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Vulnerability and psychosocial risk factors regarding people who identify as transgender. A systematic review of the research-evidence

Edward McCann PhD RN RPN RNT

Assistant Professor, School of Nursing and Midwifery, University of Dublin, Trinity College,
Dublin, Ireland

mccanned@tcd.ie

Michael Brown PhD RGN RNLD

Professor of Nursing, School of Nursing and Midwifery, Queen's University Belfast,
Northern Ireland, United Kingdom

m.j.brown@qub.ac.uk

Correspondence:

Dr Edward McCann

Trinity College Dublin

School of Nursing and Midwifery

24 D'Olier Street

Dublin 2

Ireland

E-mail: mccanned@tcd.ie

Phone: +353 1 896 4161

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ABSTRACT

The aim of this systematic review was to identify the issues related to the vulnerability and psychosocial risk factors of people who identify as transgender. A search of relevant electronic databases from 2007 to 2017 was conducted. Included studies involved transgender people, vulnerability and risk factors. Following the application of rigorous inclusion and exclusion criteria a total of 21 papers were considered suitable for the review. The identified themes included sexual risks, substance use, psychological vulnerability risk factors, Social vulnerability risk factors and protective factors and behaviors. Nurses are in a strong position to address pertinent concerns and to provide the necessary psychosocial supports to this population.

Keywords:

Transgender, Risk, vulnerability, GLBT, Social inclusion

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INTRODUCTION AND BACKGROUND

Transgender is an ‘umbrella’ term that relates to people who do not ‘fit’ with the prevailing gender binary categorisation of male or female. A person’s gender identity or expression differs from their birth sex, whereby transwomen were assigned male at birth and transmen have been designated female at birth (Coleman et al., 2011; Wylie et al., 2016). Throughout this paper, the authors have used the term trans* to encapsulate the spectrum of identities and experiences of people whose assigned sex at birth does not match their own feelings of gender identity nor conform to societal gender norms (National LGBT Health Education Center, 2016).

Internationally, there has been an increased interest in the experiences, health and social care requisites of people whom identify as trans* from a human rights and social inclusion perspective (Couch et al., 2007; Baur & Schiem, 2015; Daniel et al., 2015; Gridley et al., 2016). There have been concerns around different aspects of health and wellbeing among this group, including vulnerability and risk factors, and the potential responses from healthcare providers (Institute of Medicine, 2011). Trans* people can be vulnerable to a range of psychosocial issues including violence, discrimination, financial hardship, drug and alcohol misuse, and issues related to accessing and using appropriate health and social care services (Bockting et al., 2013; Dispenza, Watson, Chung & Brack, 2012). People who identify as trans* also are at a significantly higher risk of contracting HIV and other sexually transmitted infections, compared to the general population (Chen, McFarland, Thompson & Raymond, 2011; Reisner, Perkovich & Mimiaga, 2010). Rates of HIV have become a public health issue with particularly high figures shown among transwomen. Global prevalence rates can vary considerably with

2% recorded in Pakistan and 43.7% in India. (Baral et al., 2013). Current United States (US) studies reveal that roughly 28% of trans* people were infected with the human immunodeficiency virus (HIV) and 21% were infected with other sexually transmitted infections (STIs) (Herbst et al., 2008). Another study showed that 52% of participants had HIV (Edwards, Fisher & Reynolds, 2007). These elevated rates may be attributed to high-risk sexual practices including unprotected sex with male partners, injection drug use and sex work (Mimiaga, Reisner, Tinsley, Mayer & Safren, 2009; Operario, Soma & Underhill, 2008). Other risk factors include social exclusion, unmet healthcare needs and financial hardship that may explain higher rates of HIV (Pinto, Melendez & Spector, 2008). Also, the negative experiences associated with stigma and discrimination can lead to exclusion from HIV treatment, support and prevention services (Khan et al. 2008; Bith-Melander, Sheoran & Sheh, 2010). There is statistically significant evidence linking high rates of depression as a significant risk factor for contracting HIV (Melendez & Pinto, 2007). Violence, in any form, towards trans* people may be an intermediate factor in the acquisition of HIV (Grant, Mottet & Tranis, 2011). There is also a higher risk of HIV and other sexually transmitted infections (STIs) due to social factors such as employment discrimination and engagement in sex work (Operario et al., 2008).

The psychological distress experienced by trans* people can be a manifestation of the challenges associated living in an oppressive society and gender-related victimisation (Ellis, Bailey & McNeil, 2015; Grant et al., 2011). In one study, 87% of respondents identified discrimination and prejudice events in their lives directly related to their trans* identity (Couch et al., 2007). Globally, there are also significantly higher rates of substance use that has distinct biopsychosocial consequences and therefore, will need specific tailored interventions from practitioners and service providers (Clements-Nolle, Marx, Guzman & Katz, 2001; De Santis, 2009; Nemoto et al., 2012). To date, the main focus has been on the needs of transmen due to their high rates of alcohol and illicit drug use (Santos et al., 2014). The elevated rates may be

attributed to the negative experiences of gender minority stress (Hendricks & Testa, 2012). A significant number of participants in one study (63%) described either verbal, physical or sexual victimisation experiences (Operario & Nemoto, 2005). In one study, transmen were eight times more likely, than those in the general population, to engage in illicit drugs as a way of coping with discrimination (Grant et al., 2011). People may also use drugs and alcohol to deal with the deleterious effects of stigma and victimisation (Fredrikson-Goldsen et al., 2013). Trans* people are twice as likely to be unemployed with increasing numbers of people involved in sex work and concordant substance use (Herbst et al., 2008). There are increasing incidences of depression and associated suicidality (Grant et al., 2011). The available figures reveal that the rates of depression are between 26% and 66% (Nemoto, Bodeker & Iwamoto, 2011; Shipherd, Green & Abramovitz, 2010 and anxiety was (33%) (Bockting et al., 2013). Furthermore, alcohol and illicit drug use ranged between 20-36% (Herbst et al., 2008; Operario & Nemoto, 2005). The rates for suicidality are between 37-65% (Liu & Mustanski, 2012; Nuttbrock et al., 2009).

