. creativity	<0.0	6	5.2	3	8.6	3	3.8		
(could try out own	0.0-0.3	7	6.1	1	2.9	6	7.5	F=0.98	
ideas)	0.4 - 0.9	41	35.7	13	37.1	28	35.0		
	1.0 - 1.5	42	36.5	14	40.0	28	35.0	ns	
	≥1.5	19	16.5	4	11.4	15	18.8		
10. independence	<0.0	55	47.8	18	51.4	37	45.3		
(could work alone	0.0 - 0.3	19	16.5	3	8.6	16	20.0	F-1 07	
on job)	0.4 - 0.9	23	20.0	12		11		F=1.97	
	1.0 - 1.5	10	8.7	1	34.3		13.8	ns	
	>1.5	8	7.0	1 .	2.9	9 7	11.3		
11. moral values	<0.0	19	16.5	10	20 6	9	11.0	of majority and collision represent the ball.	
(could do work	0.0 - 0.3	7	6.1	2	28.6	5	11.3	F=5.12	
without feeling	0.4 - 0.9	41	35.7	11	31.4	30			
it is morally wrong)	1.0 - 1.5	16	13.9	4	11.4	12	37.5	p < · 05	
	>1.5	32	27.8	8	22.9	24	30.0		
13.responsibility	<0.0	4	3.5	2	5.7	0	0.5		
(could make	0.0 - 0.3	6		3		2	2.5	E=1.46	
decisions on	0.4 - 0.9		5.2		8.6	3	3.8	F=1.48	
my own)	1.0 - 1.5	35	26.1	10	28.6	20	25.0	ns	
			30.4	11	31.4	24	30.0		
	>1.5	40	34.8	9	25.7	31	38.8		

Table 141. (continued)

Occupational need (and content of item)			Disc						
	score*	A+B		A		В		Difference between hospitals	
		freq.	%	freq.	%	freq.	%		
14. security	<0.0	8	7.0	3	8.6	5	6.3		
(job would pro-	0.0-0.3	15	13.0	3	8.6	12	15.0	F=0.02	
vide steady employment)	0.4 - 0.9	40	34.8	15	42.9	25	31.3	ns	
chiptoymency	1.0 - 1.5	36	31.3	7	20.0	29	36.3		
	>1.5	16	13.9	7	20.0	9	11.3		
15. social service	<0.0	2	1.7	1	2.9	1	1.3		
(could do things	0.0 - 0.3	1	0.9	0	-	1	1.3	F=0.39	
for other people)	0.4 - 0.9	15	13.0	4	11.4	11	13.8	ns	
	1.0 - 1.5	.25	W.7	11	31.4	14	17.5		
	>1.5	72	62.6	19	52.3	53	66.3		
16. social status	<0.0	58	50.4	16	45.7	42	52.5		
(could be 'some-	0.0-0.3	11	9.6	4	11,4	7	8.8	F=0.04	
body' in the community)	0.4 - 0.9	25	21.7	10	28.6	15	18.8	ns	
Community	1.0 - 1.5	11	9.6	2	5.7	9	11.3		
	>1.5	10	8.7	3	8.6	7	8.8		
19. variety	40.0	9	7.8	4	11.4	5	6.3	100 1 100 1	
(could do some-	0.0-0.3	16	13.9	5	14.3	11	13.8	F=0.58	
thing different every day)	0.4 - 0.9	36	31.3	13	37.1	23	28.8	ns	
	1.0 - 1.5	32	27.8	5	14.3	27	33.8		
	>1.5	.55	19,1	8	22.9	14	17.5		
sample size		115		35		80			

^{* &}lt; 0.0 = very low importance

0.0 - 0.3 = low importance

0.4 - 0.9 = neither important nor unimportant

1.0 - 1.5 = moderate importance

>1.5 = high importance

Table 142 Distribution of those occupational need (MIQ) scores which comprised the extrinsic satisfaction scale and 3 additional items, hospitals A, B and the combined sample

Occupational need		-		Hospital				1	
(and content of item)	score	A+B		A		В		Difference	
		freq.	1 %	freq.	1 %	freq.	1 %	hospitals	
4. advancement	<0.0	20	17.4	10	28.6	10	12.5		
(opportunity for	0.0-0.3	13	11.3	4	11.4	9	11.3	F=0.86	
advancement)	0.4-0.9	50	43.5	12	34.3	38	47.5	ns	
	1.0-1.5	17	14.8	2	5.7	15	18.8	110	
	>1.5	15	13.0	7	20.0	8	10,0		
6. hospital policies	<0.0	10	8.7	3	8.6	7	8.8		
and practices	0.0-0.3	18	15.7	4	11.4	14	17.5	F=0.04	
(company would administer its	0.4-0.9	53	46.1	18	51.4	35	43.8	ns	
policies fairly)	1.0-1.5	21	18.3	4	11.4	17	21.3	115	
	>1.5	13	11.3	6	17.1	7	8.8		
7. compensation	<0.0	28	24.4	6	17.1	22	27.5		
(pay would com-	0.0-0.3	9	7.8	4	11.4	5	6.3	F-1 07	
pare well with other workers)	0.4 - 0.9	44	38.3	12	34.3	32	40.0	F=1.27	
other workers)	1.0-1.5	23	20.0	9	25.7	14	17.5	ns	
	>1.5	11	9.6	4	11.4	7			
12. recognition	₹0.0	34	29.6	11	31.4	23	28,8		
(would get recog-	0.0-0.3	14	12.2	3	8.6	11	13.8	F=0.07	
nition for work	0.4-0.9	28	25.4	10	28.6	18	22.5		
done)	1.0 - 1.5	18	15.7	6	17.4	12		ns .	
	>1.5	21	18.3	5	14.3	16	15.0		
17 0100000000					-	10	20.0		
17. supervision - human relations	₹0.0	8	7.0	2	5.7	6	7.5		
(nursing officer	0.0 - 0.3	11	9.6	5	14.3	6	7.5	F = 0.75	
would back up her staff)	0.4 - 0.9	65	56.5	15	42.9	50	62.5	ns	
ner san)	1.0 - 1.5	22.	19.1	9	25.7	13	16.3		
40	>1.5	9	7.8	4	11.4	5	6.3		
18. supervision - technical	<0.0	8	7.0	6	17.1	2	2.5		
(nursing officer	0.0 - 0.3	16	13.9	1	2.9	15	18.3	F=0.35	
would train	0.4 - 0.9	52	45.2	15	42.9	37	46.3	ns	
staff well)	1,0-1,5	30	26.1	10	28.6	20	25.0		
	۵1.5	9	7.8	3	8.6	6	7.5		
3. co-workers ¹	<0.0	12	10.4	4	11.4	8	10.0		
(co-workers easy	0.0-0.3	6	5.2	0	-	6	7.5	F=0.60	
to make friends with)	0.4 - 0.9	55	47.8	14	40.0	41	51.3	ns	
	1.0 - 1.5	24	20.9	10	28.6	14	17.5		
	>1.5	13	15.7	7	20.0	11	13.5		
0, working conditions	<0.0	3	2.6	2	5.7	1	1.3		
(good working	0.0-0.3	4	3.5	0		4	5.0	F=0.02	
conditions)	0.4 - 0.9	44	38.3	14	40.0	30	37.5	ns	
	1.0 - 1.5	35	30.4	8	22.9	27	33.8	115	
	>1.5	29	25.2	11	31.4	18	22.5		
. autonomy ²	<0.0	7	6.1	3	8.6	4	5.0		
(could plan work	0.0-0.3	7	6.1	1	2.9	6	7.5	F=0.16	
with little super-	0.4 - 0.9	44	38.3	15	42.9	29			
vision)	1.0 - 1.5	25	21.7	6	17.1	19	36.3	ns	
	>1.5	32	27.8	10	28.6	22	23.8		
	The second secon					Con fine	27.0		
sample size		115		35		80			

^{1 =} items in the general satisfaction scale.

