Barriers to engagement with testing for Sexually Transmitted Infections within a UK-based young adult Black Caribbean community: A qualitative study

Gemma Heath PhD[1], Kiranpal Kaur MSc[1], Claire Farrow PhD[1], Jonathan D C Ross MD[2] & Rebecca Clarke PhD[3]

[1]School of Psychology, Aston University, Birmingham, UK

[2]University Hospitals Birmingham NHS Foundation Trust, Birmingham, UK

[3]School of Psychological Science, University of Bristol, Bristol, UK

*Dr Gemma Heath

School of Psychology, Aston University, Aston Triangle, Birmingham, UK, B4 7ET

g.heath1@aston.ac.uk

0121 204 4284

Abstract

Background: The Black Caribbean population have a disproportionately high burden of Sexually Transmitted Infections (STIs) compared with other ethnic groups. The aim of this study was to explore barriers to engagement with STI testing within a UK-based young adult Black Caribbean community.

Methods: Semi-structured interviews were carried out with 14 young adults from the Black Caribbean community and six sexual health professionals. Data were analysed thematically. A focus group of 5 young adults was conducted to refine themes.

Results: Data analysis generated three themes (1) culturally embedded stigma, (2) historically embedded mistrust, (3) lack of knowledge. Perceived as "dirty", particularly for females, infection with STIs was stigmatised by religious conceptions of "purity" and shame. This presented challenges in terms of cultural acceptability of talking about STI testing with partners, friends, and family. Legacies of colonialism, medical racism and malpractice compromised young people's trust in medical intervention and confidentiality of data management. A lack of knowledge related to STIs and their treatment, and in how to access and perform STI tests further served as a barrier. Culturally tailored interventions targeting these factors and delivered by radio, podcasts and social media were highlighted as having potential to improve engagement with STI testing.

Discussion: Engagement with STI testing by young adults from the Black Caribbean community is impacted by historically and culturally embedded teachings, practices and beliefs inherited through generations. Targeting these factors within culturally tailored interventions may be effective for increasing STI-testing, and thus reducing rates of STI-infection, in this population.

Key words: Sexual health; Sexually Transmitted Infections; STI testing; Black and Ethnic Minority; Qualitative; Public health; Interview; Young adults

Highlights:

- STIs and STI testing are stigmatised in the Black Caribbean community by conceptions of "purity" and shame.
- Legacies of medical racism and malpractice have compromised young people's trust in medical intervention and data confidentiality.
- A lack of STI knowledge and confidence in accessing and performing STI tests presents a barrier to testing.
- Potential interventions to engage the target audience include culturally tailored podcasts, use of radio stations and social media.

Background

The Black Caribbean population have a disproportionately high burden of Sexually Transmitted Infections (STIs) in the United Kingdom (UK) [1,2,3]. Compared with the White British population, people of Black Caribbean heritage are eight times more likely to contract gonorrhoea and six times more likely to contract syphilis [4]. Recent public health data from England also confirms higher rates of chlamydia, trichomoniasis and genital herpes in Black Caribbeans compared with other UK populations, including other Black ethnic groups (Black African, Other Black, Mixed) [5]. In addition to this ethnic inequality, rates of STIs are currently at an all-time high in young people, putting young adults from black minority groups at double the risk [5].

Research shows that while increased risk of STI in people of Black Caribbean ethnicity is associated with previous STI diagnosis and younger age, there are no unique clinical or behavioural factors explaining the disproportionately high rates of infection [2]. Socio-cultural, structural and socio-economic factors have therefore been suggested to influence the complex drivers of increased incidence of STIs in this group [4,6], including the role of sexual networks [8]. Evidence suggests that sexual networks, specifically partner concurrency, can influence the size and speed at which STIs spread within any population [7]. A qualitative study conducted with Black Caribbeans in England identified a range of factors influencing partner concurrency including gender and relationship norms, as well as popular music and social media, especially among men and young people [7].

High levels of stigma and shame have further been identified as impacting engagement with STI testing and treatment across a range of ethnic groups, including people of Black Caribbean heritage [8,9], alongside cultural and religious beliefs [10]. Research also suggests limitations in knowledge about the options available for STI testing [11] and limited STI prevention education [7, 12]. While not unique to the Black Caribbean community, these factors continue to determine STI testing among Black ethnic groups. Theories including social cognitive theory and the theory of gender and

77 power, have been applied to understand STI prevention [13], although interventions specifically
78 targeting STI testing in the young Black population are limited [14].