Despite these concerns, there still remain significant gaps around the health and social care services that are available to trans* people (Grant et al., 2011; Resiner et al., 2016; Wylie et al., 2016). For instance, there is an insufficient range of interventions for HIV and STI treatment, prevention and care (Sullivan et al., 2012). There are also significant shortcomings in knowledge and research into poverty, homelessness and the impact of substance use on the trans* population (Grant et al., 2011). Therefore, this systematic review explored concerns and highlighted pertinent issues related to vulnerability and psychosocial factors relevant to this group.

METHODS

The focus of the review was peer-reviewed empirical studies that used qualitative, quantitative or mixed research methods that addressed the study aims and review questions.

Review questions

1. What are the vulnerability and psychosocial risk factors identified by people who are transgender?
2. What supports, services and treatment options, are required by people who identify as transgender?

Objectives

- Search for international research studies
- Collect empirical data on the vulnerability and risk experiences of people who identify as transgender
- Critically analyse and compare these findings with the wider legislative, policy and research evidence base
- Inform mental health policy, practice, education, and research.

Settings and participants

The inclusion criteria were people over 18 years of age whom identified as trans*. Studies that included trans* people as a sub-population of a wider LGBT population were excluded. Only studies that exclusively focused on the trans* population were included.

Search and selection strategy

A subject Librarian was enlisted to assist with the literature search strategy. The databases used in the search were CINAHL, MEDLINE, PsycINFO and Sociological Abstracts. The search terms used were: transgender* OR transsex* OR gender varian* OR gender dysphoria AND risk OR vulnerab* OR mental health. The data were accessed from October 2007 to October 2017. An example of the search strategy used in one electronic database is shown in Table 1.

Insert Table 1 here

The searches revealed 1216 hits across all the databases. A flow chart (Figure 1) was used to present the results of the searches (Moher, Liberati, Tetzlaff & Altman, 2009). The inclusion criteria were limited to academic journals, peer reviewed empirical studies, and written in English. The studies had to focus on risk factors and the experiences of adults who identify as transgender. A hand search was also conducted of the reference lists of the identified papers leaving a total of 21 papers for the review.

Insert Figure 1 here

Quality assessment

A recognized quality assessment tool was used as an evidence-based framework to review the papers (Critical Appraisal Skills Programme, 2013). Specific questions were consistently applied to each of the selected studies (see Table 2). Each question was scored zero, one or two out of a possible score of 20 points. A score of zero was assigned if the paper contained no information, one if there was a moderate amount, and a score of two indicated that the question was fully addressed (Rushbrooke, Murray & Townsend, 2014). A total of 13 studies achieved a score of 17 or greater, indicating good quality information (Benotsch, Zimmerman, Cathers & McNulty, 2016; Boza & Perry, 2014; de Bolger, Jones, Dunstan & Lykins, 2014; Horvath, Iantaffi, Romine & Bockting, 2014; Kaplan et al., 2015; Keuroghlian, Reisner, White & Weiss, 2015; Marshall et al., 2016; Nuttbrock et al., 2015; Reback, Shoptaw & Downing, 2012; Reisner et al., 2010; Rotondi et al., 2011; Scheim, Bauer & Shokoohi, 2017; Taylor, Bimbi, Joseph, Margolis & Parsons, 2011). A score of between 14 and 16 was given to 6 studies that showed that there were information gaps related to clarity of the aims, data collection methods, research relationships considered and ethics statements (Benotsch, Zimmerman, Cathers & McNulty, 2013; Dadasovich et al., 2017; Reisner et al. 2010; Reisner, White, Mayer & Mimiaga, 2014; Testa et al., 2012; Wilson, Arayasirikul & Johnson, 2013). Finally, 2 studies recorded scores of 13 and less and this was due to the availability of limited information around the aims, ethics and the consideration of research relationships (Edwards et al., 2007; Sanchez,

Finlayson, Murrill, Guilin & Dean, 2010). All of the studies addressed the objectives of the review and therefore were deemed suitable for inclusion.

***Insert Table 2 here ***

Characteristics of the selected studies

The 21 studies that addressed the study aim and objectives are presented in Table 3. The majority of studies (n= 15) were conducted in the United States (US). The remainder were carried out in Australia (n= 2), Argentina (n=1), Canada (n=2) and Lebanon (n=1). Sample sizes ranged from 10 to 1229 study participants involving people whom identify as transgender. All of the studies considered in the review used a selection of data collection methods that included surveys, questionnaires and interviews. A total of sixteen studies were quantitative, adopting a range of measures and survey approaches, two papers used qualitative approaches and adopted interviews and two papers utilized a mixed method design by way of interviews and a survey.

***Insert Table 3 here ***

Data extraction and analysis

The review process was guided by recognized methods involving the synthesis of mixed literature (Mays, Pope & Popay, 2005). A thematic analysis of the data was undertaken. All of the emergent themes were systematically identified across all the studies and coded. They were grouped into concepts to allow for contrasts and comparisons to be made between themes and studies. The emergent themes were identified independently and then discussed, verified and agreed by the reviewers (Caldwell, Henshaw & Taylor, 2011).

RESULTS

Following a critical analysis of the studies, five key themes were identified:

(i) Sexual risk and risk-taking behaviors; (ii) substance use; (iii) psychological vulnerability risk factors; (iv) social vulnerability risk factors; and (v) protective factors and behaviors.