^{2 =} this item appears in the MIQ but not the MSQ

Table 143 Comparison between hospital A and B of the vocational need scores: analysis of variance summary table (2-tail tests)

MIQ variable	source	degrees of freedom	sums of squares	mean square	F-ratio	p
1. ability utilization	between groups	. 1	2,33	2.33	6.13	= 01
	within groups	113	42.98	0.38		
	total .	. 114	45.31			
0	le a le a company de la compan	1	0.44	0.44	0.00	
2. achievement	between groups	113	55.32	0.49	0.90	ns
	within groups total	114	55.76	0.49		
3. activity	between groups	1	2.38	2.38	3.05	ns
	within groups	113	88.39	0.78		
	total	114	90.77			
4. advancement	between groups	1	0.58	0.58	0.86	ns
	within groups	113	75.41	0.67		
	total	114	75.99			
5. authority	between groups	1	0.47	0,47	0.71	ns
	within groups	113	75.56	0.67		
	total	114	76.03			
6. hospital policies	between groups	1	0.02	0.02	0.04	ns
and practices	within groups	113	45.61	0.40	0.04	
	total	114	45.63	0.40		
7			0.00	0.00	1 4 67	1
7. compensation	between groups	1	0.93	0.93	1.27	ns
	within groups	113	82.77	0.73		
				-		-
8. co-workers	between groups	1	0.34	0.34	0,60	ns
	within groups	113	64.67	0.57		
-	total	114	65.01			
9. creativity	between groups	1	0,42	0.42	0.98	ns
	within groups	11,3	48.88	0.43		
	total	114	49,30			
10. independence	between groups	1	1.81	1.81	1.97	ns
	within groups	113	103.76	0.92		
	total	114	105.57			ang E
11. moral values	between groups	1	5.42	5.42	5.12	∠.05
Tr. Morat values	within groups	113	119.79	1,06		- 00
	total	114	125.21	.,00		
12. recognition	babusan	1	0,07	0.07	0.07	
	between groups	113	110.31	0.07	0.07	ns
	within groups total	114	110.31	0.98		
			2 65			
13. responsibility	between groups	1	0.88	0.88	1.48	ns
	within groups	113	67.21	0.59		
	total	114	68.09			

Table 143. (continued)

THE CONTRACT OF THE CONTRACT O		1			1	
MIQ variable	source	degrees of freedom	sums of squares	mean	F-ratio	þ
14. security	between groups	1	0.01	0.01	0.02	ns
14. Security	within groups	113	71.69	0.63		
	total	114	71.70			
15. social service	between groups	1	0.27	0.27	0.39	ns
101 000101 001	within groups	113	80.44	0.71		
	total	114	80.71			
16. social status	between groups	1	0.07	0.07	0.04	ns
	within groups	113	186.56	1.65		
	total	114	186.63			
17. supervision - human relations	between groups	1	0.33	0.33	0.75	ns
	within groups	113	50.01	0.44		
	total	114	50.34			
18. supervision -	between groups	1	0.14	0.14	0.35	ns
technical	within groups	113	44.19	0.39		
	total	114	44.33			
19. variety	between groups	1	0.33	0.33	0.58	ns
	within groups	113	63.92	0.57		
	total	114	64.25			
20. working	between groups	1	0.01	0.01	0.02	ns
conditions	within groups	113	55.88	0.49		
	total	114	55.89			
21. autonomy	between groups	1	0.09	0.09	0.16	ns
	within groups	113	63.97	0.57		
	total	114	64.06			

Table 144 Distribution of the Job-Related Tension item and index scores in hospitals

A and B, and the combined sample

				Hos	pitals			and the second of the factors of the second country and
Job-related tension item	score*	A+E	3		A	В		Difference between
		freq.	%	freq.	%	freq.	%	hospitals
1. unclear about	1/2	71	54.2	17	45.9	54	57.4	× 0 - 0
scope and responsibilities	3	52	39.7	17	45.9	35	37.2	$\chi^{2}=0.99$
responsibilities	4/5	8	6.2	3	8.1	5	5.3	ns
2. not knowing ad-	1/2	99	75.6	29	78.3	70	74.5	. 0
vancement opportunities	3	23	17.6	5	13.5	18	19.1	$\chi^2 = 0.06$ df = 1
opportunities	4/5	9	6.9	3	8.1	6	6.4	ns
3. unclear how	1/2	75	57.2	19	51.3	56	59.6	* O
nursing officer evaluates per-	3	45	34.4	13	35.1	32	34.0	$\chi^2 = 0.44$ df = 1
formance	4/5	11	8.4	5	13.5	6	6.4	ns
4. unable to get	1/2	71	54.2	12	32.4	59	62.7	x 2 = 8.57
information for job	3	46	35.1	17	45.9	29	30.9	df = 1
	4/5	14	10.7	. 8	21.6	6	6,4	p < • 01
5. uncertain of	1/2	74	56.5	20	54.0	54	57.4	d 0 0 0
colleagues' expectations	3	47	35.9	12	32.4	35	37.2	$\pi^2 = 0.03$
	4/5	10	7.6	5	13.5	5	5.3	ns
6. too heavy a	1/2	69	52.7	16	43.2	53	56.4	. 0
workload	3	49	37.4	15	40.5	34	36,2	$\chi^2 = 1.35$
	4/5	13	9.9	6	16.2	7	7.4	ns
7. workload inter-	1/2	47	35.9	11	29.7	36	38.3	0
feres with quality of work	3	55	42.0	13	35,1	42	44.7	$\chi^2 = 0.52$
quartey of work	4/5	29	22.1	13	35.1	16	17.0	ns
8. have to do things	1/2	77	58.8	21	56.7	56	59.6	
against better judgement	3	46	35.1.	15	40.5	31	88.0	1.2 = 0.01
Juagernent	4/5	8	6.1	1	2,7	7	7.4	ns
9. unable to satisfy	1/2	77	58.8	21	56.7	56	59.6	
others' conflict-	3	41	31.3	10	27.0	31	33.0	$\chi^2 = 0.01$
ang demands	4/5	13	9.9	6	16.2	7	7.4	ns
Job-related Tension index (9	- 45)							
low (9	- 18)	37	28.2	8	21.6	29	30.9	F= 0.00
medium (19	- 29)	88	67.2	26	70.3	62	66.0	F=3.39
high (30	- 39)	6	4.6	3	8.1	3	3.2	ns
sample size		131		37		94		

^{* 1 =} never; 2 = rarely; 3 = sometimes; 4 = rather often; 5 = nearly all the time

Table 145. Distribution of Role Clarity item and index scores in hospitals A and B, and the combined sample

			hosp	pitals				difference
Role clarity index	score*	Α	- B	. A	4	В		between hospitals
		freq.	%	freq.	%	freq.	96	STANTANDALONING OF ARTIST LANGUAGE CONTRACTOR SECURIORIST
clear about limits	1/2	17	13.0	9	24.3	8	8.5	x ² = 4.56
of authority	3	50	15.3	4	10.8	16	17.0	df = 1
	4/5	94	71.8	24	64.8	70	74.5	p < · 05
clear about how	1/2	11	8.4	6	16.2	5	5.4	$\chi^2 = 2.80$
to do job	3	21	16.0	6	16.2	15	16.0	df = 1
	4/5	99	75.6	25	67.6	74	78.7	
clear about what	1/2	10	7.6	5	13.5	5	5.4	2 - 1 50
to do	3	14	1.0.7	6	16.2	8	8.5	$\chi^2 = 1.50$ $df = 1$
	4/5	107	81.6	26	70.3	81	86.2	ns
clearly defined	1/2	22	16.8	9	24.3	13	13.9	
policies, rules and regulations	3	45	34.4	14	37.8	31	33.0	$\chi^2 = 1.41$ df = 1
	4/5	64	48.9	14	37.8	50	53.2	ns
Role Clarity index (4	- 20)							
low (5	- 9)	8	6.2	5	13.5	3	3.2	F = 4.45
medium (10	- 15)	63	48.0	17	45.9	26	27.7	p < .05
high (16	- 20)	60	45.8	15	40.5	65	69.1	502
sample size		131		37		94		