79 There remains a need to understand the underlying cause of high rates of STI in young people of
80 Black Caribbean decent, and specifically what the barriers are to STI testing in this group. Such
81 information is needed to design effective approaches to prevention, increase rates of diagnosis and
82 reduce disease prevalence, in addition to reducing sexual health disparities [15]. The aim of our
83 study was to explore barriers to engagement with STI testing within a UK-based young adult Black
84 Caribbean population.

85 **Methods**

86 *Design*

87 A qualitative design, within an interpretative framework was adopted using individual semi-
88 structured interviews and one focus group. This approach was appropriate for exploring, in-depth,
89 the beliefs and experiences of young people and health professionals regarding engagement with
90 STI-testing.

91 *Sampling and Recruitment*

92 Purposive and convenience sampling was used to recruit young adults (aged 16-25 years) who self-
93 identified as being of Black Caribbean heritage, aiming to generate variation in gender and sexual
94 orientation. Health professionals with experience of working with young adult sexual health service-
95 users were also sampled, bringing a complimentary perspective. Participants were recruited from a
96 large, UK city-based NHS sexual health clinic and local university, using study specific advertising
97 materials including in-clinic posters, text message and email invitation. The study was also
98 advertised on the sexual health service website and associated social media, as well as via a local
99 University newsletter.

100 Prospective participants were invited to contact the research team to express their interest in taking
101 part. In response, they were emailed a study pack including an information sheet and link to an

online consent form and demographic sheet, before arranging a time for interview. A favourable review from an NHS Research Ethics Committee was obtained prior to data collection (#22/NS/0019).

Data Collection

Data were collected from July 2022 to March 2023, using individual semi-structured interviews and one focus group, both conducted via video-call (MS Teams). A focus group was convened after completion of individual interviews to sense-check our initial analysis, gain additional insights, and to support recommendations for intervention. Data collection was carried out by trained female, qualitative researchers. Interviews were conducted by GH and RC and the focus group by KK. Interviews lasted between 40 and 65 minutes and the focus group lasted 75 minutes. Both were audio-recorded with consent, and field notes taken. A schedule of semi-structured questions developed with reference to study objectives and existing literature was used to guide data collection on barriers and facilitators to STI testing and how young adults from the Black Caribbean community could be supported to engage with STI testing. Focus group participants were invited to share their views on our initial analysis of interview data, enabling us to refine the themes. Using key quotes from interviews to steer the discussion, topics related to issues of stigmatisation, cultural influences, access and availability and relationships. Participants were debriefed at the end of each interview/focus group and given a £10 voucher to thank them for their time.

Data Analysis

Recorded data were transcribed verbatim and analysed thematically [16]. Interview data underwent preliminary inductive analysis including reading and reviewing transcripts, noting of ideas, loose generation of codes and grouping to themes, and utilising discussion within the research team. Ideas generated at this stage of analysis were then used as a basis for the focus group discussion. Once all data had been collected, transcripts were subject to the formal stages of an inductive thematic analysis [16]. The first step comprised familiarisation through repeated reading, where initial

thoughts and ideas were documented within transcript margins. Individual transcripts were coded by chunking the data at salient points and ascribing labels, first at a descriptive level and then more interpretively. Codes were assigned by KK, based on their salience to the research questions, with a sub-set of transcripts independently coded by GH and discussed with JR. Following coding refinement, codes were grouped to generate tentative themes that reflected patterns within and across the data. Themes were then reviewed before being given titles and selecting illustrative quotations.

Reflexivity

GH and RC who collected and analysed interview data are White British female academics with experience of conducting qualitative health research with a range of population groups. KK who collected and analysed focus group (and interview) data is a British Asian female researcher, also with qualitative research experience. JR is a White British male, Professor of Sexual Health and HIV and a Consultant Physician and CF is a White British female academic, Professor in psychology, both contributed to the analysis and final write-up. Collectively, the research team brought to the analysis, their training in psychology, medicine and public health. Being aware of this, and our different cultural upbringings to the participant group, we actively reflected on our presuppositions through personal and group journalling, discussing the influence of our cultural and educational backgrounds on our analysis. The decision to add a focus group with a set of different young people following interviews came from these reflective practices, aiming to sense check our interpretations with additional members of the participant group.

Results

Participants

Twenty-five participants were recruited: 19 Black Caribbean young adults (aged 19-25) and six sexual healthcare professionals. Of the young adults, 16 took part in individual interviews and five in the follow-up focus group. In total, young adults consisted of 16 females and 3 males, 15 of whom were

university students and four in full-time employment/self-employed. Sixteen young adults identified as single, with three in a relationship but not co-habiting. Sixteen participants identified as heterosexual, two as gay and one as bi-sexual. Thirteen young people identified as Christian, two as Muslim and four as either no religion or preferred not to say. The six health care professionals recruited included three nurses, a doctor, clinical educator and health advisor. Years in the role spanned 9 months to 20 years (Tables 1&2).

