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Journal of Clinical Nursing (author accepted version 07-01-2024)

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Transgender and Non-Binary Peoples Experiences of Cervical Cancer Screening: A Scoping Review

Aim(s): To synthesise the literature about transgender and non-binary people's experiences of cervical cancer screening and identify ways to improve screening.

Background: Transgender people often face barriers to accessing health services including cervical screening, where transgender people have a lower uptake than cisgender women.

Design: A scoping review was undertaken following the Arksey and O'Malley (2005) framework and the PRISMA-ScR checklist. Following database searching of Medline via PubMed, Web of Science, Scopus and CINHAL, 23 papers published between 2008-2003 were included. Papers were included if they shared trans and non-binary people's experiences of cervical screening and were written in English. There were no date or geographical data restrictions due to the paucity of research.

Results: Transgender people experience barriers to cervical screening including gender dysphoria, a history of sexual trauma, and mistrust in health professionals or health services, which can result in having negative experiences of screening or avoiding screening. Health professionals can help to create a positive experience by informing themselves about best practices for trans+ health.

Conclusion: Changes are required to improve transgender people's experiences and uptake of cervical screening. Improving medical education about trans health and updating health systems would help to combat issues discussed.

Implications for the profession and/or patient care

Having an understanding of the reasons why accessing health services can be more difficult for transgender people will help health professionals to provide appropriate care for transgender patients. This paper details this in the context of cervical cancer screening and can be applied to other areas of healthcare.

What does this paper contribute to the wider global clinical community?

- This paper provides insight into transgender and non-binary peoples' experiences of cervical screening, including factors that lead to a lower uptake of screening in this group.
- The implications will be useful for service providers and health professionals who deliver cervical screening, helping to increase uptake and make screening less daunting for trans+ people.

Reporting Method: We have adhered to relevant EQUATOR guidelines and used the PRISMA-ScR reporting method.

No Patient or Public Contribution.

Introduction

Inequality and discrimination of transgender people is evident in all areas of life, including medicine and healthcare (Faye 2022). The term transgender refers to people who identify as a gender other than their sex assigned at birth, whereas, a cisgender person is someone who identifies with their sex assigned at birth (Stonewall 2017)[1]. This scoping review synthesises published research in this area to show what is currently known about trans men and nonbinary peoples (TMNB) experiences of cervical cancer screening (CCS).

Globally, trans people have low rates of access to health care due to issues such as violence, legal barriers and discrimination. For example, most countries do not legally recognise transgender identities, which contributes to exclusion and marginalisation (World Health Organisation 2022). The Equality Act 2010 states the legal duty of all health and social care organisations in the UK to provide equal

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[1] Some trans identities fall within the gender binary, which refers to classifying individuals into two categories: man or woman (Vincent 2020). Binary-oriented trans identities are trans men, which refers to people assigned female at birth (AFAB) who identify as a man, and trans women; someone who was assigned male at birth (AMAB) and identifies as a woman (Stonewall 2017). Genders which go beyond the gender binary can be referred to under the umbrella term non-binary, which means they do not identify as male or female, such as agender, genderqueer or bigender (Stonewall 2017; Vincent 2020).

treatment; however, trans people often face adversity within these services (Bachmann and Gooch 2018). The LGBT in Britain Health Report (Bachmann and Gooch 2018) drawing on a survey of 5375 LGBT people, including 752 trans people, found that 32% of trans people had experienced unequal treatment within the National Health Service (NHS), including inappropriate curiosity and discriminatory remarks from health care staff. These experiences can lead to trans people mistrusting health professionals or avoiding health care due to experienced or expected discrimination (Pearce 2018; Bachmann and Gooch 2018). Additionally, 62% of trans people reported NHS staff lacked understanding about trans-specific health needs (Bachmann and Gooch 2018). This may be due to the lack of education on trans health care, which is seen as a specialty area only necessary for those who will work in gender affirming care, even though trans people have the right to good health care in all areas (Vincent, 2018b).

Furthermore, 40% of trans people said they had experienced difficulties accessing health care due to their trans status (Bachmann and Gooch 2018). For example, a high proportion of TMNB report gender-identity discrimination in health care, which can deter them from seeking health care in the future (Eiduson et al. 2021). TMNB who have had negative experiences with health care professionals (HCP), or heard of such stories from others, can anticipate further mistreatment, which can lead to delaying treatment (Gomez et al. 2021).

Gendered health settings can also cause discomfort among TMNB, for example the gendered language within health services may feel like a constant stressor, leading to heightened dysphoria (Gomez et al. 2021). Many health care settings and providers intentionally or unintentionally treat TMNB as abnormal or ‘other’ due to the extent of cisnormativity in health care. This means TMNB must constantly combat assumptions about their bodies, their gender and their sexuality, which can decrease willingness to return for necessary health care (Eiduson et al. 2021). Furthermore, non-binary individuals are often treated as a binary gender, especially in situations or conditions that are usually associated with a specific gender. For example, in a recent study, a non-binary participant with endometriosis was perceived as a woman, i.e. in language used in relation to the condition (Eiduson et al. 2021). This highlights the need to consider how health services can be supported to be more inclusive and meet the needs of binary and non-binary trans people.