^{* 1 =} not at all clear; 2 = not too clear; 3 = fairly clear;

^{4 =} clear on most things; 5 = very clear

Table 146. Distribution of Need for Clarity items and index scores in hospitals A and B, and the combined sample

		**************************************		Hosp	ital		
Need for clarity items	score*	Α-	+ B	Δ		E	3
		freq.	%	freq.	%	freq.	%
importance of	1/2	8	6.1	0	_	8	8.5
knowing limits of authority	3	4	3.1	0	-	4	4.3
	4/5	119	90,9	37	100.0	82	87.2
importance of	1/2	4	3,1	1	2.7	3	3.2
knowing how to do job	3	4	3.1	1	2.7	3	3.2
	4/5	123	93.9	35	94.6	88	93.6
importance of	1/2	2	1.5	0	_	2	2,1
knowing what to	3	4	3.1	1	2.7	3	3.2
	4/5	125	95.4	36	97.3	89	94.7
importance of	portance of bwing what to 3 4 3.1 1 2.7 3 93.9 35 94.6 88 94.6 95.4 36 97.3 89 90.0 90.0 90.0 90.0 90.0 90.0 90.0 9	7.5					
knowing how well one is doing	3	17	13.0	4	10.8	13	13.8
	4/5	106	80.9	32	86.5	. 74	78.7
Need for Clarity Index (4-20)							
low (8		3	2.3	0	-	3	3.2
medium (12		29	22.2	6	16.2	23	24.5
high (17		99	75.5	31	83.9	68	72.3
sample size	of whitehold ages to at was made	131	A STATE OF THE STA	37		94	

^{* 1 =} not at all important 3 = fairly important

^{2 =} not very important

⁴⁼ important 5 = very important

Table 147. Distribution of Objective Role Conflict item and index scores in hospitals

A and B, and the combined sample

				Hos	pitals			Difference
Objective role conflict item	score*	A +	В		A	E	3	between hospitals
-		freq.	. %	freq.	%	freq.	%	
do things which	1/2	. 54	45.0	12	35.3	42	48.8	
should be done	3	14	11.7	4	11.8	10	11.6	F=2.21
differently	4	14	11.7	2	5.9	12	14.0	ns
	5	20	16.7	12	35.3	8	9.3	
	6/7	18	15.0	4	11.8	14	16.3	
insufficient	1/2	32	26.7	6	17.6	26	30.2	
manpower	3	11	9.2	2	5.9	9	10.5	F=6.01
	4	18	15.0	4	11.8	14	16.3	p < .05
	5	17	14.2	6	17.6	11	12.8	
	6/7	42	35.0	16	47.0	26	30.2	
have to bend rules	1/2	43	35.9	12	35.3	31	36.1	
	3	13	10.8	3	8.8	10	11.6	F=0.27
	. 4	16	13.3	4	11.8	12	14.0	ns
	5	24	20.0	8	23.5	16	18.6	
	6/7	24	20.0	7	20.6	17	19.8	
work with groups which operate	1/2	39	32.5	10	29.4	29	33.7	
differently	3	4	3.3	2	5.9	2	2.3	F=0.30
	4	8	6.7	0	-	8	9.3	ns
	5	18	15.0	5	14.7	13	15,1	
	6/7	51	42.5	17	50.0	34	39.5	
incompatible requests from 2 or	1/2	44	36.7	10	29.4	34	39.5	
more people	3 .	16	13.3	1	2.9	15	17.4	F=2.52
	4	18	15.0	8	23.5	10	11.6	ns
	5	20	16.7	7	20.6	13	15.1	
	6/7	21	17.5	8	23.5	14	16.2	
do things that are accepted by one	1/2	41	34.2	8	23.5	33	38.4	
person but notothers	3	8	6.7	2	5.9	6	7.0	F=3.90
	4	16	13.3	5	14.7	11	12.8	p 2.05
	5	23	19.2	5	14.7	18	20.9	
				4.00				
insufficient resources and	1/2	61	50.9	17	50.0	44	51.1	E=0.07
materials	4	12	10.0	6		6	7.0	F=0.07
	5	16	13.3	4	8.8	12	14.0	ns
	6/7	19	15:8	4	11.8	15	17.5	
do unnecessary	1/2	67	55.8	21	61.8	46	53.5	
things	3	9	7.5	1	2.9	8	9.3	F=0.08
	4	8	6.7	3	8.8	5	5.8	ns
	5	15	12.5	5	14.7	10	11.6	
	6/7	21	17.5	4	11.8	17	19.8	
Objective Role Conf	lict							
(8	~ 56)	000			00	05		
low (8		32	26.7	7	20.6	25	29.1	F=2.36
medium (24		70	58.3	21	61.8	49	57.0	ns
high (41	- 56)	18	15.C	6	17.6	12	14.0	
sample size	-	120		34		86		
The state of the s					1			

^{* 1 =} definitely not true; 7 = extremely true

Table 148. Distribution of Subjective Role Conflict item and index scores in hospitals
A and B, and the combined sample

Subjective role				Hosp	itals			
conflict item	score*	A +	В	,	4	E	3	Difference between hospitals
		freq.	%	freq.	%	freq.	%	11000010
do things which	0-1	72	61.5	17	50.0	55	66.3	
should be done differently	2-3	24	20.5	8	23.5	16	19.3	F = 2.31
differencia	4-6	21	17.9	9	26.5	12	14.5	ns
insufficient man-	0-1	42	35.3	9	26.5	33	38.8	
power	2-3	27	22.7	6	17.6	21	24.7	F = 5.74
	4-6	50	42.0	19	55.9	31	36.5	p < .05
have to bend rules	0-1	60	50.4	14	41.2	46	54.1	-
rave to bend rates	2-3	35	29.4	11	32.4	24	28.2	F = 2.14
	4-6	24	20.2	9	26.5	15	17.6	ns
work with groups	0-1	73	60,8	22	64.7	51	59,3	
which operate	2-3	21	17.5	4	11.8	17	19.8	F = 0.13
differently	4-6	26	21.7	8	23.5	18	20.9	ns
	40	2.0	2.1.1	0	20.0	10	20,9	
incompatible requests	0-1	56	47.1	12	35.3	44	51.8	
from 2 or more	2-3	29	24.4	10	29.4	19	22.4	F = 3.17
people	46	34	28,6	12	35.3	22	25.9	ns
do things that are	0-1	70	58.8	13	38.2	57	67.1	
accepted by one person but not	2-3	25	21.0	8	23.5	17	20.0	F = 8.134
others	46	24	20.2	13	38.2	11	12.9	p <.01
insufficient resources	0-1	68	57.6	19	55.9	49	58.3	
and materials	2-3	22	18.6	7	20.6	15	17.9	F = 0.02
	4-6	28	23.7	8	23.5	20	23.8	ns
do unnecessary	0-1	71	59.7	23	67.6	48	56.5	
things	2-3	19	16.0	5	14.7	14	16.5	F = 0.57
	4-6	29	24.4	6	17.6	23	27.1	ns
Subjective Role Conf	lict - 48)							
low (0	- 13)	54	46.2	11	32.4	43	51.8	E = 0.00
medium (14	- 28)	53	45.3	20	58.8	33	39.8	F = 3.08
high (29	- 42)	10	8.5	3	8,8	7	8.4	ns
sample size		117-120		34		83-66		

