
ARTICLE REVIEW

Gender Identities and Orientations: Demographic Change and the Health Effects They Experience

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ABSTRACT

Introduction	LGBT (lesbian, gay, bisexual, and transgender) refers to a diverse group of people who have different sexual orientations and gender identities. In population structure, LGBT individuals are considered a minority group because they represent a smaller percentage of the population, estimated at between 2% and 10% in the world compared to heterosexual individuals. Our objective in this paper is to highlight the demographic shifts associated with the increasing visibility and recognition of the LGBT community, while also examining the broader implications of these shifts on public health outcomes.
Methods	This brief communication review was based on a literature search conducted from four databases: PubMed, Scopus, Google Scholar and Web of Science. All articles published from 2012 to 2024 were accounted for by using keywords such as "LGBT", "gay", "transgender", "bisexual" "population changes", "population dynamic", "population shift", "demographic shift", "demographic changes".
Results	The extracted evidence from the literature was then formulated into 2 main focus areas: Population Dynamics Implications and Public Health Impact.
Conclusions	The health disparities faced by the LGBT community stem from stigma and discrimination, impacting their overall well-being. As the LGBT population grows, it will affect population dynamics by reducing growth rates, increasing migration to more inclusive countries, and raising mortality rates from related diseases. Addressing these challenges requires improved access to healthcare, including HIV and cancer screenings, gender-affirming therapy, and PrEP.
Keywords	LGBT; Community; People; Transgender; Population growth; Shift

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INTRODUCTION

LGBT (lesbian, gay, bisexual, and transgender) refers to a diverse group of people who have different sexual orientations and gender identities. In population structure, LGBT individuals are considered a minority group because they represent a smaller percentage of the population, estimated at between 2% and 10% in the world compared to heterosexual individuals.^{1,3} Therefore, it's important to note that sexuality and gender identity exist along a spectrum, and there is a growing recognition of the diversity within the LGBT community, too. This includes individuals who identify as queer, non-binary, intersex, asexual, and more.¹ This group of people exists in the population pyramid but with different characteristics.

Malaysian societal attitudes toward the LGBT community tend to be more conservative in comparison to other nations. This is reflected in the country's legal framework, where homosexuality remains criminalized under Section 377 of Malaysia's colonial-era Penal Code,⁴ which prohibits consensual same-sex sexual acts and imposes penalties including imprisonment and corporal punishment. Additionally, certain states in Malaysia, such as Terengganu, enforce stricter interpretations of Islamic law, further criminalizing LGBT-related behaviour and imposing additional penalties. These legal restrictions are compounded by public attitudes, with surveys indicating significant societal opposition to LGBT identities.⁵

Consensual same-sex sexual acts are punishable by imprisonment and/or fines under Section 377A, which criminalizes "carnal intercourse against the order of nature".⁵ The Malaysian government and conservative groups frequently promote traditional gender roles and family values that do not reflect the experiences of LGBT people.⁶ Some civil society groups have made efforts in recent years to promote LGBT rights and acceptance in Malaysia. These efforts, however, have been met with opposition from conservative groups.

Moreover, the government announced plans in 2018 to implement a program to prevent homosexuality among young people.⁷ Furthermore, all states have adopted Islamic Shariah law, which forbids same-sex relationships and can result in penalties or punishments under state-level Shariah enactments.⁶ Despite the existence of various laws in Malaysia that prohibit LGBT-related activities, the LGBT community continues to expand, with many individuals facing significant health challenges as a result of societal stigma, discrimination, and limited access to healthcare.⁸ This paper aims to highlight the demographic shifts associated with the increasing visibility and recognition of the LGBT community, while also examining the broader implications of these shifts on public health outcomes. Therefore, should the

LGBT community continue to grow, future public health practitioners can leverage the strategies discussed in this paper to inform the development of targeted public health initiatives and strategic planning.

METHODOLOGY

This brief communication review was based on a literature search from four databases: PubMed, Scopus, Google Scholar, and Web of Science. All articles published from 2012 to 2024 were accounted for by using keywords such as "LGBT", "gay", "transgender", "bisexual", "population changes", "population dynamic", "population shift", "demographic shift", "demographic changes". Pertinent literatures were downloaded from the scientific databases and compiled into the citation manager EndNote. All the evidence from the literature was then extracted into a table of evidence.

RESULT

The extracted evidence from the literature was then formulated into 2 main focus areas: (1) Population Dynamics Implications and (2) Public Health Impact. Further elaboration based on the extracted data from the literature was then enriched with suitable evidence and the authors' opinions.