Thematic findings

Analysis generated three themes (1) culturally embedded stigma, (2) historically embedded mistrust, (3) lack of knowledge.

1. Culturally embedded stigma

Perceived as "dirty" by young people, STIs were stigmatised by religious conceptions of "purity" and shame. By association, this stigma extended to STI testing as an indicator of purity, with female participants describing a fear of being negatively characterised as "unpure" (YA13, YA16) based on their need to carry out an STI test. Such purity myths and associated feelings of shame impacted these women's decision-making with regards STI testing, instead choosing not to test to avoid stigmatisation by themselves and others.

> YA13: it kind of makes me feel like almost dirty and like unpure in a way… I don't like the idea of like being tested or anyone know that I have to, have to like test myself in case I'm like, I don't know, nasty, like I don't know, that's how I think of it in my head, that it's like kind of disgusting… it's a bit more embarrassing (Female, age 19, interview)

When invited to elaborate on the religious origins of impurity, focus group participants highlighted a spiritual belief system prevalent within the Black Caribbean community relating to soul-ties, or 'invisible chains' that tie people together when they have sex. Beliefs about multiple partners being bad for the soul again instigated feelings of shame within the young women who did have multiple

sexual partners. STIs and STI testing behaviour was therefore perceived as a negative karmic consequence of 'shameful' sexual behaviour.

Stigma was recognised by health professionals who acknowledged embarrassment attached to attending STI clinics which can "put off a lot of people" as they are very "public" places (HCP6). However, there was less indication from professionals that they understood the deep-rooted cultural nuances of this stigma, over and above general stigma related to STI clinic attendance.

> YA16: having multiple soul ties is not good for you spiritually because your soul is no longer your soul, it's a mixture of your soul and other people's soul that you've had sex with. So not only does it make you unpure, you're developing an STI from having multiple sexual partners, makes you dirty (Female, age 19, focus group)

Throughout young people's accounts, there appeared to be a disconnect between the conservative values of abstinence and the sexual liberation of a younger generation. For many, religious teachings prohibiting sex before marriage were viewed as strict; "black mums can be quite tough" (HCP5) or outdated and misaligned with how young people viewed their own rights. Nevertheless, navigating or challenging these intergenerational beliefs was described as difficult by young people, preferring instead to conceal their sexual behaviour or engage in 'less risky' behaviours (e.g., non-penetrative sex) than face judgement by family and community members.

Female participants further discussed differences in gender norms within the Black Caribbean community. Specifically, this related to double standards in what was regarded as acceptable sexual behaviour by males and females, for example, number of sexual partners or concurrent partners. Participants highlighted that while women were often labelled as "dirty" (YA17) for having multiple sexual partners, men with multiple sexual partners were praised. Rather than being conceived as a responsible act, STI testing was then, again considered an indication of being 'dirty' particularly for women.

> YA17: it was very much like “oh have you taken an STI test?” And when he asked me, I didn’t get offended because obviously that’s a valid question but for him when I asked him, he kind of got defensive and was like “oh do you think I’m dirty?” …it was kind of an awkward conversation… because it is a very taboo subject (Female, age 21, focus group)

Peer support facilitated engagement with STI testing, with those participants who felt able to openly discuss their sexual health with others, more likely to engage with STI testing than those who did not talk about these issues. This was supported by health professionals’ experiences. However, many young people reported not feeling able to discuss sexual health with peers or family, seeing it as a forbidden subject.

> YA8: I could never mention anything like that, even to cousins, siblings, parents, I couldn’t mention anything like that, or aunties, because there is that taboo around that (Female, age 24, interview)

Further barriers to STI testing related to help-seeking behaviour more generally. Specifically, these beliefs centred on the collective view that Black Caribbeans ‘do not ask for help’, perhaps, as one participant suggested, because “we feel silenced” (YA13) or perhaps related to perceptions of medical suspicion and mistrust (see theme 2). Such beliefs often led to preferences for, and normalisation of, self-care and home remedies over medical tests and treatment.