^{*} 0 = low subjective conflict; 6 = high subjective conflict

Table 149. Distribution of Objective and Subjective scores to two additional Role Conflict items, in hospitals A and B, and the combined sample

grant control (Control control control to the control of the control c	1	1		Hospi	tal	TEA ATT MEAN 4 CO STANA	THE COMMENTAL PROPERTY OF THE PERSONS	A CONTRACTOR OF THE PROPERTY O
Role conflict	score	A +	В	A		В	OTHER COMMON STREET, STOLEN OF STREET,	Difference between
3.0011		freq.	1 %	freq.	%	freq.	1 %	hospitals
objective:	1-21	81	68.1	25	73.6	56	65.9	
not much influence with	3	10	8.4	3	8.8	7	8.2	
co-workers	4	13	10.9	5	14.7	8	9.4	F = 1.40
	.5	8	6.7	0	80	8	9.4	ns
	6-7	7	5.9	1	2.9	6	7.1	
not much	1-2	25	21.9	24	11.8	22	25.9	And the section of the Annual Profession of the Annual Ann
influence with higher manage-	3	11	9:2	4	11.8	7	8.2	F = 4.88
ment .	4	19	16.0	4	11.8	15	17.6	
	5	21	17.6	4	11.8	17	20.0	p < .05
	6-7	42	35.3	18	52.9	24	28.2	
sample size		119		34		85		
subjective:	0-12	102	88.7	29	85.3	73	90.1	printer has not control of the contr
not much influence with	2-3	9	7.8	4	11.8	5	6.2	F = 0.44
co-workers	4-6	4	3.5	1	2.9	3	3.7	ns
not much	0-1	59	50.5	1.1	32.4	48	57.8	F =13.51
influence with higher manage-	2-3	30	25.6	10	29.4	20	24.1	p < .001
ment	4-6	28	23.9	13	38.2	15	18.1	h C .OOT
sample size		115-		34		81- 83		

¹ l = definitely not true; 7 = extremely true

^{0 =} low subjective conflict; 6 = high subjective conflict

Table 150. Distribution of Objective Role Ambiguity item and index scores in hospitals A and B, and the combined sample

Objective				Hosp	itals	-		Difference
role ambiguity	Score*	A +	В	,	A	E	3	between hospitals
		freq.	%	freq.	%	freq.	%	
clear, planned	1/2	61	50.8	20	54.0	41	47.7	
goals	3	24	20.0	6	16.2	18	20.9	F = 0.19
	4	15	12.5	2	5.4	13	15.1	ns
	5	13	10.8	3	8.1	10	11.6	
	6/7	.7	5.8	3	8.1	4	4.7	
know havedivided	1/2	63	52.5	16	47.1	47	54.6	,
time properly	3	19	15.8	5	14.7	14	16.3	F = 1.14
	4	23	19.2	8	23.5	15	17.4	ns
	5	10	8.3	4	11.8	6	7.0	
	6/7	5	4.2	1	2.9	4	4.7	
know my responsi-	1/2	95	79.2	27	79.4	68	79.0	
bilities	3	12	10.0	4	11.8	8	9.3	F = 0.00
	4	5	4.2	1	2.9	4	4.7	ns
	5	4	3.3	1	2.9	3	3.5	
	6/7	4	3.3	1	2.9	3	3.5	
know what is	1/2	75	62.5	20	58.8	55	64.0	
expected of me	3	23	19.2	6	17.6	17	19.8	F = 0.56
	4	6	5.0	3	8.8	3	3.5	ns
	5	7	5.8	1	2.9	6	7.0	
	6/7	9	7.5	4	11.8	5	5,9	
know how much	1/2	79	65.9	21	61.8	58	67.5	
authority I have	3	16	13,3	3	8.8	13	15.1	F = 4.03
	4	11	9.2		5.9	9	100-10	p < · 05
	5	4	3.3	1	2.9	3	3.5	
	6/7	10	8.4	-	20.6	3	3.5	
explanation clear	1/2	77	64.2	21	61.8	56	65.1	
of what has to be	3	20	16.7		14.7	15	17.4	F = 0.03
done	4	12	10.0		14.7	7	8.1	ns
	5	5	4.2		5.9	3	3.5	113
	6/7	6	5.0		2.9	5	5.9	
Objective Role Amb	6 - 42)	81	67.5	22	64.7	59	68.6	
medium (2		35	29.2		29.4	25	29.1	F = 0.75
	2 - 42)	4	3.3		5.9	2	2.3	ns
sample size	and development have record the Probability	120		34		86		

^{* 1 =} extremely true; 7 = definitely untrue (reverse scored)

Table 151. Distribution of Subjective Role Ambiguity item and index scores in hospitals A and B, and the combined sample

Subjective				Hos	pital			Di ee
	score*	A +	В		A		В	Difference between
item		freq.	%	freq.	%	freq.	%	hospitals
clear, planned	0-1	79	65.8	25	73.5	54	62.8	F = 0.05
goals .	2-3	28	23.3	4	11.8	24	27.9	ns
	4-6	13	10.8	5	14.7	8	9.3	
know have divided	0-1	82	68.3	17	50.C	65	75.6	A Committee of the Comm
time properly	2-3	31	25.8	1.5	44.1	16	18.6	F = 3.89
	4-6	7	5.8	2	5.9	5	5.8	p <.05
know my	0-1	100	83.3	29	85.3	71	82.6	
responsibilities	2-3	13	10.8	3	8.8	10	11.6	F = 0.07
	4-6	7.	5.8	2	5.9	5	5.8	ns
know what is	0-1	87	72.5	23	67.6	64	74.4	ner ner and a section of the contraction of the con
expected of me	2-3	21	17.5	7	20.6	14	16.3	F = 1.13
	4-6	12	10.0	4	11.8	8	9.3	ns
know how much	0-1	96	80.0	25	73.5	71	82.6	F = 3.86
authority I have	2-3	12	10.0	2	5.9	10	11.6	p<.05
	4-6	12	10.0	7	20.6	5	5.8	52.00
explanation	0-1	87	72.5	21	61.8	66	76.7	AT SHE WITH THE T SHE WITH THE WATER AND A CORN THE SHE WAS A
clear of what has to be done	2-3	23	19.2	11	32.4	12	14.0	F' = 0.66
30 20 4010	4-6	10	8.3	2	5.9	8	9.3	ns
Subjective Role Ambiguity (O								
low (0	- 10)	100	83.3	26	76.5	74	86.0	
medium (11	- 22)	17	14.2	6	17.6	11	12.8	F = 2.40
high (23	- 33)	3	2.5	2	5.9	1	1.2	ns
Sample size		120	and an arrangement of the	34		86		- Marin Carlotte (Marin Carlotte Carlot

^{* 0 =} low subjective ambiguity;

^{6 =} high subjective ambiguity

Table 152. Distribution of Satisfactoriness Scale scores in hospitals

A and B, and the combined sample

			Hosp	ital			Difference
satisfactoriness scale	A	+ B		A		В	between
	freq.	%	freq.	%	freq.	%	hospitals
performance (9-28)*			1				
low (9-14)	12	11.9	4	24.9	8	9.4	2 = 4.70
medium (15-21)	68	67.3	11	68.8	57	67.1	df= 2
high (22-27)	21	20.9	1	6.2	20	23.5	ns
conformity (7-21)						The party law have been discount.	
low (8-12)	10	10.0	3	18.8	7	8.2	2 = 4.44 df= 2
medium (13-16)	76	75.2	1.3	81.2	63	74.1	
high (17-21)	15	14.9	0	-	15	17.6	ns
dependability (4-12)		THE BUILDINGS COMMUNICATION		TO BEST STORE SALES		THE PARTY NAMED AND POST OFFICE ADDRESS OF THE PARTY OF T	
low (5-7)	14	13.8	24	25.0	10	11.8	2 = 3.53
medium (8-9)	50	49.5	9	56.3	41	48,2	$\chi^2 = 3.53$ $\chi^2_{df} = 2$
high (10-12)	37	36.6	3	18.7	34	40.0	ns
personal adjustment (7-21)		,			Annual conduction for the	Company of the Company of the Company	Commence of the Commence of th
low (8-12)	17	16.9	4	25.0	13	15.3	2 = 0.98
medium (13-16)	52	51.4	7	43.8	45	52.9	df = 2
high (17-21)	32	31.7	5	31.3	27	31.8	ns
general satisfactoriness (28-85)							
low (33-48)	3	3.0	1	6.3	2	2.4	2 = 3.49
medium (49-64)	73	72.0	14	87.5	59	69.4	df= 1
high (65-80)	25	25.0	1	6.3	24	28.2	ns
sample size	101		16		85		