A health service where this is particularly apparent is CCS as trans people are less likely to attend this service than their cisgender counterparts. A small number of United States (US)/ Canada research has aimed to quantify this, for example a Canadian study reported that trans+ people are 60% less likely to attend this service (Kiran 2019). Cervical cancer symptoms include unusual vaginal bleeding or discharge, pain during sex, and pelvic pain; however, many people with cervical cancer do not experience symptoms (Cancer Research UK 2020). Not attending CCS places people at risk of missing early cervical cell changes, meaning the limited uptake of screening among TMNB places them at a higher risk of developing cervical cancer (Reisner et al., 2018; Dhillon et al., 2020).

The CCS programme in the United Kingdom (UK) offers screening for people with a cervix aged 25-64 years old, or after age 64 if the person has never attended screening or if their last test showed abnormal changes (Public Health England 2021). Cervical cancer is caused by abnormal cell changes due to the human papillomavirus (HPV). If left untreated, the abnormal cell changes may develop into a tumor (Cancer Research UK 2020). The HPV vaccination programme, which aims to protect people from the transmission of HPV, has significantly reduced mortality since its introduction in 2008 (Crosbie et al. 2013). However, the vaccine can only protect against 70-80% of cervical cancer, meaning that screening is recommended regardless of HPV vaccination status (Crosbie et al. 2013; Harb et al. 2019).

Regular cervical screening saves lives. Screening detects early changes in cervical cells, which can then be treated to prevent development of cancer (Public Health England 2021). Additionally, screening can halt disease progression as early detection means treatment can begin sooner (Crosbie et al. 2013; Cancer Research UK 2020), reducing the risk of cancer spreading (Burns et al. 2007), and thus resulting in better patient outcomes. This reduces the risk of mortality and ongoing physical and psychological issues suffered by cancer survivors who receive treatment later, such as bladder and bowel dysfunction or dyspareunia, which can affect their quality of life (Burns et al. 2007).

Additional risk factors for acquiring HPV and developing cervical cancer include smoking and sexual violence, which trans people report higher rates of (Gatos 2018); therefore, it is imperative to improve the uptake of CCS among TMNB. However, increasing the uptake requires understanding TMNB experiences of cervical screening to develop and implement changes to improve patient experiences of CCS and ultimately make CCS more accessible to TMNB.

Aims and Objectives

The aim of this scoping review is to synthesise research on this topic to provide an overall understanding of TMNB experiences of cervical screening and to identify implications to improve cervical screening experiences and uptake in the future, using the following objectives:

- To explore what is currently known about TMNB experiences of accessing and attending cervical cancer screening.
- To understand factors which affect experiences and uptake of cervical screening among TMNB and to provide recommendations for future improvements.

Methods

Design

A scoping review was carried out following the framework from Arksey and O'Malley (2005). Scoping reviews are often used in health research on topics with little published literature in order to demonstrate what is known and identify gaps in the literature (Pham et al. 2014). The process involved defining the research question, identifying and selecting studies as described below, charting relevant data, synthesising this data using thematic analysis and finally presenting the data (Arksey and O'Malley 2005). The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (Triccio et al. 2018) [supplementary file one] was also adhered to.

Search Method

This section summarises the protocol used for this scoping review. Database searching was undertaken using key terms and Boolean operators to maximise exposure to the literature between 23/06/23 to 03/07/23. Medline via PubMed, Web of Science, Scopus and CINHAL were systematically searched using key terms, as shown in

[Supplementary File Two]. Key terms were developed using the population, exposure, outcome (PEO) acronym; the population was TMNB, the exposure was cervical cancer screening, and the outcome was experiences. The search terms (below), included synonyms of the key terms to ensure the search was comprehensive (Arksey and O'Malley 2005).

> TITLE-ABS-KEY (experiences OR attitudes OR perceptions OR views OR opinions OR qualitative) AND TITLE-ABS-KEY (cervical AND cancer AND screening OR cervical AND screening OR pap AND smear OR pap AND test OR smear AND test OR papanicolaou AND test) AND TITLE-ABS-KEY (transgender OR trans OR trans AND men OR transmen OR assigned AND female AND at AND birth OR afab OR transmasculine OR nonbinary OR non-binary OR genderqueer OR gender-queer OR gender AND identity OR gender AND diverse OR agender OR bigender OR gender AND non-conforming OR female AND to AND male OR lgbt* OR two AND spirit)

Due to the paucity of research in this area, further literature was identified through grey literature and citation searching. Two further studies were also identified following discussion with researchers in the field.

Inclusion and Exclusion Criteria

Qualitative, quantitative and mixed-methods research were included, and no publication year exclusion criterion was used because there is little published research in this area. For this reason, no geographical restrictions were included; however, papers were only included if they were in the English language.

