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Research Note

A qualitative exploration of the interaction between mental illness stigma and preparedness for practice in pharmacy students

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ABSTRACT

Introduction: Mental illness stigma can result in discriminative practice in pharmacy, such as providing less pharmaceutical care to people living with mental illness (PMI) than those with physical illness. Pharmacy education should aim to reduce the impact of mental illness stigma on the pharmaceutical care of PMI. Whilst previous research has shown that some interventions can reduce stereotyping and prejudice in pharmacy students, the impact on subsequent discrimination is questionable and the reasons for successful and unsuccessful outcomes are unclear. This study aimed to explore pharmacy students' views on working with PMI and how these views might interact with mental illness stigma.

Methods: Focus groups and semi-structured interviews with final year pharmacy students and recent graduates were conducted at one UK university. Question guides were developed based on the aim of the study and investigated participants' attitudes and beliefs about mental illness. Following transcription, data were analysed in line with the guiding principles of constructivist Grounded Theory.

Results: Three major categories were developed which accounted for the data: Knowing, Doing and Valuing. Participants reported that in common with the general public, pharmacy students possess insufficient knowledge about mental illness, which limits what can be done to help and support people living with it. Finally, participants reported that mental illness is ascribed insufficient value in the pharmacy curriculum, healthcare, and in wider society. Interactions between stigma and each of these categories were identified.

Conclusion: The findings offer a novel, qualitative description and explanation of mental illness stigma among pharmacy students from one UK university. Further, the factors identified by pharmacy students as modifiers of preparedness for professional practice provide an evidence base for curriculum development with possible international relevance. This may help pharmacy educators to develop evidence-based strategies aimed at reducing the impact of mental illness stigma in future professional practice.

Introduction

Stigma can be described as a complex social process in which stereotyping can lead to prejudice and discrimination.[1] For decades, mental illness stigma has been described in research papers on an international scale, and this has been shown to affect pharmacy

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students and practising pharmacists alike. A seminal paper by Bell and colleagues in 2008 identified that pharmacy students in six countries commonly harboured attitudes about people with depression and schizophrenia which held with the existence of interpersonal mental illness stigma.[2] These authors called for pharmacy educators to consider implementing changes to pharmacy curricula which might improve attitudes towards people living with mental illness (PMI). This request substantiates earlier findings and has been repeated in more recent research focused on the professional behaviours of qualified pharmacists.[3,4] Even where professional attitudes towards PMI appear positive, research has consistently identified variations in professional practice for different patient groups, which might be indicative of discrimination against this vulnerable patient group.[3,5–8] When asked about overcoming the barriers to optimal pharmaceutical care for PMI, qualified pharmacists and pharmacy students around the world consistently request more education, and often with a specific focus on communication.[2,4,6,9–14]

A wealth of predominantly quantitative literature has examined the impacts of a variety of interventions on pharmacy students' attitudes to PMI including additional didactic content, provision of Mental Health First Aid (MHFA) training, visits to clinical mental health settings, and other contact-based strategies.[15–18] As demonstrated by Sølvøj et al., intervention studies have often used more than one intervention and the topics covered in additional didactic content has varied.[18] Within the pharmacy education context, interventions based on the principles of contact theory[19] have yielded positive results, usually in terms of reduced stigma scores of participants. Such interventions facilitate direct (i.e. face-to-face) or indirect (i.e. via simulation) contact between pharmacy students and PMI, and might involve PMI providing education or sharing their experiences with the students.[10,20–23] Typically, stigma is measured before and after the intervention, using scales such as the Social Distance Scale (SDS) or the Opening Minds Survey for Health Care Providers (OMS-HC), with change in scale scores being the primary outcome. Despite consistent and repeated evidence that contact-based interventions, among others, can reduce mental health-related stigma in pharmacy and other healthcare students,[22,24–27] the existence of mental illness stigma persists.[13,28,29]

There are some limitations of the quantitative research in the field thus far which might limit the value of the findings. The first is the premise that any reduction in a stigma scale score will automatically correlate with improvements in professional practice. Changes in single aspects of the stigma process, as measured by quantitative changes in scales, have been used as proxy indicators of stigma overall. When a scale is used as a proxy measure of interpersonal stigma, any positive impact of the intervention can only be concluded to be on that measure, e.g., a person's desire for social distance from PMI. In the example of desire for social distance, improved scale scores may mean that an intervention has had a positive impact on stereotyping or prejudice, but this effect may not extend to discrimination, and it is this behavioural aspect of stigma that would be perceived by PMI in practice. Indeed, several authors have suggested that changes in attitude may only poorly predict future professional behaviour, if at all.[30–32]