^{*} numbers in parentheses indicate possible score ranges

Table 153. Distribution of Propensity to Leave item and index scores in hospitals A and B, and the combined sample

,			-					
Daniel de la constant	1			Hosp:	ital			Difference
Propensity to leave item	score*	A +	В		Α		В	Difference between
		freq.	%	freq.	%	freq.	%	hospitals
prefer/not prefer		99	77.3	28	75.7	71	78.0	$\chi^2 = 1.21$
to continue work-	3	17	13.3	4	10.8	13	14.3	df = 2
hospital?	4-5	12	9.3	5	13.5	7	7.7	ns
how long like to	1-2	88	68.8	28	75.7	60	65.9	2 = 10.29
stay in this hospital?	3	30	23.4	3	8.1	27	29.7	7 df= 2
110001001	4-5	10	7.8	6	16.2	4	4.4	p < · 01
return later if	1-2	74	57.8	25	67.6	49	53.9	2 = 2.66
left temporarily?	3	37	28.9	7	18.9	30	33.0	7 df= 2
	4-5	17	13.2	5	13.5	12	13.2	ns
likelihood of	1-2	83	63.8	27	73.0	56	60.2	x ² = 2.73
leaving in next	3	30	23.1	5	13.5	25	26.9	/df= 2
	4-5	17	13.1	5	13.5	12	12.9	ns
Propensity to Lea index (4-								
1077 (4-9)	79	61.6	27	72.9	52	57.1	F = 0.01
medium (1	.0-14)	40	31.3	6	16.2	34	37.4	ns
high (1	.5-20)	9	7.1	4	10.8	5	5.5	
sample size		128 - 130		37		91- 93		

^{*} wording of response scale different for each item

^{1 =} likely to stay/return

^{3 =} uncertain

^{5 =} likely to leave/not return

n= 132 *p <.05 ** p <.01 ** p <.01

20	00**	22**	St	0	***	17*	1	* + 10	1.	***08	1 *	* * 0	26**	*		* * 00	* *	*	% * SO * *	T
19			23***	5	20** 29		* *	-	* 07	-	** 17		25*** 26	* 10 CV	*	-	-	* 17*		+
-	48	16,	23	10	-	07	56*	* % % %	* 16	* * * *	* 61	* 24*	-	* 80.0	* 27*	42*	-	* 800		-
181	1-	* 10	12	07	% * *	0,	K * C * * * * * * * * * * * * * * * * *	% ** **	24**	27***	% * *	27***	22**	* * * 98	% * * * * *	* 00 -	* 60			
17	28**	20**	\$22	18*	17	% ** **	28*	24**	* * * *	8 * * 60	27***	** 82	* * * * * * * * * * * * * * * * * * *	NO 02 **	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *				
19	90	**02	02	07	80	90	10	27**	-05	.4.	60	80	80	05	*91					
10	17*	% ** **	13	11	16*	10	10 **	13	% % % %	18*	* * * * * * * * * * * * * * * * * * * *	4	* * 80 CJ	* * * * * * * * * * * * * * * * * * * *						-
41	22**	10*	* * 60	* * % % %	24**	**	× * % 6 C	**	24**	\$00	***************************************	***	* * * * * * * * * * * * * * * * * * * *	CO			-			+
00	10*	16*	11.	**61	**	13	21**	41	60	** 22	*81	**10	0			-	-		-	-
2,	* * * * * * * * * * * * * * * * * * *	41	* * 8 8	***	41	30***	41**	* * * 62	43**	* + 14	32**	CA								-
11	60	12	24** 8	06	***************************************	. 90	12	13	23***	25***	()									
10	15	* + 10	% * %	18*	% * * *	18*	25***	* * * * * * * * * * * * * * * * * * * *	36**2	ů.										-
6	24**	13	37***	12	23**	23***	43**	%** %	O							-			-	
8	(U)	% ***		33***	88.	21**	17* 4	ci	,							-	-			-
1	30***		21** 15	**@		40***	1												-	
0	*	* 12		*	% ** **	40														
ro.	*92	17*	15	* 61	NO.**			630						7		-				
4		03	4	10*																
	\$ * 55	121	90																	
m	23**	1.																		
CI	16*																			
	1. activity	independence	variety	social status	moral values	security	social service	authority	ability utilization	. responsibility	. creativity	. achievement	supervision - human relations	supervison - technical	company policies and practices	compensation	advancement	recognition	19. working conditions	co-workers
	-	oi	0	4	6	6	7.	00	0	10.	11.	4	13.	4.	10.	16.	17.	18.	19.	20.

Table 154. General Satisfaction Scale: inter-item correlation coefficients (Kendall's Tau)

Table 155 General Satisfactoriness Scale : inter-item correlation coefficients (Kendall's Tau)

1. accepts responsibility of job 43*** 42*** 63*** 4 2. adapts to changes in methods 50 po*** 2 3. performs tasks requiring variety and change 37*** 2 4. quality of work good 5. quantity of work good 6. recommend pay rise 7. transfer to job at higher level 7. transfer to job at higher level 8. promote to more responsible position 6. overall competence 10. follows hospital policies and practices 10. follows thospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team	6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	25 25 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	40000 210		23° 32°	10	2400	29 *	10 1	17 22°	33,44	\$ 20*	11	05	16	10	17	200	60
37000	1- 10 (0) (1) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	e C c c c c c c c c c	-		-					The same of the latest designation of the la	-	-	-			-		
e o e / C	8 8 8 10 00 10 UU	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		2900	-	33000 27000	45 8 8 8	\$10	20* 11	3400	*** 32***	3300	98	0.4	210	0	25 ** 19*	25°	80 *
oratible position cies and practices supervisor f supervisor team	30,000	8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		80	-08 07	10	214	05 2	23" 14	4 15	22.	30,08	90 0	16	23.	1 80	17 15	24*	10
6. quantity of work good 6. recommend pay rise 7. transfer to job at higher level 8. promote to more responsible position 9. overall competence 10. follows hospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team	300,00	25.50	50.00 40.00 S	50*** 2	22* 40***	2664	3200	36,00	13 07	18	20°	10.	13	80.	07	15 1	10 24	2400 190	80
6. recommend pay rise 7. transfer to job at higher level 8. promote to more responsible position 9. overall competence 10. follows hospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team			38 *** 45 **	4840	37*** 40	40000	38,00	380	29***	-01 39**	*81 0 ee	21*	189	90	10	90	12 22*	21*	10
7. transfer to job at higher level 8. promote to more responsible position 9. overall competence 10. follows hospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team		and the same of the same of the	27***	32***	14 218	210	10	17 0	05 10	260	26*	21 9	80	80	17	15	18 16	14	10
B. promote to more responsible position 9. overall competence 10. follows hospital policies and practices 11. accepts direction of supervisor 12. respects authority of supervisor 13. respects authority of supervisor 14. works as member of team			83*** 25**	55.0	25** 25*	2846	32000	22* 1	14 02	5	60	-04	8	-16	60-	50	-09 10	-07	05
9. overall competence 10. follows hospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team			30,00	01.0	32*** 30***	3200	30,44	2900	200 03	3 21*	* 20°	90	88	4	40-	80	-01 13	05	1:
10. follows hospital policies and practices 11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team				27600	34*** 25**	100	28984	29***	16 07	7 24**	** 27**	** 20**	15	60	26 * 9 2	2699	19* 31	31949 244	11
11. accepts direction of supervisor 12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team				Cu	29000 41000	33888	38.0	44***	16 01	280	6 10	14	13	90	95	00	04 08	80	9
12. follows standard rules and procedures 13. respects authority of supervisor 14. works as member of team					48	48000 31000	38,00	47000	11 13	3 22*	100	98	17	88	00	05 0	00 40	90	07
						31,000	30,00	31000	11	19* 34	34*** 24**	19*	60	-04	90-	19#	16 25	25** 24**	34000
14, works as member of team							42000	53*** 2	22*	-05 20*	-04	8	18*	40	80	-05	-06 -02	5 -03	04
								44000	34,000	-20" 30	30,**	05	16	07	90	020	80 90	02	07
15. gets along with supervisors								6	31000 -	-04 35	35*** 07	10	25**	100	10	0 10-	02 01	89	8
16. gets along with co-workers									Y	-09 34***	12	04	18	20	90	-05	01 03	8	10
17. comes tate for work										23.	44,00	939	10	000	01	30,00	33,44	31948 36948	10
18, needs disciplinary action											37000	38 04	4200	17	28***	2900	47208 2544	43.00	8
19. stays absent from work												40.00	14	15	23*	52000	34*** 48	43*** 52**	500
20. dossnit listen when spoken to									-	-			28***	13	28***	36000 7	75000 44	44000 78000	12
21. becomes over-excited														45**	37***	6 6 4 CC	5140	31949 32996	90
22. becomes upset and unhappy															41980	31*** 2	22* 11	18#	5
23. seems bothered by something									_							21*	39,00 12	29***	9
24. complains about physical silments																4	4200	61*** 45***	2700
25. says 'odd' things						_											49	49*** 78***	12
26. tires easily																		80 80 80 80 80 80 80 80 80 80 80 80 80 8	33,00
27, wanders from subject to subject when talking									-										28**
29. performs repetitive tasks well									-										