> YA9: I feel like the way we’re raised, we’re raised to like deal with everything, like not with any doctors or anything, like it’s just dealt with, “oh, yeah, it will go away or pass by. Like you’ll be fine,” kind of thing. But sometimes you might actually need their help. Especially with like, the way I grew up, whenever I was sick or had something wrong with me, my mum would most likely just treat it and it did end up going away (Female, age 19, interview)

2. Historically embedded mistrust

Legacies of colonialism, medical racism and malpractice, that were deep rooted and passed down through generations, compromised young people’s trust in medical intervention and confidentiality of their information. To protect themselves, young adults often disengaged from services perceived

as presenting a risk to their health (medicalised testing and treatment) or a risk to their personal data being shared without consent.

> YA5: If historically there is a history of black people being harmed medically and being used medically, then, you know, the new generation are going to hear about it and think that something's going on again, because we tend to believe in history repeating itself and we hold that, we hold that like, I don't know it's a bit, it's a bit personal for us you know, you're told by your family members and it's that information that's relayed from one generation to another. (Female, age 21, interview)

> YA18: In my family, there's a lot of, don't give your DNA or data out to anyone because you don't know what they could do with it. So, I think conspiracy theories, generation, going through generations, I think that's a factor into why they wouldn't want to get tested (Female, age 19, focus group)

Mistrust in the health professions was also understood as part of a wider cultural mistrust of authorities. Young people spoke of ensuring the clinic or test is "actually safe" and "ethics" are being followed. As discussed by YA13, not sharing data was inherited as a strategy to avoid discrimination and abuse of power. Use of the collective in describing such views (e.g., "we… black people…") suggested a strong sense of community identity, as a collective against 'authoritative' figures.

> YA13: Black people, I think as well we kind of feel we are hard to trust, like I wouldn't, just like I wouldn't call the police if I had an issue, like first I'd probably call my family or friends and then the police, maybe like the same as if I had an issue with my body I wouldn't really want to go to the GP just because I think Black people like their own business to themself and we don't really like asking for help, especially from like people of authority because then that is like its own issue, like they can become very racist when they have authority and we feel silenced but, I don't know, yeah, health is a bit like different but it is kind of similar, like I would relate it just as much to like the police, like how much we trust them, we just don't trust people in our business (Female, age 19, interview)

Heath professionals acknowledged the issue of mistrust within the community, suggesting they took time to explain and demystify procedures, for example, reinforcing confidentiality and equality in treatment of service-users. However, HCPs placed more emphasis on fears related to breach of anonymity and confidentiality, particularly for STI

home-testing kits where there were risks of partners or friends intercepting kits/results and behaviours being disclosed to family or friends. While this was a concern for young adults, mistrust extended beyond fear of personal information being shared with partners and families, to fears about "history repeating itself" (YA5) in terms of the misuse of medical intervention.

3. Lack of knowledge

For many of the young adults, limited knowledge regarding STI symptoms and treatments, including how to access STI tests, presented a barrier to STI testing. As such, young people suggested they would rather wait and respond to a discomforting symptom, than engage with proactive STI testing. STI testing was therefore viewed as an option of last resort. Although personal responsibility for increasing knowledge about STIs and testing was acknowledged, approximately half of the young adults expressed a need for improved sexual health education at school or college, as well as via public health campaigns. The need for education was particularly identified in relation to the process of STI-testing i.e., the *how* as well as the *why*.

> YA12: I'm not really educated much on STI testing which probably may seem like a downfall and I feel like in that case for like probably other individuals who relate with a lack of knowledge like myself, you would wait till like the final call or till you feel like a symptom to actually build up the courage to actually go, find an establishment and go in there (Female, age 19, interview)

Health professionals supported a need for education, as well as identifying a need to correct misinformation, which was recognised as being inherited from peers or older generations; many describing encounters in clinical practice where misinformation had led to delays in testing and treatment.

> HCP1: So ultimately, I just think it's like a generational issue and it has to be this generation of youth that get the information, otherwise it's going to end up being the exact same issue for the youth's children, when they have them, they're just going to be none the wiser again. So, it's, yeah, it really needs to be, like I really, really wish that schools and education settings did more about it and

> made it less of like a laughing matter as well, made it quite serious for people to understand like the ramifications of not getting treated, of getting an STI and leaving it and the health issues it can cause (Health Advisor, interview)

Participants explored potential outlets for a campaign to support engagement with STI testing within the young Black Caribbean population. Specifically, participants identified use of podcasts, culturally targeted radio stations and social media. TikTok, which compiles short videos for users to watch, was frequently highlighted by young people as their preferred social media platform. Young people raised the importance of "capturing the person's attention within the first milliseconds" (YA10).