A second limitation of the intervention literature thus far is that attempting to reduce stigma on the interpersonal level alone is likely to be inadequate. It has been suggested that stigma reduction interventions are likely to have the greatest impact in terms of power, longevity and reach when they tackle stigma at more than one level.[27,33] This is because stigma at structural levels (e.g., within university curricula or healthcare systems) can influence, and be influenced by, interpersonal stigma. Finally, the findings of quantitative research lack explanatory power, making it difficult to define students' learning needs, or to interpret why a particular intervention has been valuable within a specific context. To the authors' knowledge, the current study is the first purely qualitative investigation into preparedness to work with PMI and mental illness stigma among UK pharmacy students. Previous qualitative description in the UK and Ireland highlighted requirement for enhancing mental health pharmacy curricula and provides a background for the findings of the current research.[34]

It is not unreasonable to accept that mental illness stigma might adversely affect patient care,[30,35] and that pharmacy educators are well-placed to attempt to address these consequences of stigma. However, due to the limitations of the evidence described above, it is important to develop richer descriptions of this complex social problem and how it might relate to future professional practice. Through these efforts, pharmacy educators will be better placed to determine the specific requirements of stigma reduction interventions designed to have the greatest impact on future professional practice. Following the suggestions of earlier research,[36,37] the aim of this study was therefore to undertake a qualitative, contextualised exploration of UK pharmacy students' views on working with PMI and how these might interact with mental illness stigma.

Methods

Design

This qualitative study explored the subjective experiences of individuals to examine the social construct of stigma in a specific context. A methodology informed by constructivist grounded theory[38] was chosen to support the development of a rich explanation of a problem which is known to exist, but which lacks adequate contextual explanation.[39] As an extension to the well-documented tenets of grounded theory,[39] using the constructivist approach described by Charmaz allowed utilisation of a constructivist methodology to investigate and describe a socially-constructed and mutually-agreed truth grounded in the first-hand experience of the participants.[40,41]

Focus groups and one-to-one interviews were selected as appropriate methods to generate qualitative data from final year pharmacy (MPharm) students and recent graduates ($\leq$ 24 months since graduation) at Aston University, Birmingham, United Kingdom (UK). Focus groups provided a method for generating a large amount of co-constructed data, rooted in first-hand experience of pharmacy students.[42] It was expected that the group setting would facilitate open discussion, in keeping with the constructivist nature of the research. Convening groups of recent graduates was impractical due to limited availability and one-to-one discussion allowed more in-depth examination of the emergent themes from focus groups contextualised in experience of professional practice. This

exploration of different perspectives facilitated understanding of how undergraduates' views on their imagined future interactions with PMI related to the real experiences of postgraduates.[43] In turn, this allowed consideration of possible implications for the pharmacy curriculum.

Ethics

Ethical approval was granted by the Aston University Research Ethics Committee in two phases (205–05-20-Macfarlane and 239–03-21).

Recruitment

Guided by the principles of constructivist grounded theory,[40] all final year pharmacy students ($N = 106$) were invited to participate in focus groups to discuss their views on mental illness and PMI and how well-prepared they felt to provide pharmaceutical care for PMI. Subsequently, recent graduates who had previously given permission to be contacted regarding research recruitment ($N = 12$), were invited to participate in interviews to further develop the findings from the focus groups and to discuss their experiences of working with PMI in practice.

Data generation

The topic guides for both the focus groups and the interviews were developed in line with the aim of the study and were informed by published literature (see supplementary material). They were written by the principal investigator and then revised in conjunction with research supervisors to check for face validity. Focus group topic guides started with an opening question designed to promote contributions from all group members. Following this, questions were designed to stimulate discussion on perceptions of PMI, provision of pharmaceutical care to PMI and enhancing preparedness for future professional roles. Permission to use case vignettes describing people who meet ICD-10 and DSM-IV diagnostic criteria for depression and psychosis was granted by the original authors and these were used as a prompt for discussion.[44] In line with the guiding principles of constructivist grounded theory, question guides were applied flexibly to enable data generation around those issues felt to be most pertinent to the participants and for the researcher to "heed cues" about what they wanted to say.[40]

Development of the topic guide for interviews with recent graduates followed early data analysis, in line with the constructivist grounded theory methodology.[40] The guide allowed for exploration of emergent data categories from the focus groups within the context of participants' professional experience.