Search Outcome

154 papers were identified using this search strategy, and 112 remained once duplicates were removed. The titles and abstracts of the 112 articles were screened, resulting in 81 papers being removed for irrelevance i.e. focusing on other LGBTQ+ identities or other health screening types. The final 31 papers were read in full and scrutinized against the eligibility criteria, resulting in 8 being excluded for focusing on rates of screening uptake or disparities in adequate samples[2], or focusing on different LGBTQ+ identities. Therefore, a total of 23 papers were included in this review. As this literature review was part of the first author's PhD study, the screening process was led by the first author. The remaining authors contributed to the selection and review of papers during supervision.

Figure 1. PRISMA diagram of literature selection.

Data abstraction and synthesis

Key information from the 23 papers was extracted into a data charting form (figure 2), and the data analysed thematically following guidelines outlined in Braun

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[2] TMNB are less likely to produce a sample that can be tested for HPV or abnormal cervical cells. For example, TMNB are more likely to bleed during CCS and too much blood in a sample renders it unusable.

and Clarke (2022). Analysis involved working in an Excel document to create codes that reflected similar experiences, such as “gender dysphoria” and “fear of discrimination”, which were then grouped together to create the three themes presented below. Care was taken to include diverse, contrasting, experiences with each theme. Three authors were involved in the data analysis and any differences in interpretation were resolved by consensus; this helped reduce the risk of selection bias.

Figure 2. A table of characteristics and key data charted from the selected papers

Findings

Themes

Three themes were identified, these were: Theme 1 – Emotional and psychological distress; Theme 2 - Experiences of the healthcare system; Theme 3 - Health care providers attitudes and behaviours towards TMNB. They are discussed after a description of the studies.

Description of the studies

Of the 23 papers, 17 were research studies, 11 of which were qualitative (Agénor et al. 2016; Bernstein et al. 2017; Gibson et al. 2021; Johnson et al. 2016; Johnson, Wakefield, and Garthe 2020; Kerr, Fisher, and Jones 2020; McDowell et al. 2017; Peitzmeier et al. 2017; Peitzmeier et al. 2019; Dutton, Koenig, and Fennie 2008; Carroll et al. 2023), two mixed-methods (Potter et al. 2015; Berner, et al. 2021a) and four quantitative (Seay et al. 2017; Shires et al. 2019; Roznovjak et al. 2023; Harb et al.

2019). Three of the papers were literature review articles (Connolly, Hughes, and Berner 2020; Dhillon et al. 2020; Gatos 2018), two were recorded conference presentations (Berner *et al.*, 2021b; Berner *et al.*, 2021c) and one was a conference abstract (Semlyen and Kunasegaran 2016). Additionally, two research articles, (Bernstein et al. 2017; McDowell et al. 2017), were doctoral dissertations. Grey literature such as conference videos, conference abstracts and doctoral theses were included due to the paucity of literature in the area.

All 23 studies were conducted in the Global North: 13 in the USA, four in the UK, two in Australia and one in Aotearoa, New Zealand. In the three review papers, all (Gatos 2018) or the majority of studies reviewed were conducted in the US, with one from France, Canada and Italy (Connolly, Hughes, and Berner 2020), and one from Canada and the UK (Dhillon et al. 2020). The majority of participants in each study were aged between 18-30 years, non-hispanic White, TMNB patients recruited from specialist LGBTQ+ services.

Six papers included health care professional's perspectives of cervical screening for TMNB, including 60 health professionals from a "women's health" department (Shires et al. 2019), 17 health professionals with experience of caring for trans people (Potter et al. 2015) and 12 key informants on cancer policy, sexual and reproductive health and trans health (Gibson et al. 2021).

Theme 1 – Emotional and psychological distress

Patients and providers consistently reported that TMNB experience physical and psychological distress, discomfort and anxiety when attending, or considering attending CCS (Agénor et al. 2016; Dhillon et al. 2020). TMNB are often aware of the importance of screening for health; however, the emotional distress can be so severe that a significant proportion of TMNB avoid CCS (Dutton, Koenig, and Fennie 2008). For example, 55% of TMNB patients in Australia reported avoiding CCS due to anticipating the procedure to be emotionally traumatic (Kerr, Fisher, and Jones 2020). This is caused by multiple, often interlacing, factors, which are outlined below.

A history of sexual trauma

CCS can be distressing for anyone with sexual trauma; however, globally, there is a higher rate of sexual trauma among TMNB than cisgender women (Gibson et al. 2021); therefore, it is important to understand how this affects CCS in order to improve uptake and experiences among TMNB.

TMNB patients with sexual trauma often reported negative experiences including distress, a loss of control and PTSD-like symptoms during CCS (Bernstein et al. 2017). Some TMNB also shared that sexual trauma prevented them from attending screening due to fear surrounding the invasive nature of the procedure (Carroll et al. 2023). Additionally, many participants discussed worries of being touched by a stranger or being ignored if they needed the procedure to stop (Bernstein et al. 2017). In one study, the idea of penetration was extremely distressing to a participant, so the use of the speculum meant they were not able to access screening (Johnson, Wakefield, and Garthe 2020). This participant had scheduled multiple CCS appointments; however, had cancelled them due to fear and anxiety (Johnson, Wakefield, and Garthe 2020).