Sexual risk and risk-taking behaviors

Worldwide, HIV among transwomen is estimated to be almost fifty times higher than the general population (Edward et al., 2007, Nuttbrock et al., 2015). In the United States (US), studies have shown consistently higher rates of HIV and STIs in the trans* population. In the current review, figures range between 26-44% compared with the general population (Reisner et al., 2010; Reisner et al., 2014). Where HIV care and supports are concerned, survival rates for transwomen were less than 50%. There was often a poor uptake of services with the contributing factors including stigma, distrust, confidentiality issues and poor location and access issues (Wilson et al., 2013). In another study, psychosocial stressors such as unsafe sex and stressful life events were identified as challenges for transwomen (Sanchez et al., 2010). Other studies identified having multiple sex partners, engaging in sex work and high incidences of the non-use or inconsistent use of condoms, as significantly increasing the risk of HIV and other STIs (Reisner et al., 2010; Sanchez et al., 2010). Furthermore, research involving transmen who have sex with men has shown a significant elevated level of risk for HIV and STIs with almost 44% of participants reporting unprotected sexual activity (Reisner et al., 2010). As well as the physical risks associated with the topic, psychological risks are evident in the research. For instance, in gender abuse among transwomen, one study discovered associations between unprotected receptive anal intercourse and casual or ‘commercial’ sexual partners and higher HIV incidences. This may, in part, be due to trans* women seeking out sexual relationships for emotional support as a maladaptive coping response (Nuttbrock et al., 2015). Scheim et al., (2017) identified an association between a history of transphobic assault and greater drug use in people who are transgender. Additionally, in the same sample, sex work was also correlated with greater drug use within the trans* population. In another study undertaken in California, findings suggest that the use of testosterone was associated with an increase in transmen’s sexual activity with men who have sex with other men. The reported

increase in sexual activity with partners from populations with high HIV prevalence may have important risk-taking prevention implications for transmen (Dadasovich et al. 2017).

Some studies revealed helpful HIV reduction interventions such as the *Girlfriend* project consisting of group support sessions. The study results demonstrated that participants had fewer sexual partners and less unprotected sex following their positive experiences of the group (Taylor et al., 2011). Appropriate safety considerations were identified that included social, emotional, physical, sexual and financial aspects (Kaplan et al., 2015). Internet dating was also seen as a potentially useful HIV prevention intervention by targeting trans* people at high risk of HIV infection (Benotsch et al., 2016).

Substance use

Compared to the general population, there is an increased prevalence of substance use among people who identify as trans* (Keuroghlian et al., 2015). There are significant gaps in the available evidence-base and it is only recently that researchers have become more interested in substance use and the associated risks among trans* groups (Benotsch et al., 2013; Hovarth et al., 2014). Positive correlations have been discovered between substance use disorders (SUDs) and demographics, gender identity issues and mental health concerns (Keuroghlian et al., 2015). Furthermore, there has been a significant rise in the non-medical use of prescription drugs (NMUPD) that has led to increased public health concerns and a demonstrable rise in the rates of depression and anxiety due to this phenomenon (Zullig & Divin, 2012). The common non-prescription drugs being used illicitly are stimulants, 'downers' and analgesics (Keuroghlian et al., 2015). Individuals may self-medicate as a means of coping with the psychosocial stressors that people who identify as trans* endure in their daily lives including depression, anxiety, social isolation and loneliness (Benotsch et al., 2013). High levels of marijuana use, alcohol misuse and significantly elevated incidences of unprotected sex in transwomen, may increase the risks of HIV and other STIs (Hovarth et al., 2014). One in four

transmen who participated in one study, had engaged in ‘risky sex’ associated with alcohol use, compounded by other psychosocial issues such as depression, anxiety and victimization experiences (Reisner et al., 2014). It is recognized that trans people who are prescribed medication for depression and other mental health conditions may be susceptible to using other non-prescription or recreational drugs. The use of poly-substances, including alcohol, can lead to multiple mental and physical health problems (Benotsch et al., 2013). Another common issue in the studies was the non-medical use of hormones. The main public health concerns are related to how the hormones are procured, their safe administration, and the potential risk of infections and complications. Evidence suggests that the use of medically prescribed hormones is positively co-related with better quality of life outcomes for trans people (Benotsch et al., 2013). In a 2017 study carried out in Ontario, cocaine and amphetamine use was higher when compared with the non-trans* population (Scheim et al., 2017).

Psychological vulnerability risk factors

There are high incidences of mental health issues related to the myriad of psychosocial issues faced by people who identify as transgender. There are significantly high recorded statistics related to suicidal ideation, suicide plans and suicide attempts. The prevalence rates for attempted suicide are 32% and 33% respectively (Marshall et al., 2016). Furthermore, internalized stigma has been strongly associated with suicidality (Marshall et al., 2016). Current rates for depression among trans* people stands at 21-60% and reflects the impact of the challenges faced by people (Boza & Perry, 2014). Conversely sexual satisfaction was perceived by many study participants as a protective factor against poor mental health (Rotondi et al., 2011). However, transphobic experiences such as stigma, violence and victimization were found to be particularly damaging to a person’s mental health and well-being (Rotondi et al., 2011). There were strong correlations between physical and sexual violence and increased

suicide attempts (Testa et al., 2012). Greater social supports were equated with lower levels of depressive symptoms (Boza & Perry, 2014). Furthermore, there were improvements in overall mental health following the process of transition (de Bolger et al., 2014).

People who identify as trans* can experience the damaging effects of victimization with 70% of participants in one study reporting at least one instance of gender-related victimization (Boza & Perry, 2014). The negative reaction of society to a person's gender identity can have a profound effect on the person. Transphobia, stigma and discriminatory attitudes can lead to social isolation, depression, anxiety and other mental health conditions (Marshall et al., 2016). One study that specifically investigated the potentially traumatic psychological effects of physical and sexual violence towards trans* people. The results identified that both transmen and transwomen who experienced violence had a significantly higher risk of suicidal ideation, suicide attempts and substance abuse. Key violent offenders were in polarized positions in that they were either complete strangers or members of the trans person's family, including partners. Only 10% of victims reported the attack to the police authorities (Testa et al., 2012).