Demographic data were collected to contextualise the data within the existing literature and the study did not aim to link participants' responses with their demographic details nor to examine any links between them. Anonymised demographic details were provided using Microsoft Forms® at the same time as provision of written consent.

Data were analysed according to the steps described by Charmaz, beginning immediately after the first focus group.[40] From this point onwards, data generation and analysis continued concurrently until a point of theoretical sufficiency was reached.[40,45] The transcript of each focus group and interview was initially coded line-by-line, using NVivo Plus 12® software, to describe what was happening within the data. Initial code names depended on the use of gerunds (the -ing form of verbs) and in vivo codes (codes named using the participants' own words) to help ensure that the coding and initial analysis were grounded in the data collected. Through processes of constant comparison, focused codes were developed. Since data analysis continued throughout data generation, constant comparison required continual re-examination of focused codes against new data. Diagramming was used to develop understanding of the relationships between codes such that some were collapsed or merged as appropriate to develop the three major data categories that fully accounted for the data.

Results

Initial expressions of interest were received from 22 students. Once study information was sent out, 15 agreed to participate. One person withdrew prior to the focus groups taking place. Fourteen final year students (14/106, 13 %) and 4 recent graduates (4/12, 33 %) participated in focus groups and interviews respectively. Focus groups and interviews were conducted online, using Microsoft Teams® and data were collected between November 2020 and September 2021. Focus groups lasted 96–104 min (mean = 100) and interviews lasted 56–80 min (mean = 66). Most respondents described themselves as female (16/18 responses), of British nationality (16/18) and of Asian ethnicity (7/17). Just over half of the participants described themselves as having personal experience of mental illness (9/18; personal experience was not defined) and half (9/18) reported contact with PMI in an educational or professional context.

In line with Grounded Theory methodology, each new contribution to the primary data (whether arising from students or recent graduates) was coded and incorporated into the single data corpus.[46–48] Where respondent data varied between students and graduates, this was found to support rather than destabilise the developing categories. As such, the categories were found to be grounded in the experience of all participants. Three major data categories which described participants' views were developed: Knowing, Doing and Valuing, which relate to one another in cyclical fashion and were formulated into the Knowing, Doing, Valuing (KDV) cycle as shown in Fig. 1.

Examples of the data found in each category are given in Table 1.

Knowing

In the first category, responses suggested that pharmacy students feel inadequately knowledgeable about mental illness and its treatment. Indeed, participants described mental illness as being a subject about which too little is known in general and expressed a belief that this means that what can be taught about mental health is limited (*"there's so many unanswered questions which is why we don't get a full education on it"*). Further to this, perceived inadequacies in the undergraduate pharmacy curriculum reinforced participants' sense that their knowledge was insufficient. Poor knowledge about mental illness was described as a barrier to effective communication (*"…they don't want to look stupid, people don't want to call things the wrong words…"*) which could perpetuate interpersonal stigma related to ignorance. This relationship with stigma was bidirectional in that where mental illness stigma was perceived, it was described as perpetuating ignorance.

Participants valued knowledge about mental illness and clearly asserted the view that increasing the knowledge they possess is a prerequisite to professional preparedness because *"you can only give advice to someone if your knowledge is up to scratch"*. This view expanded beyond the pharmacy curriculum as participants opined that any individual with insufficient knowledge would be ill-equipped to support PMI. However, the effect of stigma was complex here as participants explained that it is possible that someone might be in possession of adequate knowledge, yet apply it badly or not at all, thus highlighting a view that increasing knowledge in isolation may be insufficient to overcome the effect of what people do in practice.

Doing

In the second major category, Doing, data again revealed a sense of inadequacy among pharmacy students. Respondents identified a range of barriers to the provision of pharmaceutical care to PMI. This was seen to stem from poor knowledge, but also included inability to empathise with PMI, relationship constraints, a desire to avoid mental illness, and the inadequacy of pharmacy and medicines in the treatment of mental illness. These barriers adversely affected participants' confidence in their ability to provide pharmaceutical care to PMI which was thus conceptualised as mental illness being difficult to treat. This difficulty was exacerbated by perceived inadequacies of the medicines available to treat mental illness because "*it's not something that medication can solve*" and because the specific help and support needed by PMI was seen to differ from that required by those without mental illness. Respondents asserted that more time is needed for PMI and "*the pharmacist [is not] free enough to actually just sit down and chat with someone*".