Heightened gender dysphoria before, during and after cervical cancer screening

Gender dysphoria, which refers to the distress caused by the incongruence between gender identity and sex assigned at birth (Johnson et al. 2016), was consistently discussed across the literature and was reported as one of the primary reasons for delaying or avoiding cervical screening (Carroll et al. 2023; Roznovjak et al. 2023). Some TMNB experience gender dysphoria throughout their everyday lives; however, it can be exacerbated by CCS due to the focus on genitalia (Johnson et al., 2016; Berner et al., 2021a). One participant stated that the focus on their genitals during screening left them feeling like they were pre-transition as they felt as dysphoric as they did before receiving gender-affirming care (Peitzmeier et al. 2017).

Additionally, TMNB patients can feel uncomfortable with the practitioner seeing their genitalia as this means the practitioner is aware they do not have a traditionally male body, which may not be the case in their everyday lives (Peitzmeier et al. 2017). Some participants also reported that the physical contact during CCS heightens their dysphoria (Carroll et al. 2023; Dutton, Koenig, and Fennie 2008). As a result, TMNB report feeling dysphoric, vulnerable and exposed during screening (Peitzmeier et al. 2017).

Gender dysphoria can also be triggered by correspondence about CCS, including being sent an invitation, booking an appointment, or discussing the need to access CCS (Dhillon et al., 2020; Berner et al., 2021a; Berner et al., 2021b). This is due to CCS being seen as a ‘woman’s exam’, so such correspondence reminds the patient that they have anatomy that is incongruent with their gender (Dhillon et al. 2020). Many TMNB also report feeling worried about being outed by the screening invitation, which refers to other people discovering their trans status, due to seeing that they require CCS (Berner et al., 2021b).

Heightened gender dysphoria can continue to be experienced following the procedure (Bernstein et al. 2017). For example, CCS may lead to disturbing after effects such as vaginal bleeding (Dhillon et al. 2020; Potter et al. 2015). One participant reported experiencing severe pain during the procedure and bleeding for two days following, which caused menstrual dysphoria, trauma, and avoidance of future CSS (Bernstein et al. 2017). This participant had called for the procedure to stop; however, the practitioner had ignored this request.

Additionally, the thought of developing cervical cancer can be distressing for many TMNB (Connolly, Hughes, and Berner 2020). One participant stated that having cervical cancer would lead to dysphoria so intense that it "would kill me as much as the disease would kill me" (Peitzmeier et al. 2017:p2144). This means that TMNB must navigate the risks of discomfort caused by CCS, along with the risks of developing cervical cancer and the distress this would cause (Peitzmeier et al. 2017; Connolly, Hughes, and Berner 2020).

However, dysphoria is not a homogenous experience among TMNB during CCS. Some participants do not experience dysphoria during CCS (Connolly, Hughes, and Berner 2020), while others report that their dysphoria during CCS has reduced as they progress further into their transition (Peitzmeier et al. 2017; Bernstein et al. 2017). Furthermore, Peitzmeier et al., (2017:p2140) suggests that people who identify as more masculine, such as transgender men or masculine-leaning nonbinary people, may experience more severe gender dysphoria as compared with people who identify further away from the masculine end of the spectrum (Peitzmeier et al. 2017). This is further evidenced in Kerr, Fisher and Jones, (2020) which found that trans men in Australia were much less likely to attend screening than gender diverse people. Additionally

Peitzmeier et al. (2017) suggests that gender dysphoria may be less severe in people who are able to view CCS as gender neutral, thus suggesting the extent of gender dysphoria can be influenced by where both identity and perception of the procedure are placed on a masculine-feminine spectrum.

Some participants report that they have become more comfortable in their bodies and no longer feel dysphoria during CCS (Bernstein et al. 2017). One participant stated that a bad experience during CCS would not cause gender dysphoria or affect their self-esteem as they are affirmed and accepted by themselves and other people in their life (Bernstein et al. 2017). However, a participant who was not accepted by their family discussed feeling intense dysphoria during screening as they feared that the practitioner have a similar reaction (Bernstein et al. 2017). Therefore, the extent of gender dysphoria experienced during CCS may be affected by how the participant views their own body, and how their body is viewed by others (Bernstein et al. 2017; Kerr, Fisher, and Jones 2020).

Theme 2 - Experiences of the healthcare system

Many systematic barriers to CCS for TMNB were identified (Gibson et al. 2021; Bernstein et al. 2017). This theme explores the impact of the way the health system can affect TMNB experiences of screening, for example, often TMNB who are registered as male on health records in the UK, US and Aotearoa do not get invited to CCS because current systems do not recognise that TMNB may require CCS. This, among other issues, which are outlined below, has resulted in trans patients reporting feelings of discomfort and distrust within health services.