> YA12: I'm like an active individual on social media, especially like TikTok. I would say using such a platform to actually help educate people (Female, age 19, interview)

> YA6: TikTok is very influential on like our age group at the moment, like everyone's on it, you spend hours on it and as you scroll you come across ads and a lot of the times the ads will catch your attention (Female, age 20, interview)

Content of the proposed STI testing campaign was strongly recommended to include representation from Black Caribbean communities, with emphasis on discretion and confidentiality of STI-testing; and guidance on how to access and perform tests. Somebody who "looks like me" (YA3, YA6, YA7) was a common thread regarding social media content, however it was stressed that this needed to be presented in a balanced way, so as not to 'single out' the Black Caribbean community as problematic.

> YA6: Especially if you know, they contain people that look like me so if there's anyone black I kind of think, oh what's this about, like oh, what are they talking about, so I think that would be a great very effective way to actually portray the message of testing and the importance of it (Female, age 20, interview)

Other approaches to increasing awareness and knowledge of STI testing included integrating sexual healthcare education into established community structures, for example, by reaching out to community leaders in faith-based settings (Churches and Sunday Schools) as well as locations such as hairdressers and barbers or Caribbean shops.

Discussion

Findings show that decades of socio-culturally embedded knowledge and behaviours designed to protect the Black Caribbean communities from external threat continue to influence young people's STI testing behaviour today. While some of the factors we identified are also applicable to groups other than those of black Caribbean heritage (e.g., gendered differences in attitudes towards sex, social stigma, limitations in knowledge [17]), others (e.g., mistrust as a legacy of medical racism and malpractice; religious and cultural nuances of stigma) are specific to the Black Caribbean population and would therefore benefit from targeted intervention.

Our findings, along with those from previous studies, indicate high levels of stigma, rooted in conservative religious traditions, create a barrier to STI testing in young Black Caribbean adults [18]. Perceptions of STIs and by association, STI testing, as a marker of purity in women are consistent with previous research examining restrictive norms in young people from communities that prohibit premarital sex [19]. Our findings extend this understanding of gendered norms with regards to sexual behaviour, to also include preventative sexual health behaviours within the Black Caribbean ethnic group, indicating the intersectionality of gender, ethnicity, and age as a target for intervention.

Protecting personal data and DNA from unauthorised use were further expressed as concerns and therefore barriers to STI testing by young people in our study. These concerns were embedded in the cultural intergenerational traumas of mistreatment by medical science. It is well-documented that the Black population have for centuries endured institutional racism [20,21], medical neglect [22] and involuntary medical treatments [22,23]. Such harm, manufactured by the healthcare industry has deeply impacted the community, causing widespread distrust towards healthcare institutions, including STI testing and treatments. Understanding this historical context is crucial for understanding barriers to STI testing [24], yet very few health theories or interventions have attempted to link historical trauma and preventative sexual health behaviour among Black young people in the present day [13]. Future interventions are recommended to target these factors.

Lack of knowledge about STI testing in the young adult Black Caribbean population is not unique to this ethnic group, however, strategies for increasing knowledge in this population will require sensitivity to culturally embedded mistrust and misinformation. Information campaigns delivered via social media or radio, as well as reaching out to community spaces were recommended by our young adult participants, supporting existing findings that young people are keen to learn about sexual health through a range of media [25,26]. Our findings show that messaging will need to focus on building trust as well as demystifying the process of testing. Information will need to be presented in a balanced way to avoid inadvertently perpetuating stereotypes and include representation from people of Black Caribbean heritage.

Implications for practice

Community-based participatory approaches are the gold standard for developing interventions for underserved communities [27]. Co-producing interventions with Black Caribbean stakeholders as full and equitable partners is therefore essential for ensuring relevance and acceptability of future interventions [28]. Previous research shows the impact community-tailored radio stations can have on increasing awareness of medical and healthcare research [29], although a study by Jenkins et al., [30] did not find a significant difference in STI testing kits being ordered during and post-radio advert, highlighting the challenges in achieving behaviour change. Nevertheless, integrating sexual health information into established community structures has been shown to be feasible and trusted by attendees in Caribbean countries, when managed sensitively [31]. Table 3 presents ideas for intervention strategies based on our qualitative findings.