Table 156 Correlations between satisfaction and perceived role pressure variables and absence and propensity to leave before and after partialling out age

satisfaction and	absenc	ce (spells)	propensi	ty to leave
role pressure variables	zero-order correlation	correlation when age removed	zero-order correlation	correlation when age removed
global satisfaction	ns	ns	-58***	-59***
intrinsic satisfaction	กร	ns	-36***	-35***
extrinsic satisfaction	ns	ns	-52***	-49***
general satisfaction	ns	ns	48***	-46***
job-related tension	ns	ns	31***	28**
objective conflict	ns	ns	27**	27**
subjective conflict	ns	ns	30***	29**
objective ambiguity	ns	ns	24**	21*
subjective ambiguity	ns	ns ·	22*	20*
role clarity	ns	ns	-23**	-24**

Table 157. Correlations between satisfactions and perceived role pressure variables and absence and propensity to leave after partialling out tenure, distance from hospital and number of children

satisfaction and	correlation (spells) w	n with abse hen:	ence	correlation to leave v	on with pro when:	pensity
role pressure variables	tenure removed	distance lives from hospital removed	number of children removed	tenure removed	distance lives from hospital removed	number of children removed
global satisfaction	ns	ns	ns	-58***	-57***	-59***
intrinsic satisfaction	ns	ns	ns	-35***	· - 37***	-35***
extrinsic satisfaction	ns	ns	ns	-59***	-52***	-49***
general satisfaction	ns	ns	ns	-47***	-49***	-46***
job-related tension	ns	ns	ns	28**	31***	31***
objective conflict	ns	ns	ns	27**	28**	30***
subjective conflict	ns	ns	ns	, 29**	30***	29**
objective ambiguity	ns	ns	ns	. 22*	25**	25**
subjective ambiguity	ns	ns	ns	21*	23*	23*
role clarity	ns	ns	ns	-22*	-25**	-25**

Comparison of the satisfaction, absence and propensity to leave scores of leavers and 'matched' stayers in hospital Table 158

sity /e	Ŋ	Ŋ	9	7	7	7	0	8	O	6	.0	6	10	5	ns.
propensity to leave	7	9	9	7	8	8	13	14	16	17	20		u,	41	
£13	S	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.20	2.00	2.00		2	35
'current'3 absence		0	0	1.00	3.00	3.00	3.43	3.43	4.00	7.50	8.00			27.	<.05
0	S	0	0	0	1.00	1.00	1.72	2.29	3.00	3,45	4.00	5.00	8.45		<.01
'past'2 absence		1.00	3.00	4.00	6.00	6.52	7.00	8.00	10.67	13.00	14.29			19	>
l ction	S	26	69	72	75	97	77	78	79	79	80	80	82	.5	ns
general satisfaction		44	56	7.1	74	75	92	80	80	83	06	7		57	2
sic	S	16	18	18	18	19	20	21	23	23	23	23	24	2	S
extrinsic satisfaction		12	13	13	14	17	19	22	23	24	26			45	Su
ic ction	S	36	45	47	47	48	48	50	20	20	51	51	21	55.5	ns
intrinsic satisfaction		28	36	39	48	48	48	52	52	54	54			5	
ction	S	7	ω	8	6	0	o	o	0	10	10	10	10	22	S
global satisfaction	1	4	. 9	8	0	0	0	0	6	0	10			45	SU
														1/014	d

1 L = leavers S = 'matched' stayers

2 number of absence spells during the 2 years before data collection, corrected for tenure less than 2 years.

3 number of absence spells during the 6 months before and the 6 months after data collection corrected for tenure less than 12 months.

4 Mann Whitney U or U' statistic comparing leavers' and stayers' scores, one-tail tests.

Table 159. Comparison of the perceived role pressure scores of leavers and 'matched' stayers in hospital A

	-		-			-									
stive	S	0	4	9	9	9	8	8	6	6	13	28			
subjective	L	-	4	4	4	9	6	14	16	23				53	ns
tive	S	13	28	31	31	32	32	33	35	36	37	42		10	
objective ambiguity	٦	19	20	28	32	33	35	38	38	41				46.5	SU
otive t	S	0	9	7	11	12	14	17	18	22	24	26		3	15
subjective		-	13	17	24	25	27	28	37	42				23	<.05
tive	S	8	18	25	25	26	26	28	32	34	38	44		5	
objective conflict		15	21	32	34	36	38	43	52	53				29.5	ns
٦.	S	14	15	16	17	18	18	18	19	19	20	20	20		(0
need for clarity		17	17	18	18	19	19	20	20	20	20			44	SU
arity	S	8		11	13	13	14	15	15	17	18	18	20	5	
role clarity		0			13	15	15	16	16	17	18			57.5	ns
nsion	S	-	15	18	19	21	21	22	24	24	26	27	28	0	(0
job tension	7	0	10	21	22	23	24	24	27	59	30			49	ns
														'U/U	d

see Table 158 for footnotes

Table 160. Comparison of the satisfaction absence and propensity to leave scores of leavers and 'matched' stayers in hospital B.

	global satisfa	action	intrin		extrin satisfa		genera		'past'	e e	'curre		prope to lea	
	L ¹	s ¹	L	S	L	S	L	S	L	S	L	S	L	S
1	5	7	37	43	14	14	61	66	0	0	0	0	4	4
	6	8	41	43	14	17	63	69	0	0	0	0	5	4
	7	8	42	44	15	18	64	70	0	0	0	0	6	6
	8	8	43	45	15	19	67	71	0	0	0	0	6	6
	8	9	44	46	19	20	69	73	0	0	0	0	8	6
	8	9	45	48	19	20	71	73	0	0	0	0	8	6
	9	9	45	48	19	21	71	77	1.00	0.	1.00	1.00	9	6
	9	9	47	48	20	21	73	77	1.00	0	1.00	1.00	9	6
	9	10	47	48	20	21	74	77	1.85	0	1.20	1.00	9	6
	9	10	48	48	20	21	75	77	2.00	1.00	1.50	1.00	10	8
	. 9	10	48	49	21	22	75	78	2.00	4.00	2.00	1.00	10	8
	9	10	48	49	21	22	77	78	2.40	4.00	2.00	2.00	11	8
1	10	10	49	49	21	22	78 .	78	3.43	4.80	2.40	2.00	11	8
	10	10	49	-50	21	22	79	78 .	4.80	5.00	2.40	2.00	11	9
	10	10	49	50	22	22	80	80	4.80	5.00	3.00	2.40	13	9
	10	10	49	50	23	23	80	80	5.14	5.33	3.00	3.00	13	10
	10	10	50	50	23	23	80	80	6.00	5.50	3.00	3.00	13	10
	10	10	51	50	23	24	81	81	8.00	6.00	3.00	3.00	14	10
	10	10	52	52	24	24	81	84	9,82	6.00	5.00	3.00	15	10
	11	11	53	52	24	24	81	85	10.29	9.60	5.45	3.00	16	10
	11	11	53	53	25	24	81	85	12.00	10.29	6.00	3.60	17	10
	11	11	56	53	25	26	84	85	12.00	12.00	7.64	3.60		11
-	12	11	57	54	25	26	91	86	12.00	12,00	11.00	4.00		11
-		11		.54		27		88	32.00	12.00		5.00		11
-	7	11		56		27		91		13.33		5.00	Wash.	12
		11		58		27		92		13,50	No. of	5.00		15
		11		58	,	29		96		16.00		7.00		
1										17.00				
	386.	. 5	38	88	39	9	39	5	3	63	30	9.5	18	7
	1.5	4	1.5	53	1.7	4	1.6	6		51		. 02	-1.	87
	ns	3	r	ns .	2.	05	۲.	05	r	ns		ns	. <	05

¹ L = leavers S = 'matched' stayers

 z^5

p

^{2/3} see footnote to Table 158 .