Social vulnerability risk factors

People who identify as trans* often have challenges in the work environment that can make working untenable. Trans people can face discriminatory experiences in the workplace that can lead to unemployment, despite having key work skills and valuable experience, resulting in economic hardship. Additionally, there can be issues with accessing appropriate quality housing and some trans people can become homeless (Reback et al., 2012). Scheim et al., (2017) identified the issue of homelessness and under-housing as being associated with greater drug use among trans people. Other social stressors may be related to stigma, discrimination and social exclusion. The negative aspects can have a damaging effect on a trans person's value and self-worth. Individuals can be susceptible to isolation and loneliness and subjected to ostracism and rejection, not just by wider society, but also by family members (Boza & Perry,

2014). There may be issues around emotional and physical safety. For many, the importance of ‘passing’ in the new gender-role is crucial in terms of greater confidence and increased self-regard. Also, being recognized as trans* and being accepted is a fundamental part of identity formation and development (Reisner et al., 2010).

Enhanced levels of social support and an expanded social network have been positively correlated with less depressive experiences. There is evidence to suggest that following surgery, trans* people have richer friendships and social relationships, and greater opportunities to have more intimate relationships. People can develop acceptance and higher self-esteem and, as a result, become less socially isolated (Boza & Perry, 2014). Still, there are barriers to accessing services, for example sexual health services, and culturally appropriate and supportive services. There remains a limited awareness of the specific needs of trans* people and negative attitudes towards trans* people are rampant in society (Sanchez et al., 2010; Testa et al., 2012).

Protective factors and behaviors

Trans* people face a multitude of challenges that may affect health and well-being. Like all individuals, trans* people have fundamental psychosocial needs that should be recognized, acknowledged and appreciated (Hovarth et al., 2014). Consequently, services need to be responsive, supportive and individually tailored to the distinct needs of the trans* population. Trans* people need access to good housing, employment opportunities, and they need support and protection through legislation and policies that upholds their human rights (de Bolger et al., 2014). From a financial perspective, trans* people need to be supported in claiming welfare benefits, essential during the process of transitioning. Trans* people who had fully medically transitioned, and supported in doing so, had better mental health; they were less prone to anxiety and had fewer symptoms of depression (Rotondi et al., 2011). Also, support in dealing with internalized stigma due to trans* identity and the provision of ‘stable’ housing was found to be beneficial and protective in addressing lifetime suicidal behaviors. Increased acceptance

of trans* people by health and social care practitioners and access to counselling and psychotherapy may help to prevent suicide attempts and ameliorate emotional distress (Marshall et al., 2011).

Furthermore, studies involving psychosocial interventions that aim to promote resilience, develop peer support and enhance coping skills, have shown promise in reducing HIV risk behaviors (Reisner et al., 2010; Taylor et al., 2011; Wilson et al., 2013). Access to efficient and effective screening and treatments for HIV and STIs is required (Taylor et al., 2011; Reisner et al., 2014). Another protective and supportive factor is the education and training of health and social care staff on the needs of trans* people. This may involve mental health professionals, health professionals in general, and practitioners involved in the assessment of transgender people who are considering or are going through the medical transitioning experience (Boza & Perry, 2015; de Bolger et al., 2014). Several of the studies reviewed highlighted the importance of social networks and how governmental and non-statutory organizations can provide the necessary supports to trans* individuals and their family members (Edwards et al., 2007; Hovarth et al., 2014; Reisner et al., 2014).

DISCUSSION

It has become increasingly clear from this systematic review of the available research literature that trans* people continue to face challenges in relation to vulnerability and risk factors associated with societal discriminatory attitudes and behaviors. People who identify as trans also have difficulties accessing and using appropriate housing, social welfare, health and social care services that need to be responsive to their distinct needs. The relevance and implications of the findings from this systematic review will be presented in relation to mental health policy, practice, education and research.

Legislation and policy implications

Trans* people have been described as ‘one of the most vulnerable and discriminated communities’ and subjected to human rights violations, stigma, discrimination,

marginalization and social exclusion (Lo & Horton 2016). Furthermore, discriminatory societal reactions can impact negatively upon health and social care provision and access to responsive support services (Hammarberg, 2009). Therefore, legislation needs to be developed, implemented and evaluated that sets out clearly the rights and protections afforded to trans* people, thereby tackling stigma and discrimination towards minority groups (World Health Organisation 2013; Stroumsa 2014). Legislation needs to be fully supported by robust equality and diversity policies that reflects and takes account of the distinct needs of the trans* population.

Policy makers and service providers have a duty to address discrimination and social exclusion in employment, education, and health care. Central to effective policy development is the inclusion of the views, experiences and opinions of trans* people, their friends and families. Policy aimed at improving the lives of trans* people needs to be evidence-based and then fully resourced and implemented to ensure that the supports required to address health needs and reduce the consequences of poor health and minimize barriers to accessing health are in place (Cruz 2014). Therefore, collective and sustained action is required on both legislative and policy fronts to address the issues and concerns related to equality and diversity and stigma and discrimination. This extends to equality of access to universal services available for the whole population and to ones dedicated specifically to trans* people (Grant et al., 2011). Addressing these issues is important given the evidence related to the high levels of both physical and mental ill-health experienced across the trans* communities and the significant barriers related to access to healthcare and other services, further compounded by the discriminatory and stigmatizing attitudes from some healthcare providers (Lavesque et al., 2013; McCann & Sharek 2016; Bouman et al., 2017). It is therefore necessary when planning services that providers make gender reassignment procedures, such as hormones treatment, surgery and psychological support, fully accessible for trans* people and ensure that financial

costs are covered by welfare benefits and reimbursed by insurance companies (Wylie et al., 2016).