As in the first category, participants described perceived stigma in the Doing category. People living with mental illness were depicted as victims of discrimination due to poor availability of treatment services and through interpersonal avoidance, for example. No participants described their own future inaction or discomfort as a potential source of discrimination, but this was implicit within the findings in which participants spoke with a sense of hopelessness around their future professional roles ("*But I think [other mental health professionals] are the best like primary help for [PMI] for listening than maybe pharmacists because we do have our jobs and we can't always guarantee that time for them*").

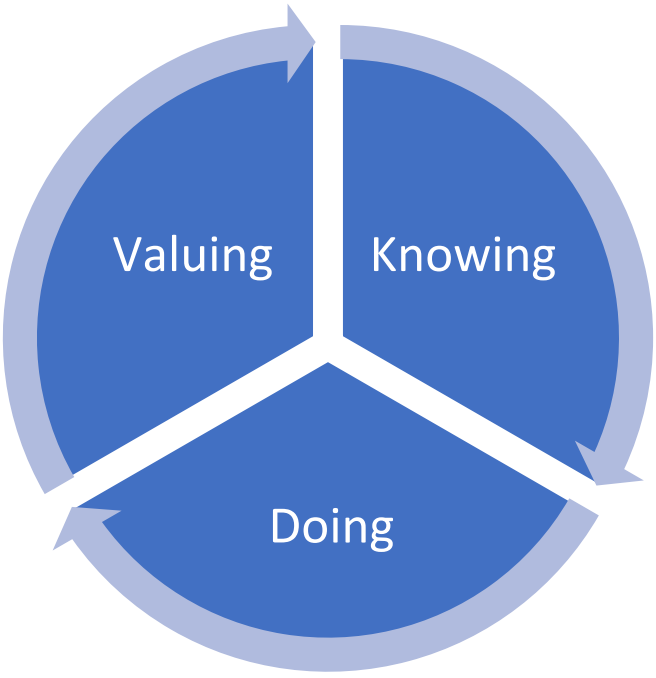

Fig. 1. The three major categories: The KDV cycle.

Table 1
Representative quotes from each data category. Identifiers: 'FG' denotes focus group number, followed by participant number within that group. 'I' denotes interview, followed by participant number.

Data category	Quotes
Knowing	"I don't think, I know we don't know enough as we should to help the public" (FG3P3 – original emphasis)
	"if he came into a community pharmacy I feel like we wouldn't know what to do" (FG2P2)
	"…it might take them years to realise that they had depression…" (FG2P1)
	"People don't want to call things the wrong words like they might not be able to explain how they feel and that might really bother them, like they don't want people to feel they're stupid…" (FG3P2)
	"…when people mention mental illness, most people don't actually know it's like a proper thing…" (FG3P3)
	"…like, we don't get taught loads about mental health…" (FG3P4)
	"…I role played with [my tutor] […], because I needed to make sure I understand the red flags…" (IP1)
	"I think we need to be taught like the conversation…" (FG1P1)
	"…you don't want to bring up a subject that might affect somebody" (IP2)
Doing	"I think it's easier to go into a state of denial instead of admitting it, because it feels like they've failed themselves…" (FG1P3)
	"because we don't know anything about what's going on in his head, it's just difficult, […], How would you get him to speak about that?" (FG1P4)
	"I think like a big barrier is you are medical professional at the end of the day, you're not their family" (FG2P5)
	"I feel like you haven't got enough time…" (FG2P4)
	"You can put them on an SSRI or a TCA […], it isn't necessarily going to help and I don't know that it's going to work" (FG3P1)
	"…in a community setting, I'd be more inclined to refer to somebody who's more specialised…" (FG2P3)
	"Like tell people what the difference is between being professional and being… Like combining empathy and being professional at the same time…" (FG1P3)
Valuing	"It's just not held to the same standard as physical health" (FG3P4)
	"…unless you're experiencing physical symptoms […] a GP is going to […] completely overlook them…" (FG2P2)
	"…people don't seek help until they have like hit that rock bottom…" (FG3P1)
	"…they don't think they deserve help" (FG1P5)
	"…although you've done everything you can, sometimes the mental illness just takes over." (IP3)
	"…you can't teach a lecture if somebody's sat there going […] 'oh, mental health isn't real'…" (FG3P2)
	"It's an everyday condition, […] mental health should have the same importance as cardiology or renal" (FG1P1)