Population Dynamics Implications

Several countries, including the Netherlands, the United States, and Thailand, have implemented policies such as the legalization of same-sex marriage, which have fostered societal acceptance and legal recognition of LGBT rights. In particular, the United States has introduced legal protections and benefits that support family formation within the LGBT community, thereby creating a more inclusive environment and attracting greater participation from LGBT individuals.^{1,9,10} Adoption, assisted reproductive technology, and surrogacy are prevalent methods through which LGBT individuals and couples form families. These alternative family structures can indirectly contribute to population growth by providing a stable home and care for children who may not have access to a traditional family environment.^{10,11} The families formed among LGBT individuals through marriage further exacerbate demographic challenges.¹¹ In contrast, the prohibition of same-sex marriage in Malaysia restricts the ability of many LGBT individuals to form traditional family structures. Although a significant proportion of the LGBT population is within the reproductive age range, the legal barriers are likely to promote heterosexual marriage, which is intended to prevent their gender identities and orientation behaviour. Besides that, the social and political climate surrounding LGBT issues plays a significant role in shaping population dynamics. For instance, shifts in laws and policies related to same-sex marriage, adoption, and employment

discrimination often prompt LGBT individuals to migrate to countries that offer stronger legal protections and supportive social networks. The opportunity of having countries that practice more inclusive environments not only provides better access to marriage and job opportunities but also enables LGBT people to lead lives free from discrimination, fostering a sense of security and well-being.^{10,11} The assertion that the emigration of LGBT individuals from Malaysia is counterbalanced by an influx of foreign workers, resulting in a negligible impact on population dynamics, requires critical examination. While Malaysia's reliance on foreign labour, comprising over 3 million migrant workers, does influence its demographic structure, particularly in terms of the labour force, the factors driving LGBT emigration are primarily sociocultural and legal, rather than economic. LGBT individuals may migrate to countries with more inclusive policies and legal protections, yet this trend is not directly offset by the influx of foreign workers, whose migration is economically driven.¹² As such, the potential demographic effects of LGBT emigration, such as shifts in population structure or family dynamics, could be significant, independent of the foreign labour migration trends. Further research is needed to fully understand these complex interactions and their long-term effects on Malaysia's population dynamics.

In addition, HIV/AIDS significantly impacts the health and reproductive decisions of LGBT individuals. Concerns about transmitting the virus to partners or offspring often lead to postponement or avoidance of childbearing. Additionally, HIV-related health issues can directly affect fertility, further influencing family planning choices.⁸ The stigma surrounding HIV/AIDS may also deter individuals from seeking necessary medical care, exacerbating health risks and complicating reproductive decisions. Addressing these challenges requires comprehensive healthcare services, including accessible HIV treatment, fertility support, and counselling, to empower LGBT individuals to make informed choices about their reproductive health.⁸

HIV/AIDS significantly influences population structures and dynamics, particularly through its impact on mortality and fertility rates. Premature deaths among productive individuals, including parents and community leaders, can lead to a loss of essential human capital, affecting economic productivity and social cohesion. In regions heavily affected by HIV/AIDS, such as sub-Saharan Africa, these effects are pronounced, with adult prevalence rates exceeding 20% in some countries.¹³ The epidemic also disrupts age and gender demographics. In sub-Saharan Africa, women are disproportionately affected, with infection rates among young women aged 15–24

being twice as high as those of their male counterparts. This imbalance can alter traditional family structures and caregiving dynamics, as women often bear the brunt of caregiving responsibilities for both sick partners and orphaned children.¹³

Furthermore, the loss of parents due to HIV/AIDS has led to a significant increase in orphanhood, with millions of children affected globally. These children face heightened risks of poverty, limited education, and increased vulnerability to exploitation. In Malawi, for instance, over 170,000 children were living with HIV in 2011, and the number of orphans has increased dramatically since the epidemic began.^{14,15}

LGBT individuals often experience higher rates of mental health disorders compared to their heterosexual counterparts, primarily due to societal stigma and discrimination. Studies indicate that LGBT individuals are approximately twice as likely to have a mental disorder and 2.5 times more likely to experience anxiety, depression, and substance misuse.¹⁶ These mental health challenges can significantly influence reproductive decisions and family planning. LGBT individuals may encounter barriers to accessing fertility treatments and may face societal biases that question their suitability as parents. Additionally, experiences of internalized stigma can affect one's self-perception and readiness to pursue parenthood. Notably, transgender youth report higher rates of depression, with studies showing they are nearly four times more likely to experience depression compared to their non-transgender peers.¹⁶ As a result, the intersection of mental health and reproductive health in the LGBT community underscores the necessity for inclusive healthcare services that address both mental and reproductive health needs. Such services should be sensitive to the unique challenges faced by LGBT individuals, providing supportive environments that facilitate informed reproductive choices and promote overall well-being.¹⁷