Practice implications

There are significant practice implications arising from the evidence presented in this systematic review. People who are trans* are frequent users of all health services and there is an opportunity for practitioners to demonstrate positive values and attitudes that fosters an inclusive and respectful care experience (Agius et al., 2011; Wylie et al., 2016). It is necessary for practitioners to develop knowledge and effective clinical skills in working positively with trans* people. This is important to contribute to reducing and minimizing the impact of stigma and negative attitudes which further marginalizes and excludes trans* people from accessing the help and support they need (Bidell 2017).

The distinct mental health needs of trans* people is a concern that requires attention from practitioners in primary and acute care and those working in mental health services. A significant number of trans* people (78%), for example, contemplated ending their life (Trans* Equality Network Ireland, 2013). Therefore, practitioners across health services need to be alert to the possibility of mental illness and ensure that there is a strong focus within their assessments and clinical practice to identify and address mental health needs (McCann & Sharek 2016). To respond appropriately, practitioners in mental health services need to provide adequate and appropriate treatment options and a range of psychosocial supports that enable inclusive practices. There needs to be access to person-centered talking therapy that is effective, such as Cognitive Behavior Therapy (CBT), Dialectical Behavior Therapy (DBT), CA-CBT, psychotherapy, counselling and Eye Movement Desensitization Reprocessing (EMDR) that are trans* affirmative as well as resilience building programs aimed at increasing personal coping skills and capacity (Hunt, 2014; Heck et al., 2015; Reisner et al., 2016; Austin et al., 2017).

Minority stress is a major issue for many trans* people and has significant implications in terms of both internal and external factors such as internalized transphobia, negative expectations, and nondisclosure and lack of belonging. These are important issues that practitioners need to recognize and address regarding the consequences of mental illness and the need for a strong focus on providing interventions, treatment and supports that reduce suicide rates, with new models of practice being developed that support the development of resilience and coping strategies (Breslow et al., 2015; McCann & Brown 2017; Testa et al., 2017).

Central to effective clinical practice is the need for comprehensive assessments that informs appropriate treatments, interventions and supports. Practitioners need to be self-aware regarding their own attitudes and values to ensure they actively provide care and support that is affirmative, that is non-judgmental, respectful and inclusive (Fredriksen-Goldsen et al., 2014; Whitman & Bidell 2014; Kanamori et al., 2017). As an integral part of the provision of care and support, mental health practitioners are in an ideal place to create an environment where trans* people can safely disclose, explore and discuss their concerns, aspirations and hopes. Arising from this is the opportunity for mental health practitioners to adopt a systemic approach by providing wider support to the families and significant others of trans* people, thereby seeking to ensure that their needs are recognized, considered and met, to build coping strategies, acceptance and understanding (Simons et al., 2013; McConnell et al., 2016; McCann & Brown 2017).

Social isolation and loneliness can be significant issues, particularly for many trans* people, lacking meaningful friendships, access to individual supports and social networks (Pantell et al., 2013; Stewart et al., 2017). Mental health practitioners are well placed to work collaboratively with the trans* communities and partners such as social care providers, housing agencies and homeless organizations to develop community networks and support groups that build a sense of belonging and a sense of identity and community connectedness, vital to

building resilience and enhancing coping strategies (Brennan-Ing et al., 2014; Johnson & Amella 2014; Hughes 2016).

The nonmedical use of prescription drugs (NMUPD) has become an increasing public health concern in the United States, with abuse rates rising rapidly since the late 1990s. Yet preventing and reducing prescription drug misuse represents a major challenge (Substance Abuse and Mental Health Services Administration 2016). Practitioners therefore have an opportunity as part of their assessment and treatment models to incorporate a focus on identifying the use of NMPUD. An associated issue that emerged from the current review was the availability and safe administering of hormones. Several clinics in the United States, such as the Callen Lorde Community Center in New York, Fenway Health in Boston, and Howard Brown Health Center in Chicago, have developed Informed Consent Protocols to provide hormone therapy to trans people. Such clinics have specific trans health policies that govern the full range of their trans-specific healthcare including HIV testing and prevention services (Keuroghlian et al., 2017). Programs, such as HIV and safe-sex initiatives, should be tailored to individual needs and adequately resourced and supported by knowledgeable and skilled practitioners, conversant with the behaviors and distinct support needs of trans* people (Tang et al., 2016).

Education and training issues

What has emerged from the review is that support staff need access to professional development opportunities including education and training initiatives (Reisner 2010). These can be aligned to person development plans and work initiatives around equality, diversity and anti-discrimination practices. There needs to be adequate resources made available and time allocated to staff to enable them to undertake the necessary education and training. Vulnerable and marginalised groups, including the trans* population, have a right to protection and the necessary supports within educational settings. There needs to be inclusive educational environments that promotes equality, values diversity and encourages dignity and respect

where people can develop to their full potential. National and local education policies and legislation must address pertinent issues related to gender identity and expression such as discrimination, harassment and victimisation. In learning environments, reasonable accommodations should be provided for individuals undergoing medical procedures related to gender reassignment. Students should be permitted and supported in updating their personal records to match their gender identity and expression. There needs to be access to available resources in terms of mental and emotional support such as counselling, pastoral and advisory services. Sports clubs should be inclusive in their services to trans* people, ensuring that a person can participate in activities according to their identified gender. There needs to be robust and effective complaints procedures to deal with bullying, harassment or discrimination related to a person's gender identity or expression. In the current systematic review, there were no studies identified that focused specifically on the education and training requirements of service providers. Training and awareness raising should be made available to all educational, health and social care staff. Equality, diversity and cultural awareness training should feature more prominently within the health and social care curricula at undergraduate and postgraduate levels (De Bolger et al., 2014). The specific holistic needs of trans* people, their families and carers, should be explicitly identified and become a core component and major focus in practice development programs. Decisions will need to be made about the training content, prospective participants, the delivery and evaluation of the training.