⁴ Mann Whitney U statistic (corrected for ties) comparing leavers' and stayers' scores, one-tail tests.

 $^{^{5}}$ sample size sufficiently large for the observed U value to be converted to Z scores since the sampling distribution of U is approximately normal.

Table 161. Comparison of the perceived role pressure scores of leavers and 'matched' stayers in hospital B

job tensior	1	role clari	ty	need		objec	ctive	subje	ctive	obje	ective oiguity	subj	ective
L	s	L	S	L	S	L	s	L	S	L	S	L	S
13	9	6	12	10	8	10	15	2	3	23	24	0	0
14	10	10	12	12	10	17	15	5	6	23	25	1	0
15	14	11	13	14	15	25	15	7	6	26	28	1	0
17	14	12	14	15	16	25	16	9	6	28	30	2	1
19	16	12	14	16	16	27	20	9	7	29	30	2	2
19	18	13	14	16	16	27	21	11	7	29	31	3	2
21	18	13	15	17	17	28	22	11	7	29	31	4	2
21	18	14	15	17	17	31	22	12	7	30	31	5	2
22	19	14	15	17	17	33	23	13	8	32	33	5	3
22	20	14	15	18	17	34	26	15	8	32	33	6	3
22	20	15	15	18	17	34	26	19	10	33	33	6	4
24	20	15	15	18	17	35	26	19	10	34	33	6	5
24	21	15	15	18	13	35	27	20	12	34	34	8	5
24	21	15	15	18	18	37	28	21	13	35	34	8	5
24	21	15	15	19	18	39	28	22	14	37	34	9	7
25	21	16	16	19	18	39	29	22	14	38	34	9	7
25	22	16	16	19	18	40	31	23	15	39	34	10	7
26	23	17	16	19	18	41	31	24	16	39	35	12	8
27	23	17	17	19	19	42	31	27	16	40	35	13	8
27	24	17	17	19	19	44	. 32	32	19	40	37	14	9
29	24	17	17	19	20	52	33	41	19	41	37	16	9
30	24	18	18	20	20		33		22		38		9
36	24	19	18	20	20		33		23		39		10
	24		18		20		36		25		39		11
	25		18		20		38		36		41		15
	26		19		20		41				42		
	27		20		20								
21	8	39	92	32	2	15	1.5	18	8	29	5	221	.5
-1.8	1	1.6	32.	.23		-2.	62	-1.	66	. 48		45	
<.	05	. (05	ns	3	c.	01	<	05	ns	3	ns	

see Table 158 for footnotes

U

Z

p

Table 162 . Comparison of the satisfactoriness scores of leavers and 'matched' stayers in hospital B

	performance		conformity		denondability		personal	adjustnent	general	satisfactoriness
	L	S	L	S	L	S	L	S	L	S
	9	15	9	12	5	6	9	8	33	46
	13	16	11	13	6	7	10	10	50	52
	14	16	12	13	6	7	11	12	50	55
	14	17	13	13	7	8	11	13	50	58
	15	17	13	14	8	8	13	13	52	58
	15	17	14	14	8	8	13	14	53	58
	15	18	14	14	8	8	13	14	53	59
	15	18	14	14	8	8	14	14	53	59
	17	19	14	14	8	9	14	14	54 .	60
	17	19	14	14	8	9	14	14	55	61
	18.	19	14	14	8	9	15	15	55	61
	18	19	14	14	8	9	15	15	57	62
	19	19	15	15	8	9	15	15	58	62
	19	20	15	15	9	10	15	16	59	63
	19	20	15	15	9	10	16	16	61	63
	20	21	15	16	9	10	16	16	62	63
	20	21	15	16	10	10	16	17	62	63
	20	21	16	16	10	10	16	18	63	64
	20	21	16	16	10	11	17	18	63	64
	21	22	16	16	11	11	18	18	66	66
	21	22	16	16	11	11	20	19	67	68
	23	22	17	17	12	11	20	19	69	68
		24		17		11		19		68
		25		18		12		20		71
		25 27		20		12		21		78
U	403	3.5	34	.9	374	.5	34	-4	413	3.5
z^1	2.4	6	1.3	34	1.8	88	1.2	22	2.6	66
р		01	r	ns	n	S	r	ns	<.	01

see Table 158 for footnotes.

^{1 =} two-tail tests.

Table 163. Comparison of all the scale scores of leavers and 'matched' stayers in the total sample

-		
U	Z	р
798	1.80	∠. 05
752	1.24	ns
797.5	1.75	<.05
768.5	1.42	ns
598.5	89	ns
523.5	-1.57	ns
385	-2.48	<.01
477.5	-1.89	<.05
763.5	1.38	ns
610	.39	ns
313.5	-3.05	• 001
374.5	-2.28	• 01
581	.33	ns
494	77	ns
	798 752 797.5 768.5 598.5 598.5 477.5 763.5 610 313.5 374.5 581	798 1.80 752 1.24 797.5 1.75 768.5 1.42 598.5 89 523.5 -1.57 385 -2.48 477.5 -1.89 763.5 1.38 610 .39 313.5 -3.05 374.5 -2.28 581 .33

see Table 158 for footnotes

Score distributions of the CNs' reactions to the 'Salmon' structure and perceived accessibility of hospital policies, rules and regulations, hospitabA & B, and the combined sample. Table 164.

		1	Hospitals	SI			difference
	A +	В	+	A	Ш	8	between
	freq.	%	freq.	% ,	freq.	%	hospitals
satisfaction with 'Salmon': not/only slightly satisfied satisfied very/extremely satisfied	47 47 11	56.1 35.6 8.3	25 7	67.6 18.9 13.5	49 40 6	57.6 42.1 6.3	$\chi^{'} = 2.85$ $df = 2$ ns
'Salmon' provides good career prospects?: yes no don't know	201	76.7	0 0 0	70.3	76 10 10	79.2	$\chi^2 = 0.74$ $df = 2$ ns
number of nurse administrators: too few just right too many don't know	34 01.	1. 28. 4. 0. 2. 4. C. 4.	1 7 2 3	2.7 18.9 73.0 5.4	1 27 4 4	1.0 28.1 66.7 4.2	$\chi^2 = 0.45$ df = 1 ns
accessibility of hospital policies, etc: never/seldom/sometimes usually accessible often/always accessible	3.63	25.9	0 6 0	24.3 48.6 27.0	25 45 45	26.5 47.9 25.5	$\lambda^{'2} = 0.08$ df = 2 ns
sample size	131–133	133		37	94-96	96-	

Table 165. Perceived amount of contact with various colleague groups, hospitals A and B, and the combined sample