Strengths and limitations

This study highlights the importance of understanding socio-historical and cultural norms that are unique to the black Caribbean community, for understanding barriers to STI testing in this group. It is one of very few qualitative studies conducted specifically with young adults of Black Caribbean ethnicity [12]. The study included a varied sample; however, we recognise limitations in our

understanding of the heterogeneity of the sample. Further research should be mindful of the multitude of communities and heterogeneous cultures within the UK Black Caribbean population (e.g., first, second, third generation; Spanish/French/Dutch speaking heritage). There was also an over-representation of female participants in our sample and those who were either employed or at university, as well as a lack of data collected on correlation between gender identity and sex assigned at birth. We may therefore have missed insights from a wider range of Black Caribbean young adults including those who are socio-economically deprived or with poorer educational attainment. Further research is recommended to actively involve these marginalised groups through a process of co-production. Future studies should also collect data on health professional ethnicity, to support understanding of the impact of professional cultural background on therapeutic relationships.

Conclusion

Culturally and historically embedded factors, unique to the Black Caribbean community and passed down through generations impact young people's choices regarding STI testing. Targeting these factors within co-produced and culturally tailored interventions may be more effective for increasing STI-testing (and thus reducing rates of STI-infection) in the young adult, Black Caribbean population.

References

1. Aicken, C. R., Wayal, S., Blomquist, P. B., Fabiane, S. M., Gerressu, M., Hughes, G., & Mercer, C. H. (2019). Pathways to, and use of, sexual healthcare among Black Caribbean sexual health clinic attendees in England: evidence from cross-sectional bio-behavioural surveys. *BMC Health Services Research*, *19*, 1-13.
2. Bardsley, M., Wayal, S., Blomquist, P., Mohammed, H., Mercer, C. H., & Hughes, G. (2022). Improving our understanding of the disproportionate incidence of STIs in heterosexual-identifying people of black Caribbean heritage: findings from a longitudinal study of sexual health clinic attendees in England. Sexually transmitted infections, 98(1), 23-31.
3. Public Health England. (2021, September 29). Promoting the sexual health and wellbeing of people from a Black Caribbean background: An evidence-based resource. GOV.UK. https://www.gov.uk/government/publications/promoting-the-sexual-health-and-wellbeing-of-people-from-a-black-caribbean-background-an-evidence-based-resource

4. Furegato, M., Chen, Y., Mohammed, H., Mercer, C. H., Savage, E. J., & Hughes, G. (2016). Examining the role of socioeconomic deprivation in ethnic differences in sexually transmitted infection diagnosis rates in England: evidence from surveillance data. Epidemiology & Infection, 144(15), 3253-3262.

5. GOV UK. (2023). *Sexually transmitted infections and screening for Chlamydia in England: 2022 report*. GOV.UK. https://www.gov.uk/government/statistics/sexually-transmitted-infections-stis-annual-data-tables/sexually-transmitted-infections-and-screening-for-chlamydia-in-england-2022-report

6. Quinn, K., Dickson-Gomez, J., Zarwell, M., Pearson, B., & Lewis, M (2020) "A gay man and a doctor are just like, a recipe for destruction": How racism and homonegativity in healthcare settings influence PrEP uptake among young Black MSM. AIDS and Behavior, 23(7), 1951-1963

7. Wayal, S., Gerressu, M., Weatherburn, P. et al. A qualitative study of attitudes towards, typologies, and drivers of concurrent partnerships among people of black Caribbean ethnicity in England and their implications for STI prevention. BMC Public Health 20, 188 (2020). https://doi.org/10.1186/s12889-020-8168-0

8. McDoom, M. M., Bokhour, B., Sullivan, M., & Drainoni, M. L. (2015). How older black women perceive the effects of stigma and social support on engagement in HIV care. AIDS patient care and STDs, 29(2), 95-101.

9. Lippman, S., Morris, J., Lightfoot, M., & Philip, S. (2011). P2-S3. 05 Association of STI-related stigma and shame to STI testing and partner notification among young black men in San Francisco. Sexually Transmitted Infections, 87(Suppl 1), A238-A238.

10. Sutton, M. Y., & Parks, C. P. (2013). HIV/AIDS prevention, faith, and spirituality among Black/African American and Latino communities in the United States: Strengthening scientific faith-based efforts to shift the course of the epidemic and reduce HIV-related health disparities. Journal of religion and health, 52, 514-530.

11. Burns, J. C., Reeves, J., Calvert, W. J., Adams, M., Ozuna-Harrison, R., Smith, M. J., ... & Watkins, D. C. (2021). Engaging young Black males in sexual and reproductive health care: a review of the literature. American Journal of Men's Health, 15(6), 15579883211062024.