Feeling ignored and invisible within healthcare

Globally, TMNB have often been excluded from CCS policy, provision and research, resulting in some TMNB feeling ignored within CCS (Gibson et al. 2021; Agénor et al. 2016). For example, many TMNB participants discussed their frustration at the lack of research and guidelines around CCS in the US (Agénor et al. 2016). Contrastingly, the Australian national CCS program recently began using gender-inclusive language and recommending screening for all people with a cervix (Kerr, Fisher, and Jones 2020). At the time of publishing, 44.6% of participants in an Australian study had never been recommended screening but this change was expected to improve the uptake of CCS across Australia (Kerr, Fisher, and Jones 2020).

The lack of inclusion of TMNB in discussions of CCS means that some TMNB patients are unaware that they are at risk of cervical cancer, or may feel like their health is at risk and seen as less important than that of cisgender women (Agénor et al. 2016). Some participants navigated worries about their gynecological health by regularly attending screening, such as one man who stated that regular screening helps him to feel safe and healthy (Agénor et al. 2016). However, due to the uncomfortable nature of CCS, the lack of awareness of the need for TMNB to access screening, and the unwillingness of some providers to screen TMNB, many TMNB do not attend screening (Agénor et al., 2016; Berner et al., 2021b).

Furthermore, many TMNB report distrust in the healthcare system (Bernstein et al. 2017). For example, health services and health insurance companies may only cover CCS for people registered as female on their health records (Bernstein et al., 2017; Connolly, Hughes and Berner, 2020). This means that many TMNB patients are unable to change their gender marker as they would no longer be able to access CCS; therefore, the inability to align their legal gender with their gender identity is a direct result of the health care system (Bernstein et al. 2017). Because of this, many TMNB view health care as an impediment to their transition (Peitzmeier et al. 2017). Some health services and insurance companies state that people registered as male on their health records cannot access pap smears due to “gender incongruence”, referring to screening only being needed among women, which ignores that women are not the only people with cervixes (Bernstein et al. 2017). Additionally, in the UK, labs often fail to process cervical samples from TMNB due to having a male name on the form (Berner et al., 2021b). This can be reiterated by providers reporting the results, as evidenced by one trans man in the US who was told ‘This is, can’t be for you. You don’t have a vagina.’ (Gibson et al. 2021). This was stated in front of the waiting room, causing the patient to feel extremely uncomfortable, and he never received his results (Gibson et al. 2021).

Perception of CCS as a ‘woman’s procedure’

Historically, CCS has been seen as a woman’s procedure, despite its importance for everyone with a cervix (Kerr, Fisher, and Jones 2020). Levels of comfort often depend on whether providers affirm their patient’s gender identity during screening, and whether patients are able to view CCS as gender neutral (Peitzmeier et al., 2017). Health services can (un)intentionally reinforce the feminisation of the procedure in many ways (Peitzmeier et al. 2017). For example, many health services refer to CCS as a ‘well women’s exam’, which excludes TMNB (Peitzmeier et al. 2017), and resources such as leaflets and pamphlets are aimed at cisgender women, which reinforce that they are not open to other identities (Dhillon et al. 2020).

The gendered nature of many health settings can be uncomfortable and dysphoria inducing, which can make accessing health care as a TMNB difficult. This is especially true when seeking sexual/reproductive health care such as CCS. Some TMNB patients report avoiding appointments at gynaecology clinics due to feeling unwelcome as a result of the non-inclusive environment (Harb et al. 2019). TMNB patients report feeling more comfortable when they are not the only TMNB in the waiting room. For example at trans-specific health clinics, or clinics which set aside appointment blocks specifically for trans people (Johnson, Wakefield, and Garthe 2020; Dhillon et al. 2020).

Many TMNB reported feeling uncomfortable or misunderstood when making CCS appointments by providers and receptionists who discourage or turn away TMNB from attending CCS due to their gender identity and the misconception that CCS is for women only (Berner et al., 2021a; 2021b). Additionally, TMNB may feel uncomfortable when signing non-inclusive intake forms, such as only having “male” or “female” options on gender questions (Dutton, Koenig, and Fennie 2008). This reminds TMNB patients that health care services are not inclusive (Peitzmeier et al. 2017).

Theme 3 – Health care providers attitudes and behaviours towards TMNB

TMNB have consistently reported that the attitudes and behaviours of health care providers can greatly impact their experiences of CCS. For example, in Aotearoa, 30% of those who delayed screening did so due to worries of how they would be treated by HCPs (Carroll et al. 2023). This theme discusses how HCPs can impact TMNB experiences of CCS, both positively and negatively.