Research implications

A variety of data collection methods were utilized in the selected studies including surveys, measures, questionnaires and interviews. Most studies explored the health and social care needs of trans* people concentrating on individual experiences, concerns and support requirements. There was only one treatment or intervention evaluation study (Taylor et al. 2011). The sample sizes were generally small and ranged from 10 to 1229 study participants. There were no

national or international multi-center studies or longitudinal investigations. Most of the studies in the review used cross-sectional convenience sampling at one-off conference events that presents research challenges to conducting more longitudinal studies to identify changes over time. One study demonstrated innovative recruitment techniques called ‘seeds and chaining’ (Rotondi et al. 2011). Many of the studies were undertaken in the US and there was distinct lack of European, African and Asian research. There was a lack of policy and legislation studies and those focusing on mental health issues. Therefore, opportunities exist to expand the evidence-base around psychological and social interventions their effectiveness and impact on individuals, families and significant others. There is a paucity of research related to education and training involving trans* people, families and health practitioners. There is a need for pre- and post-test evaluations that may inform future mental health education curricula at undergraduate and postgraduate levels.

Strengths and limitations

The review has revealed important issues that may affect the lives of people who identify as trans*, their families and others in their social group. The concerns for mental health practitioners around potential supports and interventions have become increasingly apparent. However, in terms of empirical evidence, the review is limited by the paucity of European studies, recruitment challenges and the under-representation of people of color. Future research studies should consider ways of addressing these shortcomings.

CONCLUSION

There is a growing interest in the health and social care needs of people who identify as trans* and this has become increasingly apparent through the issues that have emerged in this systematic review. The challenge now is for service providers, including mental health practitioners, to work collaboratively with trans* communities to develop and implement effective strategies and interventions that meet the identified requirements. Adequate resources

must be provided to support and enable future practice development initiatives and the delivery of appropriate services that address equality, diversity and social inclusion issues.

Disclosure of interest:

The authors report no conflicts of interest.

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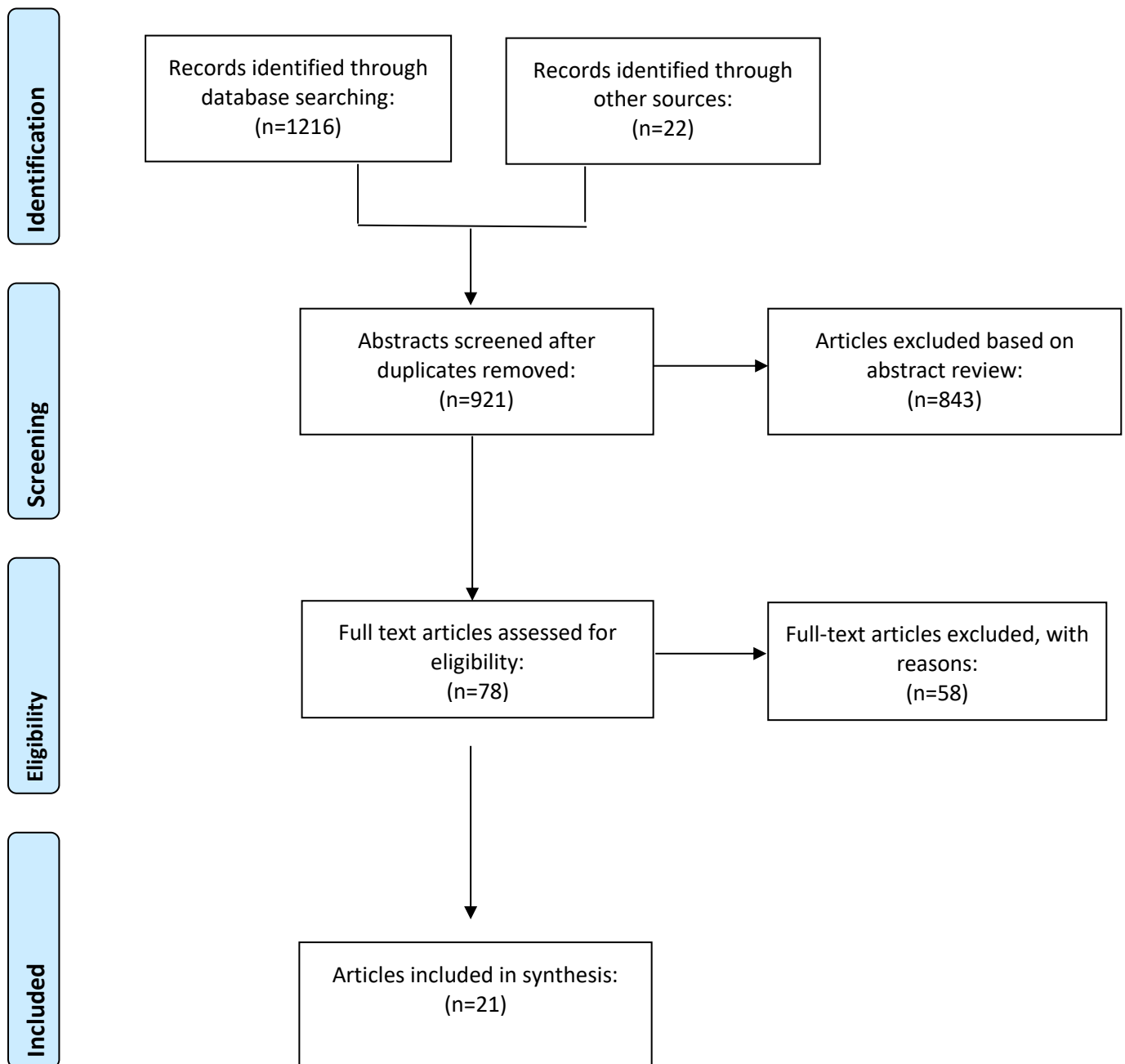