Valuing

Poor knowledge (Knowing) was described as an inhibitor of action (Doing) around mental illness and both these categories fuelled the final category: Valuing. Data analysis elucidated the view that mental illness is insufficiently valued in pharmacy education and beyond into healthcare settings and wider society. Concern regarding low value being attributed to mental illness in pharmacy curricula was evident through participants' views that a disproportionately small part of the curriculum was dedicated to the study of the subject. Additionally, mental illness was seen to be taken less seriously than somatic illness in healthcare settings in which people might "*completely overlook*" mental illness. In this latter sense, participants described a process in which devaluing mental illness drives personal stigma as PMI internalise the perception of their lower personal importance in relation to those with somatic illness.

Participants did not overtly describe ways in which they personally devalue mental illness and its treatment, rather this was something that they described observing around them and which they thought might impact their future professional roles. However, disease-first language and negative value judgements were used by participants in their conversations (e.g., "*…because it seems like he's kind of paranoid, could be schizophrenic…*" and "*…they're suffering from something like depression…")* as well as implicit endorsement of some mental illness stereotypes such as dangerousness (e.g., *"…I would feel a bit more anxious […], if I said something wrong and that might trigger something more*.") and permanence (e.g., *"…although you've done everything you possibly can, sometimes the mental illness takes over*."). These exemplify participants' own views that mental illness and those living with it can be devalued through inadequate or inappropriate knowledge and action. They offer critical examples of the (possibly implicit) stereotypes and prejudices which might be the target of interventions aimed at reducing the impact of stigma.

Discussion

The findings presented here support the previously well-documented existence of intrapersonal, interpersonal, and structural stigma in a UK pharmacy education context. However, whilst stigma was identified as a problem for PMI, it was also seen to impact development and application of knowledge and the ways in which mental illness is valued, thus contributing novel explanation of this problem in the context of pharmacy education. Pharmacy students reporting feeling unprepared for practice and the categories of Knowing, Doing and Valuing within the KDV cycle provide a description of how mental illness stigma affects this preparedness for their future professional roles with PMI.

Overall, the data revealed a sense of inadequacy, and participants related this to deficiencies in what is known about mental illness, the application of knowledge in practice, and the way that mental illness is valued. Throughout, participants talked about and exemplified the various impacts of stigma at all levels which might impede help-seeking, access to care, communication, and sense of worth, for example. Stigma was therefore identified as an important modifier of these three factors which underpin pharmacy students' preparedness for working with PMI: Knowing, Doing and Valuing. Each of these factors was also found to modify stigma itself.

Participants were clear in their assertion that pharmacy curricula could be adapted to enhance their sense of preparedness, and

therefore reduce the impact of mental illness stigma in future practice. At the time of data collection, 9 curriculum hours were dedicated to specific mental health teaching in the 4-year pharmacy curriculum at Aston University. Overall, participants called for a greater focus on mental health education in pharmacy curricula as they perceived this to be inadequate in relation to other therapeutic areas. This echoes previous research which has identified inadequacies in knowledge and/or the need for further education in the context of the provision of pharmaceutical mental healthcare.[4,6,9–14] This observation does not appear to be specific to the UK and poor mental health coverage in university curricula has been specifically cited as an example of structural stigma.[30]

In their model for reducing mental illness stigma, Knaak and Patten identified lack of skills/confidence as one of the roots of healthcare provider stigma, along with "pessimism about recovery", "seeing the illness ahead of the person" and "lack of awareness of own prejudices".[49] The major categories of Knowing and Doing in this study provide some exploration of this problem of skills/confidence deficit. Participants were consistent in their agreement that not only should more time be allocated to the teaching of mental illness in the pharmacy curriculum, but that developing students' confidence in their knowledge should be a focus. Creating a more balanced curriculum by increasing the number of hours of mental health teaching was suggested. The data also supported the provision of more opportunities to practise the skills through assessments, preparing students to apply what they learned into patient care.[50]