12. Wayal, S., Aicken, C.R.H., Griffiths, C., Blomquist, P.B., Hughes, G., Mercer, C.H. (2018) Understanding the burden of bacterial sexually transmitted infections and *Trichomonas vaginalis* among black Caribbeans in the United Kingdom: Findings from a systematic review. PLoS ONE 13(12): e0208315. https://doi.org/10.1371/journal.pone.0208315

13. Opara, I., Abrams, J.A., Cross, K. & Amutah-Onukagha, N. Reframing Sexual Health for Black Girls and Women in HIV/STI Prevention Work: Highlighting the Role of Identity and Interpersonal Relationships. *Int. J. Environ. Res. Public Health* **2021**, *18*, 12088. https://doi.org/10.3390/ijerph182212088

14. Clarke, R., Heath, G., Ross, J. & Farrow, C. (2023) Interventions Supporting Engagement with Sexual Healthcare among People of Black Ethnicity: A Systematic Review of Behaviour Change Techniques Sexual Health (under review)

15. Wayal, S., Hughes, G., Sonnenberg, P., Mohammed, H., Copas, A. J., Gerressu, M., ... & Mercer, C. H. (2017). Ethnic variations in sexual behaviours and sexual health markers:

findings from the third British National Survey of Sexual Attitudes and Lifestyles (Natsal-3). The Lancet Public Health, 2(10), e458-e472.

16. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.
17. Jackson, L., Al-Janabi, H., Roberts, T., et al. (2021) Exploring young people's preferences for STI screening in the UK: a qualitative study and discrete choice experiment. Soc Sci Med, 279:113945
18. Rooney, E., & Willis, D. (2015). P109 “Love thy neighbour”: an evaluation of religion as a potential barrier to accessing sexual health services for gay and bisexual men in the west of scotland.
19. Saharso, S., van Hoogstraaten, J., Claassen, R., & Jokic, M. (2023). No sex before marriage? Migrant youth navigating restrictive norms regarding premarital relationships. Ethnic and Racial Studies, 1-21.
20. Nuriddin, A., Mooney, G., & White, A. I. (2020). Reckoning with histories of medical racism and violence in the USA. The Lancet, 396(10256), 949-951.
21. Jaiswal, J., & Halkitis, P. N. (2019). Towards a more inclusive and dynamic understanding of medical mistrust informed by science. Behavioral Medicine, 45(2), 79-85.
22. Ashton, C. M., Haidet, P., Paterniti, D. A., Collins, T. C., Gordon, H. S., O’Malley, K., ... & Street Jr, R. L. (2003). Racial and ethnic disparities in the use of health services: bias, preferences, or poor communication? *Journal of general internal medicine*, *18*(2), 146-152.
23. Ojikutu, B. O., Bogart, L. M., & Dong, L. (2022). Mistrust, empowerment, and structural change: lessons we should be learning from COVID-19. American Journal of Public Health, 112(3), 401-404.
24. Lee, A. T., Chin, P., Nambiar, A., & Hill Haskins, N. (2023). Addressing intergenerational trauma in Black families: Trauma-informed socioculturally attuned family therapy. Journal of marital and family therapy.
25. Fowler, L. R., Schoen, L., & Morain, S. R. (2021). Let's Tok about sex. *Journal of Adolescent Health*, *69*(5), 687-688
26. Bautista, P. S., Alonso-López, N., & Giacomelli, F. (2021). Fact-checking in TikTok. Communication and narrative forms to combat misinformation. *Revista Latina de Comunicación Social*, (79), 87-112.
27. McCuistian C, Peteet B, Burlew K, Jacquez F. Sexual Health Interventions for Racial/Ethnic Minorities Using Community-Based Participatory Research: A Systematic Review. Health Education & Behavior. 2023;50(1):107-120. doi:10.1177/10901981211008378
28. Woode Owusu M, Estupiñán Fdez. de Mesa M, Mohammed H, et al Race to address sexual health inequalities among people of Black Caribbean heritage: could co-production lead to more culturally appropriate guidance and practice? (2023) Sexually Transmitted Infections Published Online First: 03 May 2023.

29. Medeossi, B. J., Stadler, J., & Delany-Moretlwe, S. (2014). 'I heard about this study on the radio': using community radio to strengthen Good Participatory Practice in HIV prevention trials. BMC Public Health, 14(1), 1-8.

30. Jenkins, W. D., Rabins, C., Barnes, M., Agreda, P., & Gaydos, C. (2011). Use of the internet and self-collected samples as a sexually transmissible infection intervention in rural Illinois communities. Sexual Health, 8(1), 79-85.

31. Pichon, L. C., Williams Powell, T., Williams Stubbs, A., Becton-Odum, N., Ogg, S., Arnold, T., & Thurston, I. B. (2020). An exploration of US Southern faith Leaders' perspectives of HIV prevention, sexuality, and sexual health teachings. International journal of environmental research and public health, 17(16), 5734.