	1		1	Hospi	tals			difference
perceived amount of contact with	scorel	A	+ B		А	В	3	between hospitals
		freq	%	freq.	76	freq.	%	110001
nursing officer	1-2	24	18.2	6	16.2	18	18.9	$\chi^2 = 0.01^2$
	3	22	16.7	8	21.6	14	14.7	ns
	4-5	86	65.2	23	62.2	63	66.3	
senior nursing	1-2	95	72.0	33	89.2	62	65.3	$\chi^2 = 6.42$
administrators (above No.7)	3	27	20.5	3	8.1	24	25.3	p <.05
(45000 110.1)	4-5	10	7.6	1	2.7	9	9.5	
hospital adminis-	1-2	124	93.9	33	89.2	91	95.8	3
trators	3	2	1.5	2	5.4	0	-	
	4-5	6	4.5	2	5.4	4	4.2	
nurse teachers	1-2	78	59.1	27	73.0	51	53.7	$\chi^2 = 3.34$
	3	19	14.4	7	18.9	12	12.6	ns
	4-5	35	26.5	3	8.1	32	33.7	
medical staff	1-2	3	2.3	0	-	3	3.1	3
	3	11	8.3	2	5.4	9	9.4	
	4-5	119	89.5	35	94.6	84	87.5	
paramedical staff	1-2	29	21.8	9	24.3	20	20.8	$\chi^2 = 0.04$
	3	38	28.6	7	18.9	31	32.3	ns
	4-5	66	49.6	21	56.8	45	46.9	
ancillary staff	1-2	7	5.3	1	2.7	6	6.3	3
	3	33	24.8	8	21.6	25	26.0	
	4-5	93	69.9	28	75.7	65	67.7	
clerical staff	1-2	46	35.1	18	48.6	28	29.8	$\chi^2 = 3.36$
	3	17	13.0	8	21.6	9	9.6	ns
	4-5	68	51.9	11	29.7	57	60.6	
Sample size		131-	-133	3	7	94.	-96	

^{3 =} a moderate amount

^{1 1 =} almost none 2 = very little 4 = quite a lot 5 = a great deal

 $^{^2}$ χ 2 based on 2 x 2 contingency tables (response categories 1 & 2, and 3, 4 & 5 combined, with 1 degree of freedom)

 $^{^3}$ χ 2 test inapplicable because one expected cell frequency less than 5. No other test used because frequencies in each hospital very similar.

Table 166. Score distribution of the perceived co-operation of colleagues from other departments, total sample only.

staff amuns			co-operation	ration			
	extremely, very well	hely/	fairly well	well	not very/not at all well	y/not ell	sample
	freq.	%	freq.	%	freq.	%	
medical staff	66	75.6	28	21.4	4	3.1	131
nursing administrative staff	62	48.1	47	36.4	20	15.5	129
nurse teachers	44	35.5	52	41.9	28	22.6	124
hospital administrative staff	22	17.6	99	52.8	37	29.6	125
clerical and secretarial staff	62	48.8	54	42.5	11	8.6	127
laboratory staff	95	73.7	28	21.7	9	4.7	129
staff from X-ray department	74	57.4	38	29.5	17	13.2	129
staff from pharmacy department	82	66.2	33	26.6	6	7.2	124
staff from hospital kitchens	46	38,7	43	36.1	30	25.2	119
staff from other wards	70	55.1	53	41.7	4	3.2	127

Table 167. Adequacy of communication from the nursing officer, hospitals A and B, and the total sample

			Hospitals	tals			difference
A+B	+ +	В		4		В	between
freq.		%	freq.	%	% freq.	%	- Copicato
50		15.3	4	10.8	16	17.0	¥ = 5.82
40		30.5	17	45.9	23	24.5	df= 2 ns
71		54.5	16	43.2	55	58.5	
131			37		94		

Table 168. Score distributions of performance appraisal items, hospitals A and B, and combined sample.

			Hospitals	als		
Items	4	A + B		4		В
	freq.	%	freq.	%	freq.	%
feedback from nursing officer: almost none/very little moderate amount quite a lot/a great deal	71 26 34	54.2 19.8 26.0	t d t	40.5 32.4 27.0	56 14 24	59.6 14.9 25.5
staff appraisal system in operation? yes, formal reports don't know/other	98	73.7	34 8	91,9	64	66.7
do you see reports? yes no don't know	61 27 45	45.9 20.3 33.8	20 20 20	78.4 8.1 13.5	32 24 40	33.3 25.0 41.7
Sample size	131 – 133	-133	37		94 - 96	96

Perceived health and welfare facilities: score distributions in hospitals A and B, and the combined sample Table 169.

	-		-		-	-	The second secon
			Hospitals	als			
Item	A	A + B	1	4	8		difference
	fred.	%	freq.	%	freq.	%	hospitals
satisfaction with staff facilities: not/only slightly satisfied satisfied very/extremely satisfied	54 71 9	40.3 53.0 6.7	9 0 0	43.2	38 52 7	39.2 53.6 7.2	$\chi^2 = 0.05$ df = 1 ns
opportunity for secondment on to management course: almost none/very little moderate amount quite a lot/a great deal	52 39 39	30.0	7 14 16	18.9 37.8 43.2	255	48.4 26.9 24.7	$\chi^2 = 8.39$ df = 1 p < .01
opportunity for secondment on to other courses: almost none/very little moderate amount quite a lot/a great deal	71 34 25	54.6 26.2 19.2	ST + 1 + 1	32.4 29.7 37.8	23 7 1 1 3 3	63.4 24.7 11.8	$\chi^2 = 9.06$ df = 1 p < .01
Sample size	130	130 - 134	(I)	37	93	93 - 97	

Table 170 Score distributions of CNs' immediate plans for the future, hospitals A and B, and the combined sample

			Hospitals	tals		
Immediate plan	4	A + B		4		a -
	freq.	%	freq.	%	fred.	%
to continue as I am	92	68.7	27	73.0	65	67.0
to take further training	12	0.6	n	8.1	0	9.2
no plans	10	7.5	0	1	10	10.3
to take another CN's post elsewhere	9	4.5	N	5.4	4	4.1
to go abroad	ro	3.7	0	1	Ŋ	5.2
to have a child	Ŋ	3.7	m	8.1	CJ	2.1
to seek promotionas a nursing officer	CI	1.5	-	2.7	1	1 0
retiring soon	a	7.0	-	2.7	-	1.0
Sample size	1.01	134	(0)	37	O)	97

Table 171. Time for direct nursing care and teaching : score distributions in hospitals A and B, and the combined sample

	7			Hospitals	als			difference
	score	freq.	m %	freq.	%	freq.	%	between hospitals
time for direct nursing care	- 4 - 0 1 0 0	22 34 58	19.3 29.8 50.8	111	22.6 35.5 41.9	15 23 45	18.1 27.7 54.2	$\chi^2 = 0.08$ $df = 2$ ns
time for teaching the learner nurses	1 8 1 8 1 8 1 9 1 9 1 9 1 9 1 9 1 9 1 9	43 53 31	33.9	6 4 0	51.3	24 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	26.7	$\chi^2 = 6.08$ df = 2 p < .05
Sample size 2		113	113 - 127	31	31 – 37	82	82 - 90	

3 = a moderate amount 2 = very little 5 = a great deal 1 = almost none 4 = quite a lot

2 theatre CNs excluded from first question

Table 172. Satisfaction with staffing levels and patient care : score distributions in hospitals A and B, and the combined sample

				Hospitals	itals			
Item	score 1	4	A + B	,	4		α.	difference
		fred.	%	freq.	%	freq.	%	hospitals
satisfaction with	1 2	57	42.9	25	67.5	32	33.3	$\chi^2 = 11.42$
number of nurses	w 1 ro	25	18.0	0 0	5.4	42	43.8	df = 2 p <.01
satisfaction with	1 2	41	31.3	16	43.2	25	26.6	$\chi^2 = 2.69$
patient care generally	Ŋ	51	38.9	13	35.1	38	40.4	df = 2
	4 - 5	39	29.8	ω	21.6	31	33.0	ns
Sample size		131	131 - 133	(1)	37	. 94	94 - 96	
The state of the s	-							The state of the s

1 = not satisfied 2 = only slightly satisfied 4 = very satisfied 5 = extremely satisfied

3 = satisfied

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