Participants specifically called for increased focus on communication with PMI in pharmacy curricula. This was related to a sense that PMI are difficult to talk to and that there is a definitive 'correct' and 'incorrect' way to talk to them. Pharmacy students feared that, through saying the wrong thing, they risk making things worse for PMI and suggested that education focused on communication with PMI is required. These concerns are consistent with and complementary to existing literature in the field.[15,51–53] A study of pharmacy students in the UK and Ireland found that 33.2 % of participants felt that their pharmacy degree had adequately equipped them to support PMI. Participants in that study highlighted a profound unmet need in communication skills.[54] It is possible that participants' concerns here are reflective of a stigmatised view of the differentness of PMI or that the presence of mental illness necessarily results in communication challenges. Whilst acknowledging the likely difficulty in rehearsing communication in an academic environment to such an extent that students feel fully prepared for real patients, incorporating roleplay and simulation, for example, may allow students to practice applying their knowledge and develop confidence in their communication skills.[23] Through such initiatives, students might be encouraged to consider whether mental illness makes communication more challenging, or whether they might just need to develop more general confidence in their practice.

Taking a broader perspective, participants in this study identified a concern that mental illness is difficult to treat. They correlated observations of untreated and neglected mental illness with poorly effective interventions and specifically doubted the roles of pharmacy and medicines in effective management of mental illness. As a result of this, participants painted a picture of being professionally hamstrung; unable to help despite their reported willingness. Similar uncertainty has previously been found in pharmacy and medical students in the US,[55] highlighting the importance of explaining the value of pharmacists and medicines in the effective management of mental illness. Through better exemplifying the ways in which pharmaceutical care can support PMI, students can begin to reflect on the true value of their knowledge. Further, where the practical application of knowledge is formally assessed, the development of confidence in its value is promoted and at the same time, the value of the knowledge and the skills assessed is reinforced.

Participants in this study recognised the potential negative impact of stigma on mental illness and people living with it but did not identify themselves as a source of interpersonal stigma. This supports previous findings demonstrating that pharmacy students may not recognise how their prejudices might create barriers to effective pharmaceutical care[10] and suggests a need to teach on the impacts of stigma itself. The pessimism expressed by study participants around the treatment of PMI, and the use of medicines for treating mental illness in particular, may exemplify another of Knaak and Patten's roots of stigma: prognostic pessimism /feeling like what they do doesn't matter.[49] Therefore, the present study reinforces the need to teach pharmacy students about mental illness stigma and its effects as well as to aim to reduce the effects of stigma through targeted intervention. Pharmacy students should be given the opportunity to examine their personal beliefs and attitudes whilst learning about the impact of stigma at the same time as receiving an education which reinforces their confidence in their ability to help people living with mental illness. Additionally, pharmacy educators should endeavour to understand the stereotypes and prejudices which may be endorsed by their students to avoid inadvertently reinforcing these within the curriculum. Since it is possible to contribute to mental illness stigma in this way,[29,56] it is important to avoid the temptation to believe that something is better than nothing in mental health education.

Through the KDV cycle, the findings of this study can help to explain why pharmacy students feel unprepared for future practice with PMI and how this might relate to the problem of mental illness stigma. The qualitative findings are broadly in agreement with existing literature regarding the need for specific improvements to pharmacy education and it may be that more consistent application of evidence-based intervention will start to show longer-term benefits in terms of minimising stigma impact. However, the current results also provide a contextualised explanation of the complex interaction between stigma and preparedness for professional practice. This contribution is novel and provides a starting point for evidence-based curriculum design which could help to increase sense of preparedness whilst minimising the impact of stigma. Minimising the impact of stigma in pharmacy practice is complex and dependent on social context. Therefore, reducing the impact of stigma in pharmacy students is unlikely to be achieved through any single, discrete intervention. Pharmacy educators should consider the ways in which knowledge and confidence can be improved through application of evidence-based curricular enhancements whilst at the same time consistently identifying and tackling interpersonal and structural stigma.

The findings of this study are limited by the inclusion of participants from a single university in the UK. It is possible that the results and discussion include some elements of UK-specificity, but due to the agreement with existing literature, may well have international reach and relevance. People identifying as male were underrepresented in the study in relation to the typical demographics of the

pharmacy school, and around half of the participants reported personal experience of mental illness. This may mean that data were not wholly representative. Additionally, where previous research has compared attitudes to mental and physical illness, no point of comparison was used in the current study, and it is possible that the findings might not be limited to the subject of mental illness. The COVID-19 pandemic at the time of data generation might have impacted the nature of data generated in this study.