501 Table 1 Young Adult participants
502

Participant	Age	Gender	Religion	Sexual orientation	Relationship status	Employment status	Data collection
YA1	20	Female	Christian	Gay	Single	Student	Interview
YA2	25	Male	Christian	Heterosexual	Single	Part-time employment	Interview
YA3	24	Female	Christian	Heterosexual	In a relationship - not co-habiting	Full-time employment	Interview
YA4	23	Female	Christian	Heterosexual	Single	Student	Interview
YA5	21	Female	No religion	Heterosexual	Single	Student/ part time employment	Interview
YA6	20	Female	Christian	Heterosexual	Single	Student	Interview
YA7	23	Male	No religion	Gay	Single	Full-time employment	Interview
YA8	24	Female	Prefer not to say	Bi-sexual	In a relationship - not co-habiting	Self-employed	Interview
YA9	19	Female	Christian	Heterosexual	Single	Student	Interview
YA10	19	Male	Christian	Heterosexual	Single	Student/ Full time employment	Interview
YA11	19	Female	Christian	Heterosexual	Single	Student/part time employment	Interview
YA12	19	Female	Christian	Heterosexual	In a relationship not co-habiting	Student	Interview
YA13	19	Female	Prefer not to say	Heterosexual	Single	Student	Interview
YA14	19	Female	Christian	Heterosexual	Single	Student	Interview
YA15	19	Female	Christian	Heterosexual	Single	Student/part time employment	Focus Group
YA16	19	Female	Christian	Heterosexual	Single	Unemployed	Focus Group
YA17	21	Female	Muslim	Heterosexual	Single	Student/part time employment	Focus Group
YA18	19	Female	Muslim	Heterosexual	Single	Student	Focus Group

YA19	19	Female	Christian	Heterosexual	Single	Student	Focus Group

503

504 Table 2 Health Professional participants

505

Participant	Profession	Speciality	Years in role	Data collection
HCP1	Health Advisor	Sexual health	9 months	Interview
HCP2	Clinical Educator	Sexual health	1 year	Interview
HCP3	Senior research nurse	Sexual health	20 years	Interview
HCP4	Nurse	Sexual health	10 years	Interview
HCP5	Sexual health Sister (nurse)	Sexual health	2.5 years	Interview
HCP6	Speciality Doctor in GU and HIV medicine	Sexual health	10 years	Interview

506

507 Table 3 Key findings and ideas for intervention

Themes	Barriers to STI testing	Ideas for co-produced intervention content	Ideas for intervention co-delivery
Culturally embedded stigma	STIs stigmatised by cultural conceptions of purity and shame. Challenges regarding cultural acceptability of talking about STIs, tests and treatments.	Normalise STI testing through open discussion by relevant role models; model how to talk about STIs and STI testing by credible sources (e.g., celebrities / musicians relevant to young BC population).	Multi-media campaigns (podcasts, social media posts/videos, radio, TV/cinema adverts, billboards).
Historically embedded mistrust	Legacies of colonialism, medical racism and malpractice have compromised young people's trust in medical intervention and confidentiality of data management.	Acknowledge and address historical context of medical racism and malpractice; actively rebuild trust regarding intervention and confidentiality; demonstrate how data is effectively protected and managed.	Seminars in schools, colleges and universities; dramatization; social media videos and posts by culturally accessible credible sources.
Lack of knowledge	A lack of knowledge related to STIs and their treatment, and in how to access and perform STI tests.	Increase knowledge about STI transmission, prevention, symptoms, treatment and health consequences; demonstrate where, when and how to access STI tests and treatments.	Digital campaigns (targeted social media averts and videos containing meaningful and digestible information).

508

Funding This study was funded by University Hospitals Birmingham NHS Foundation Trust

Conflicts of interest Jonathan Ross reports personal fees from GSK Pharma and Bayer Consumer Care; ownership of shares in GSK Pharma and AstraZeneca Pharma; lead author of the UK and European Guidelines on Pelvic Inflammatory Disease; Member of the European Sexually Transmitted Infections Guidelines Editorial Board. He is an NIHR Journals Editor and associate editor of Sexually Transmitted Infections journal. He is treasurer for the International Union against Sexually Transmitted Infections and chair of charity trustees for the Sexually Transmitted Infections Research Foundation. The other authors report no conflicts of interest.

Data availability Data that support the findings of this study are available on request from the corresponding author.