Public Health Impact

Recent data from the 2020 National Survey on Drug Use and Health (NSDUH) reveals notable disparities in substance use between the general population and individuals identifying as LGBT. Specifically, 41.3% of LGBT adults reported marijuana use in the past year, significantly higher than the 18.7% observed in the general adult population. Additionally, 21.8% of LGBT adults reported alcohol use disorders in the previous year, compared to 11.0% in the general population, and 6.7% of LGBT adults misused opioids, higher than 3.6% in the general population. These figures highlight the elevated rates of substance use and mental health challenges faced by the LGBT community, which are often driven by minority stressors such as societal stigma and discrimination.¹⁸

Moreover, studies suggest that between 20% and 30% of gay and transgender individuals experience substance abuse, a figure substantially higher than the 9% seen in the general population. From a public health perspective, these findings underscore the urgent need for targeted interventions that address the unique challenges faced by LGBT individuals.² According to Blackwell and López Castillo,¹⁹ there are higher rates of both traditional cigarettes and e-cigarette usage among LGBT people, especially bisexual women is higher than that among lesbian and heterosexual women.^{20,21} Besides that, bisexual men were more likely to admit to having tried or smoked electronic cigarettes than heterosexual men.²²

Psychiatric problems are more common among LGBT individuals who struggle with substance use disorder (SUD).² Globally, two-thirds of LGBT adults with SUD had problems with alcohol consumption. Nearly 40% of mental illness falls into the severe category, and 3.9 million LGBT persons have both substances abuse and mental health problems.² For instance, gay or bisexual individuals are more likely to experience frequent mental anguish and despair, and transgender children and adolescents are more likely to suffer from depression, suicidality, self-harm, and eating disorders. As a result, it is crucial that LGBT people receiving treatment for SUD are evaluated for other mental illnesses and vice versa, and that all conditions that are identified are treated simultaneously.²³

Furthermore, Sexually Transmitted Diseases (STDs) are becoming more common among gay and bisexual men, especially those who have Men sex with men (MSM) accounted for 83% of primary and secondary syphilis cases in known sex partners in the United States in 2014 and also more likely to contract other STDs such as chlamydia, gonorrhea, and HPV, which can lead to anal and oral cancer. Gay and bisexual men are 17 times more likely than heterosexual men to develop anal cancer, especially if they are HIV positive.² According to a study,²⁴ the majority of Syphilis rates were found to be highest in low-middle-income countries at 72.9%, with HIV prevalence concentrated in two regions: Sub-Saharan Africa and Central and Southern Asia.

There are several reasons for this disparity. First, LGBT individuals are more likely to experience discrimination and stigma, which can make it harder for them to access healthcare, including HIV testing and treatment.^{25,26} Second, some sexual behaviours that are more common among LGBT individuals, such as anal sex, carry a higher risk of HIV transmission. Third, some LGBT individuals may be more likely to engage in substance use or have other health conditions that increase their risk of HIV infection.²⁵ Transgender women, particularly those from racial and ethnic

minority backgrounds, face an increased risk of HIV infection compared to their cisgender counterparts. Evidence from studies indicates that transgender women, specifically Black, Latina, and Indigenous transgender women in the United States, are disproportionately affected by HIV. This heightened risk is attributed to a combination of social determinants of health, including stigma, discrimination, lack of access to adequate healthcare, and a higher prevalence of high-risk sexual behaviours.²⁵

Public Health Strategies

In the context of family disruption, LGBT youth may experience significant challenges in forming secure parent-child attachments if they face rejection due to their sexual orientation or gender identity. This disruption can have profound emotional and psychological effects, as rejection by family members is associated with higher risks of mental health issues, substance abuse, and homelessness. Strengthening family support services, such as providing counselling and education to families, can play a crucial role in promoting understanding and acceptance, fostering healthier parent-child relationships, and mitigating the negative consequences of rejection. By offering resources to both LGBT youth and their families, public health initiatives can help rebuild these vital connections, contributing to better mental health and overall well-being for LGBT individuals to screen for risks.²⁷

Lack of societal acceptance and understanding is a problem that affects many LGBT families, making them feel isolated and marginalized. Relationships within the family may suffer as a result of this lack of support, and overcoming obstacles may become more challenging. As a result, parents frequently reject their LGBT children's gender and sexuality, which can occasionally result in relationship breakdown.²⁸ Therefore, access to qualified therapists or counsellors with experience working with LGBT people and their families can be very important. These services can support families in navigating their particular difficulties, providing a secure setting for candid discussion, and providing advice on acceptance, communication, and coping mechanisms. These programs can also help young LGBT people develop self-acceptance, resilience, and the skills they need to communicate effectively with their families and reconsider going back to their original identity as men or women.