Taking a reflexive perspective, it is further acknowledged that because of the constructivist approach used in data analysis, it is not possible to claim that the interpretation of the data presented here is the only one. Whilst the interviewer was not well-known to the participants, her role as a mental health pharmacist may have influenced data generation and interpretation. To minimise the impact on data generation, the interviewer's background and expertise were not discussed at the start of each focus group or interview. During analysis, reflecting on the interviewer's specialist subject knowledge led to a more objective approach in subsequent data generation in which participants were more carefully probed for the meanings of the terms that they used, for example. The coding of the data was reviewed by a supervisor who was not a subject expert for quality assurance purposes.

Despite the limitations of the study, its findings echo those of the broader literature in this area and their relevance to other pharmacy schools might be supported through their common goals and curricula. The implications for pharmacy educators are that stigma reduction should not be considered in isolation from professional preparedness. Rather, the way that students acquire, develop, apply, and demonstrate their knowledge about mental illness as well as the way that mental illness is valued should be addressed in curricula alongside the specific issue of mental illness stigma itself.

The principal research implication of this study is in substantiating previous suggestions of the value of qualitative enquiry in this field. The findings exemplify the contribution to knowledge that can be provided through qualitative exploration of a problem which is well-known but poorly understood. Future intervention studies focused on stigma reduction should consider making greater use of qualitative enquiry. Mixed methods approaches might allow investigation of the impact of an intervention alongside description of the subjective views of students. In this way, impact could be both measured and explained.

Conclusion

Pharmacy students identified that preparedness for working with PMI is affected not only by intrapersonal, interpersonal, and structural stigma, but also knowledge about mental illness and its treatment, barriers to the provision of pharmaceutical care and the way that mental illness is valued in academic, healthcare, and social contexts. Mental illness stigma was described as a modifying factor for each of these three areas which in turn affect students' sense of preparedness for working with PMI. The findings presented here support the conclusion that when stigma is considered as a contextualised, social process, efforts to reduce it must address those factors which interact with stigma in the training of future pharmacists, and not focus on quantitative stigma reduction in isolation. This qualitative understanding of how stigma can affect pharmacy students' sense of preparedness therefore represents an important contribution to the literature. The KDV cycle presents a model which explains the interaction between mental illness stigma and students' sense of professional preparedness based on experiences of students in one UK university. In addition, it presents opportunities for learner-focused and evidence-based intervention in future pharmacy curriculum design.

CRediT authorship contribution statement

Hannah Macfarlane: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Project administration, Validation, Visualisation, Writing – original draft, Writing – review and editing. Joe Bush: Writing – review and editing, Supervision. Alexis Paton: Formal analysis, Writing – review and editing, Supervision.

Declaration of competing interest

None.

Appendix A

A.1. Focus group topic guide

A.1.1. Introduction and ground rules

Ice-breaker: Please tell me your name and what sector of pharmacy you plan to work after graduation.

Opening question: If I ask you to think about mental illness, what is the first thing that comes into your mind?

Read vignettes:

John: John is 24 and lives at home with his parents. He has had a few temporary jobs since finishing school but is now unemployed. Over the last six months he has stopped seeing his friends and has begun locking himself in his bedroom and refusing to eat with the family or to have a bath. His parents also hear him walking about his bedroom at night while they are in bed. Even though they know he is alone, they have heard him shouting and arguing as if someone else is there. When they try to encourage him to do more things, he whispers that he won't leave home because he is being spied upon by the neighbour. They realise he is not taking drugs because he never sees anyone or goes anywhere.

Jay: Jay is 30 years old. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time,

he has trouble sleeping nearly every night. Jay doesn't feel like eating and has lost weight. He can't keep his mind on his work and puts off making decisions. Even day-to-day tasks seem too much for him. This has come to the attention of Jay's boss, who is concerned about his lowered productivity.

Topic 1: Thoughts around people described in the vignettes.
Consider emotional responses to the people described.
What might life be like for the people described?
How people might find themselves in such situations?
The need for and type of support which might be offered/sought.
Topic 2: Thoughts and feelings around working as a pharmacist with the people described.
What would it be like to provide pharmaceutical care to the people described?
Roles of pharmacists in this context – feelings of preparedness for this role?
Discussion of barriers to care
Enhancing preparedness of the pharmacist.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.cptl.2024.102271.

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