Discrimination by health care providers

Due to worries about adverse experiences with health care providers or services, many TMNB opt to access trans-specialist clinics for CCS in the UK and US (Peitzmeier et al., 2017; Dhillon et al., 2020; Berner et al., 2021a). There is a lower uptake of CCS among patients who are not connected to LGBTQ+ competent clinics (Seay et al., 2017). TMNB report feeling more comfortable attending CCS at a trans-specialist health clinic as the providers have a better understanding and experience, meaning trans people feel less anxious about stigma or discrimination (Berner et al., 2021c). For example, all those who reported a positive experience of CCS in a study by Harb et al. (2019) were screened in LGBTQ+ clinics or by a provider who specialised in trans healthcare. Furthermore, a service for TMNB to access CCS was piloted in the UK in which 12/20 patients who were screened there said they would not have accessed screening if the clinic had not existed (Berner et al., 2021c). However, many TMNB patients have reported positive experiences with non-specialist providers who carry out the procedure with patience and understanding, and provide good aftercare (Berner, Connolly, et al. 2021a).

In contrast, some TMNB report negative experiences caused by a lack of sensitivity towards, and education on, trans issues among HCPs (Peitzmeier et al. 2017; Carroll et al. 2023). For example, some participants reported being referred to by their deadname in a waiting room (Dhillon et al. 2020), which can exacerbate the distress already felt by being the only masculine-presenting person in a room full of cis women. Further, some health care workers take a long time, and require multiple conversations with TMNB patients about their identities, to accept and acknowledge different gender identities, which can create concern among patients that requesting CCS would result in them being viewed as less masculine (Berner et al., 2021a).

Previous negative experiences with medical professionals, both within and outside of CCS creates distrust among HCPs and results in TMNB anticipating further negative experiences in CCS (Johnson, Wakefield, and Garthe 2020; Potter et al. 2015). A higher level of discrimination both in healthcare and everyday life is associated with avoiding health services due to a fear of how providers will treat them (Johnson, Wakefield, and Garthe 2020). This can cause worry about disclosing their trans identity to HCPs due to concerns of how they will react (Dutton, Koenig, and Fennie 2008), which may affect whether patients feel comfortable requesting a CCS appointment (Johnson, Wakefield, and Garthe 2020). For example, one participant changes their gender expression to present as female to avoid transphobia when attending screening (Johnson, Wakefield and Garthe, 2020). Therefore, HCPs behaviours and attitudes towards trans people and their bodies play a key role in influencing whether patients will attend screening, and whether they have a positive, neutral or negative experience (Kerr, Fisher, and Jones 2020; Gatos 2018).

Many TMNB patients reported that providers had ignored their calls for the screening exam to stop due to discomfort or distress, which they described as a violation or compared it to rape (Peitzmeier et al. 2019). Additionally, some participants felt unable to tell the practitioner to stop, and instead carried on with the procedure despite discomfort (Peitzmeier et al. 2019). This highlights that the experience of CCS can be made significantly worse if health professionals do not listen to the needs or requests of their patients.

Provider's capability and willingness of providing care to trans people

Despite 85% of CCS providers in a US study stating that they would be willing to screen transgender patients, many TMNB patients report difficulties finding HCPs who do so (Shires et al. 2019). Several patients have been turned away from screening by practitioners who said they had no experience with TMNB patients (Bernstein et al. 2017). One TMNB patient reported negative experiences with overtly transphobic HCPs, and worried CCS would provide practitioners another opportunity to attack them (Berner et al., 2021a). This is a significant issue as practitioners play an important role in CCS access; for example, 38% of TMNB participants in an Australian study did not access CCS due to an inability to find a provider they felt comfortable with (Kerr, Fisher, and Jones 2020). Furthermore, Shires et al. (2019) found that only 40% of the providers in their US based study had screened a transgender patient in the past 5 years, suggesting that despite willingness to screen trans patients, many providers have no experience. As discussed in Gatos (2018), this is potentially due to practitioners being willing to screen TMNB but not feeling like they had enough knowledge to do so appropriately. This can create further worry among trans patients who, as above, would prefer a practitioner with experience caring for trans patients (Dhillon et al. 2020; Peitzmeier et al. 2017).

TMNB report positive experiences of CCS when their providers show respect and sensitivity towards their gender identity (Semlyen and Kunasegaran 2016; Dhillon et al. 2020), which can be demonstrated by using the correct pronouns and terminology, and not making inappropriate comments about their identities or bodies (Johnson, Wakefield, and Garthe 2020). For example, some TMNB patients reported that practitioners who affirmed their gender identity reduced both their levels of discomfort and dysphoria (Dhillon et al. 2020). Additionally, providing further training on working with trans people, such as including different bodies in medical textbooks, can improve providers' understanding of trans issues and the respect and sensitivity shown to trans patients. informing themselves about best practices for trans+ health...

However, some providers are not only inexperienced in practice, but also report unwillingness to provide healthcare for TMNB. Shires et al., (2019) found that a lack of training and knowledge was not associated with unwillingness to provide CCS to TMNB patients, but bias and beliefs about transgender people was. Therefore, it is important to tackle transphobia among health care providers to mitigate negative beliefs about trans people before providing them with training and education around trans health (Shires et al. 2019).