Figure 1: PRISMA flowchart of search strategy and outcome

Table 1: CINAHL search results on 1 August 2017

Search code	Query	Results
S1	transgender*	1,598
S2	transsex*	628
S3	gender dysphoria	130
S4	gender varian*	51
S5	vulnerab*	17,474
S6	risk	377,712
S7	mental health	45,782
S8	S1 OR S2 OR S3 OR S4	1,992
S9	S5 OR S6 OR S7	425,595
S10	S8 AND S9	584

Table 2: Quality assessment scores (n=21)

	Benotsch et al. (2013)	Benotsch et al. (2016)	Boza & Perry (2014)	Dadasovich et al. (2017)	De Bolger et al. (2014)	Edwards et al. (2007)	Horvath et al. (2014)	Kaplan et al. (2015)	Keuroghlian et al. (2015)	Marshall et al. (2016)	Nuttbrock et al. (2015)	Reback et al. (2012)	Reisner et al. (2009)	Reisner et al. (2010)	Reisner et al. (2014)	Rotondi et al. (2011)	Sanchez et al. (2010)	Scheim et al. (2017)	Taylor et al. (2011)	Testa et al. (2012)	Wilson et al. (2013)
1. Clear statement of aims	0	2	2	1	2	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2
2. Appropriate methodology	2	1	2	2	2	1	2	2	2	2	1	2	2	2	2	2	1	2	2	2	2
3. Appropriate research design	2	2	2	2	2	1	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2
4. Appropriate recruitment strategy	2	1	2	1	2	2	2	2	2	2	2	2	2	2	1	2	1	2	2	1	1
5. Appropriate data collection methods	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	1	1
6. Research relationships considered	0	1	1	0	1	0	1	2	1	1	1	1	0	1	0	1	1	0	1	1	1
7. Consider ethical issues	2	2	2	2	2	0	2	2	2	2	2	2	0	2	2	0	0	2	2	0	0
8. Rigorous analysis	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2
9. Clear findings	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2
10. Value of the research	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2
Total scores out of 20	15	17	19	16	19	12	19	20	19	19	17	19	14	19	16	17	13	17	19	14	15

Citation and country	Aim	Sample	Methods	Measures used	Key findings	Recommendations	CASP scores
Benotsch et al. (2013) USA	Examine the prevalence of the non-medical use of prescription drugs (NMUPD), polysubstance use, and mental health in transgender adults.	Transgender adults (N= 155)	Quantitative: Survey and measures	NMUPD (Benotsch et al. 2011) Brief Symptom Inventory (Derogatis 2001) Rosenberg Self-esteem Scale (Rosenberg 1965)	Participants (26.5%) reported lifetime NMUPD. Prescription analgesics (23.9%), anxiolytics (17.4%), stimulants (13.5%), and sedatives (8.4%). Non-medical use of hormones was also frequently reported (30.3%). Prescription drug misuse robustly associated with emotional distress.	More substance use and mental health interventions with the assessment and treatment of NMUPD.	15
Benotsch et al. (2016) USA	Examine the use of the Internet to meet sexual partners: sexual risks and mental health in transgender adults.	MTF (n=112) FTM (n=54)	Quantitative: Measures	Rosenberg Self-esteem Scale (Rosenberg 1965) Brief Symptom Inventory (Derogatis 2001)	Almost 34% met partner over the internet with higher rates of unprotected sex, multiple partners and use substances. 47% involved in sex work.	Increase internet HIV prevention programmes including networking and video elements. Encourage HIV testing.	17
Boza & Perry (2014) Australia	Explore victimization, social support and depression in trans people	Transmen (n=83) Transwomen (n=160)	Quantitative: Survey and measures	Centre for Epidemiological Studies Depression Scale (Radloff 1977) Multidimensional Scale of Perceived Support (Zimet 1988)	69% reported at least 1 instance of victimization, 59% had depressive symptoms, and 44% reported a previous suicide attempt. Social support was the most significant predictor of depressive symptoms.	Develop interventions to increase well-being. More research about the needs and experiences of transgender people. More government and funding bodies to support further research.	19
Dadasovich et al. (2017) USA	Examine testosterone and sexual risk among trans men	Transmen (n=122)	Mixed: Survey and focus groups	Self-designed survey	Testosterone use increased sexual behaviors: increased desire, attraction and sexual activity.	Health service providers need to be aware of the risk factors that includes HIV and provide appropriate interventions.	16
De Bolger et al. (2014) Australia	Explore the mental health experiences of trans men.	Transmen (n=279)	Quantitative: Online survey	Self-designed survey	A majority reported psychological distress with a diagnosis of depression or anxiety within the last 12 months and attributed suicidal ideation and self-harm and attempted suicide to personal issues with gender identity. Going through a masculinization process and coming out reportedly led to improved mental health	The findings highlight the need to educate mental health and health care professionals on trans issues.	19
Edwards et al. (2007) USA	Investigate trans women and HIV risk factors.	Transwomen (n=101)	Quantitative: Survey	Self-designed survey	High HIV risks included needles reuse, paid sex, poor housing and victimization experiences.	More HIV intervention programmes. Education about hormone injections and infections. Counseling for stigma.	12
Horvath et al. (2014) USA	Compare the mental health, substance use, and sexual risk behaviors of rural and non-rural transgender people.	Transgender adults (n=1229)	Quantitative: Survey	Self-designed survey	Primary findings include: significant differences in mental health between rural and non-rural transmen; relatively low levels of binge drinking across groups, although high levels of marijuana use; and high levels of unprotected sex among transwomen.	The results confirm that mental and physical health services for transgender persons residing in rural areas are urgently needed.	19