Moreover, the diversity within the LGBT community contributes to a wealth of unique talent across various sectors, including social media, fashion design, styling, brand ambassadorship, and entrepreneurship, all of which play a significant role in driving socio-economic development. LGBT individuals need to thrive in their careers, fostering innovation and growth across industries in countries

that accept this kind of ideology. Creating inclusive workplaces that celebrate diversity not only supports the LGBT community but also benefits the broader economy by tapping into a diverse and dynamic workforce.¹⁸ On social media, for example, these influencers are free to express themselves and reach a larger audience with their content, and their ability to connect with diverse communities can drive positive social change and shape public opinion. In countries where LGBT rights are not recognized or protected, there is a significant risk of talent drain, as skilled professionals are often forced to seek more inclusive environments. Research consistently shows that discrimination and the lack of legal protections for LGBT individuals can drive this migration, depriving nations of valuable contributions to economic growth, innovation, and cultural development. For instance, a study by the National Academies of Sciences, Engineering, and Medicine² highlights that countries with weak LGBT protections, such as some regions in Eastern Europe and the Middle East, witness an outflow of LGBT individuals to nations with stronger rights protections. This migration results in lost potential for economic and social development, underscoring the importance of recognizing and safeguarding LGBT rights as a means to foster talent retention, innovation, and cultural enrichment within countries.²⁰ These people may choose to migrate to a friendlier country in search of a more welcoming environment that respects their rights and provides equal opportunities. These countries attract those seeking a society that values and accepts diversity and provides equal rights to all citizens; they foster an environment conducive to innovation, creativity, and economic development.^{19,20} However, each country has its cultural and religious philosophy that needs to be respected.

The American Society of Plastic Surgeons (ASPS) in the 2020 Plastic Surgery Statistics report revealed that the number of transgender male patients undergoing breast or chest surgery treatments increased by 15% between 2019 and 2020.²⁹ From 2022 to 2030, the market for sex reassignment surgery in the United States is projected to increase at a compound annual growth rate (CAGR) of 11.23%.³⁰ Individuals in the LGBT community visit aesthetic clinics for services including cosmetic surgery, laser hair removal, and even gender-affirming options.³⁰ Hormone replacement treatment (HRT), facial feminization/masculinization operations, and body contouring surgeries are just a few examples of the transgender-related services that cosmetic clinics may offer.³¹ These methods are associated with significant positive health outcomes, including improved mental health, reduced gender dysphoria, and enhanced overall well-being. However, it is crucial to ensure that these interventions are carried out according to established medical guidelines,

appropriate clinical supervision, and standards of care.³²

Therefore, LGBT issues must be highlighted as challenges in public health programs. Cooperation between NGOs and international organizations such as the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) is needed to raise awareness, provide support systems, and educate the public on LGBT health risks and vulnerability. These collaborations and community outreach programs can improve information sharing and support through a variety of channels such as face-to-face meetings, video conferences, and web-based platforms.³³ Furthermore, improving health practices focusing on STDs, HIV, and other critical health screenings for LGBT individuals, such as prescribing pre-exposure prophylaxis (PrEP), screening for cervical cancer, and providing gender-affirming hormone therapy, is critical with the involvement of family members and communities.³³⁻³⁴ In addition, several counselling activities are needed on condom use, mental health, substance abuse, and violence for people at higher risk, as well as those having more difficulty accessing quality healthcare.^{33,37}

CONCLUSION

The health disparities faced by the LGBT community stem from stigma and discrimination, impacting their overall well-being. As the LGBT population grows, it will affect population dynamics by reducing growth rates, increasing migration to more inclusive countries, and raising mortality rates from related diseases. Improving access to healthcare, including HIV and cancer screenings, gender-affirming therapy, and PrEP helps to prevent health risks. Public health efforts must focus on reducing health risks by ensuring access to healthcare for all, to promote overall well-being, and a healthier population.

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