Discussion

This scoping review provides one of the first comprehensive accounts of TMNB experiences of CCS from both a patient and provider perspective. This review highlighted a myriad of negative experiences suffered by TMNB when accessing CCS. Many of these were similar to those of cisgender women such as worries around physical pain, sexual trauma, and embarrassment; however, experiences unique to TMNB were also shared (Dhillon et al., 2020; Kerr, Fisher and Jones, 2020; Berner et al., 2021a). Circumstances such as experiencing poverty, homelessness or sexual assault, or being neurodivergent are associated with a lower uptake of CCS, and are also more common among TMNB (Kerr, Fisher, and Jones 2020).

The findings highlight how TMNB are often subject to negative experiences with CCS due to trans-specific barriers. For example, TMNB often experience a higher level of pain during screening due to testosterone use which causes vaginal atrophy; the thinning and drying of vaginal walls which can increase pain during penetration (Berner, *et al.*, 2021a). Additionally, TMNB may experience gender dysphoria due to the focus on genitalia and may feel heightened embarrassment at HCPs seeing this area of their body (Weyers et al. 2021; Connolly, Hughes, and Berner 2020). Furthermore, TMNB are less likely to provide adequate cervical samples which may mean they need to repeat the potentially distressing procedure (Reisner et al. 2018; Gatos 2018). This highlights the need for trans people to be given equal but not identical care (Caulfield et al. 2016).

Trans people often experience additional systematic barriers to CCS. For example, all people registered as female with their GP automatically receive an invitation every three years; however, trans men who are registered as male do not receive this invitation despite potentially needing this service (Public Health England 2021). Additionally, GP systems tend to offer binary gender classifications which means gender diverse people have to select ‘male’ or ‘female’. This means that not all TMNB receive an invitation to screening, which shows that the current invitation system is a barrier to accessing screening (Public Health England 2021). This systematic denial of the existence of trans people creates distrust within the healthcare system, which can be further exacerbated when undergoing uncomfortable procedures such as CCS (Bernstein et al. 2017).

Implications

This review indicates important implications for healthcare services and education. Positive experiences result from accessing trans-specific screening clinics, or providers who behave in a sensitive and respectful way with patients. This shows that the attitude providers have towards trans patients can affect experiences of CCS; therefore, improving health education is required (Roznovjak et al. 2023). This should include teaching providers to discuss options with their patients which may ease physical and emotional discomfort (Potter et al. 2015), such as offering self-insertion, to be accompanied by a trusted friend, and improving trauma informed care. Additionally, education on appropriate behaviour is required, such as avoiding heteronormative assumptions or inappropriate curiosity. Improving education on trans+ health will also help to reduce potential biases or prejudices, whether conscious or unconscious, held by HCPs, which in turn will improve trans+ peoples experiences of, and trust in, health services.

Furthermore, TMNB patients report feeling more welcome when they are represented in clinics, waiting rooms or correspondence (Dhillon et al. 2020). Therefore, the use of inclusive policy documents, indicators of being trans friendly such as including trans+ people in leaflets, posters or invitation letters, or offering gender neutral bathrooms, can help TMNB to feel included and comfortable when accessing CCS (Potter et al. 2015).

Lastly, removing systemic barriers, such as updating the current invitation system to ensure that TMNB who are registered as male receive an automatic invitation to screening, would make the procedure more accessible, and thus improve the overall experience and future uptake. Electronic systems should also be updated to ensure that contact with patients uses their correct name, pronouns, titles and gender (Carroll et al. 2023). Therefore, multiple changes within the health services are required at a systematic and societal level, which may in turn improve TMNB's experiences of CCS.

Limitations

The lack of published literature in this area is a potential limitation of this review as many TMNB experiences have not yet been captured. Additionally, 3 papers (Agénor et al. 2016; Peitzmeier et al. 2019; 2017) and a further paper and conference abstract (Berner *et al.,* 2021b; Berner *et al.,* 2021c) used data from the same participants which potentially limits the diversity of participants included in this review. Additionally, of the six papers which included providers, three (Peitzmeier et al. 2019; Agénor et al. 2016; Bernstein et al. 2017) used the same 17 providers recruited from a trans-specialist clinic, which limits the diversity of providers discussed in this review. Furthermore, the research on provider perspectives required providers to be interested in research about trans health. This is a potential sample bias because those with negative feelings towards TMNB may not have responded to calls for participants. Additionally, all research with providers was undertaken in the US and Australia, both of which are relatively accepting of trans people (Poushter and Kent 2020). Therefore, studies on provider perspectives in cultures that are less tolerant of TMNB were not captured.

Requiring research to be published in English language may also have excluded research from other countries. While this review did not impose any geographical exclusion criteria, all the research took place in the Global North, which means TMNB people from the Global South are not represented. TMNB living in countries with less tolerance towards LGBTQ+ people may experience adversity when accessing CCS or may be denied this altogether. Further, although some researchers made efforts to recruit a diverse group of participants, such as Peitzmeier *et al.*, (2019), who aimed to recruit older trans patients and trans people of colour, the majority of participants in this review were white and young (aged under 30); therefore, the experiences of older adults or people of colour may not be represented. Until the research evidence base grows, primary studies could ensure that a diverse group of participants are recruited, such as by recruiting from settings outside of trans-specific clinics and recruiting people with multiple marginalised identities to create a wider understanding of TMNB experiences of CCS.