Kaplan et al. (2015) Lebanon	Explore HIV risk behaviors and Lebanese trans women.	Transwomen (n=10)	Qualitative: Semi-structured interviews		Main themes: Relationships with family and friends, 'outness,' stigma, sexual attitudes and behaviors.	Increased sexual health and HIV prevention strategies to reduce risk and improve resilience.	20
Keuroghlian et al. (2015) USA	Investigate substance use of transgender adults.	Transgender adults (N=452)	Quantitative: Survey	Self-designed survey	Substance use and SUD treatment among transgender adults are associated with demographic, gender-related, mental health, and socio-structural risk factors. Studies are warranted that identify SUD treatment barriers, and integrate SUD treatment with psychosocial and structural interventions for a diverse spectrum of transgender adults.	Studies are warranted that identify SUD treatment barriers, and integrate SUD treatment with psychosocial and structural interventions for a diverse spectrum of transgender adults.	19
Marshall et al. (2016) Argentina	Examine the lifetime prevalence and correlates of attempted suicide among transgender people.	Transmen (n=41) Transwomen (n=459)	Quantitative: Survey	Self-designed survey	33% had attempted suicide. Internalized stigma related to suicidality. Good housing equated to reduced suicidal behavior. Reducing stigma and addressing vulnerabilities may reduce suicide attempts among transgender people.	Clinical, social, and structural developments are needed to prevent suicide attempts among transgender people. Need proper anti-stigma strategies and effective legislation.	19
Nuttbrock et al. (2015) USA	Explore gender abuse and depression and HIV and STI risk among transwomen	Transwomen (n=230)	Quantitative: Survey	Self-designed survey	Gender abuse and depression were associated with higher incidences of HIV and STIs.	Trauma interventions. More research.	17
Reback et al. (2012) USA	Prevention Case Management (PCM) and psychological distress among transwomen	Transwomen (n=60)	Quantitative: Measures	Brief Symptom Inventory (Derogatis 2001)	PCM evaluation. Decreased homelessness, depression, hostility and anxiety at follow-up.	PCM intervention roll-out strategy to be developed.	19
Reisner et al. (2009) USA	Examine sexual risk taking among transwomen sex workers.	Transwomen (n=11)	Mixed-methods: Measures and interviews	Center for Epidemiologic Studies Short Depression Scale (Andresen et al. 1994) CAGE questionnaire (Ewing 1984)	More than a third were HIV infected. Themes were sexual risk, motivations, consequences of sex work and social networks.	Interventions should be multi-layer and address psychosocial factors.	14
Reisner et al. (2010) USA	Identify the sexual health needs of transmen who have sex with non-transgender men	Transmen (n=16)	Mixed-methods: Interviews and brief survey	Centre for Epidemiological Studies Depression Scale (Radloff 1977) Beck Anxiety Inventory (Beck et al. 1993)	Self-identified as 'moderately' high risk for HIV and STDs. 43% were having unprotected sex with men.	Increased awareness among practitioners. Well designed and coordinated sexual health interventions needed.	19
Reisner et al. (2014) USA	Explore sexual risk behaviors and psychosocial health concerns of female-to-male transgender men	23 Transwomen with STIs	Quantitative: Electronic medical records (EMRs)		52% depression, 52% anxiety, and 26% adjustment disorder and 65% regular alcohol use was common. Alcohol use, psychosocial distress	Full HIV risk assessments and screening for STIs. More research into risk factors, sexual identity and behaviours.	16

	screening for STDs at a community health center.				histories, and sex with males only, versus with males and females, were associated with sexual risk in the past three months. Transgender men have concomitant psychosocial health vulnerabilities which may contribute to sexual risk behaviors		
Rotondi et al. (2011) Canada	To estimate the prevalence of depression in FTM transgender people and explore potential risk and protective factors.	Transmen (n=205)	Quantitative: Survey and measures	Centre for Epidemiological Studies Depression Scale (Radloff 1977) Medical Outcomes Study Social Support Survey Scale (Sherbourne & Stewart 1991)	66.4% of participants had depression. Sexual satisfaction was a strong protective factor. Experiencing transphobia and being at the stage of planning but not having begun a medical transition, hormones and/or surgery, adversely affected mental health in FTM trans.	More research needed to further understand the risk and protective factors for depression among FTMs	17
Sanchez et al. (2010) USA	Identify risk and psychosocial stressors in MSM and Trans women	301 MSM and 60 transgender women	Quantitative: Survey and measures	Centre for Epidemiological Studies Depression Scale (Radloff 1977)	Risk behavior and stressors were common in both groups, but transgender women were more likely to report exchange sex, stigmatization, and stressful life events. High rates of risk behavior and HIV in this special community warrant relevant HIV testing and prevention services.	New ways to reduce stigma (e.g., public information). Further study into how stigma, economic disadvantage, and risk behavior are interrelated for transgender people is warranted.	13
Scheim et al. (2017) Canada	Examine drug use among transgender people and social exclusion	Transgender people (n=406)	Quantitative: Survey	Self-designed survey	History of transphobic assault, homelessness or sex work were associated with greater drug use among trans people.	More longitudinal studies are needed that have larger samples to identify drug use and possible associations with excessive drug use.	17
Taylor et al. (2011) USA	Evaluate an HIV risk-reduction intervention for transwomen	Transwomen (n=63)	Quantitative: Pre-post-test single group evaluation		At 3 months follow-up participants had fewer sexual partners and less unprotected sex.	Need to effectively roll out the intervention programme.	19
Testa et al. (2012) USA	Explore the effects of violence on trans people	Transwomen (n=179) Transmen (n=92)	Quantitative: Survey	Self-designed survey	Violence positively co-related to suicidality. In transmen, history of sexual or physical violence related to alcohol abuse. In transwomen, more substance use.	Greater awareness of patterns of violence. More trauma interventions, prevention and treatment options.	14
Wilson et al. (2013) USA	Explore access to HIV services for African American transwomen with HIV.	Transwomen (n=10)	Qualitative: In-depth interviews		Main barriers to accessing services were gender stigma, peer and institutional distrust.	Improved access to care. Special service to trans people. Anti-stigma work in the community. Positive relationships with care staff.	15

Table 3: Risk papers included in the review (n=21)