Conclusion

This review has highlighted the ways in which cervical cancer screening often fails TMNB people. Individual barriers, such as gender dysphoria, can be exacerbated by systemic barriers that make practical aspects of accessing cervical screening difficult. Improving trans peoples experiences with and uptake of CCS should involve a multi-level approach including medical education about trans health, health service policy change such as modifying the procedure to make it more appropriate for different bodies, as well as societal change in attitudes towards trans people.

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Declaration of Interest Statement

In accordance with the journal policy and our ethical obligation as researchers, we are reporting that we have no conflicts of interests relating to this paper. This review was undertaken as part of a self-funded PhD and received no other funding.

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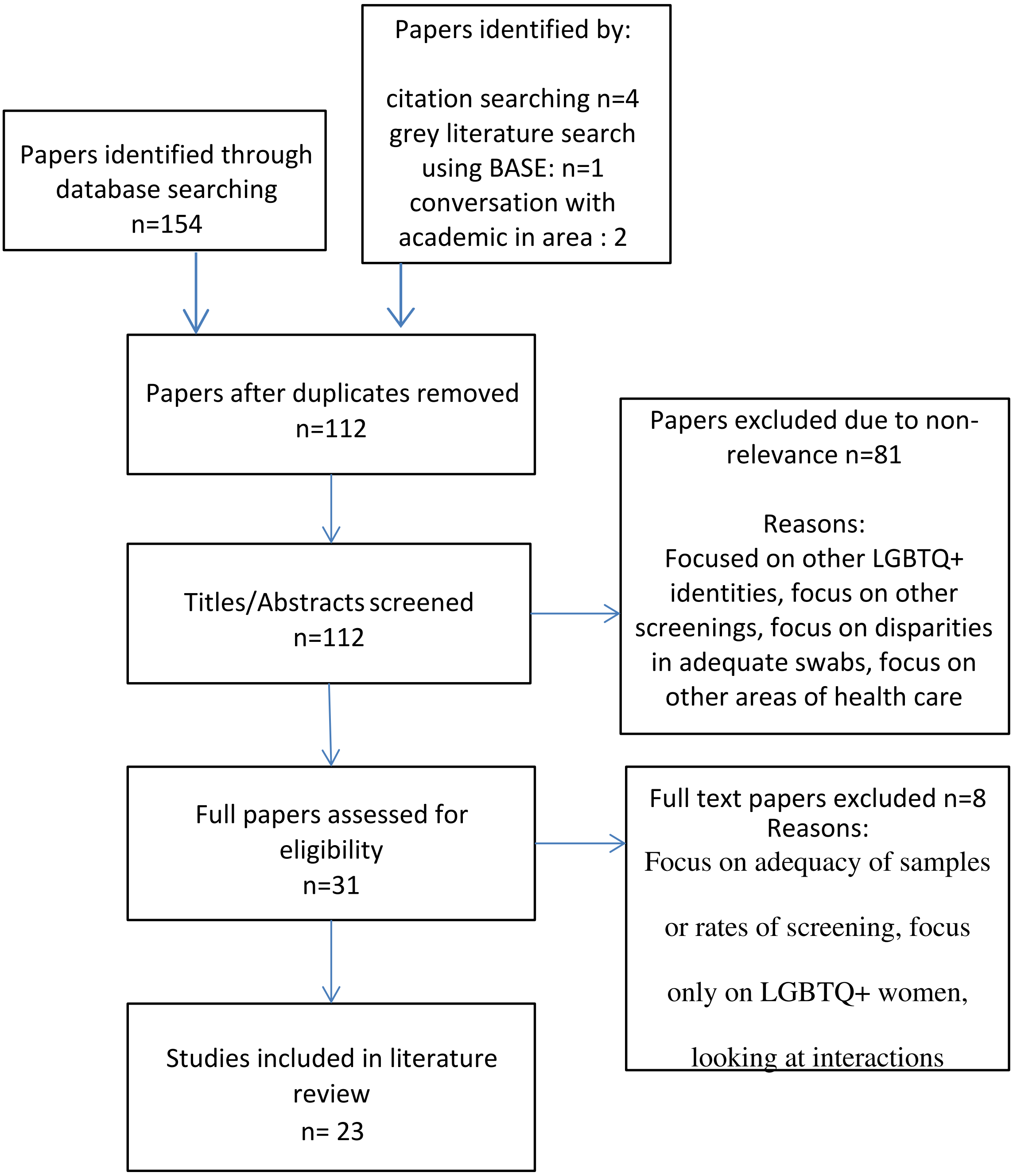

Figure 1. PRISMA diagram of literature selection.