

Journal of International Students
Volume 14, Issue 1 (2024), pp. 248-268
ISSN: 2162-3104 (Print), 2166-3750 (Online)
jistudents.org

Sexual and Reproductive Health Experiences of International Students Studying in Universities of Western Countries: A Critical Literature Review

Abukari Kwame

College of Nursing, University of Saskatchewan, Canada

Hua Li

College of Nursing, University of Saskatchewan, Canada

Pammla M. Petrucka

College of Nursing, University of Saskatchewan, Canada

Geoffrey Maina

College of Nursing, University of Saskatchewan, Canada

ABSTRACT

Engaging in sexual relationships is part of adulthood, but doing so in a foreign country can be risky because unsafe sexual experiences can have severe consequences for international students. This review explored sexual and reproductive health (SRH) experiences and needs of international university students in Western countries to identify challenges and gaps and to discuss critical SRH interventions. Four databases (Scopus, Embase, Web of Science, and PubMed) were searched for peer-reviewed journal articles published between 2000 and 2023. After screening 1607 articles, 10 met the inclusion criteria. Results of the review showed that many international students lack comprehensive knowledge about sexual health and sexually transmitted infections. They often obtain SRH information from informal sources, face language barriers, and experience difficulties navigating the healthcare systems of their host countries. University sexual wellness programs should examine how cultural orientations impact the sexual health of international students and provide culturally appropriate SRH interventions.

Keywords: international students, sexual and reproductive health, sexual taboo, sexual wellness, Western universities

To obtain a quality education, many students from developing countries attend universities in Western countries. The Migration Data Portal (2023) shows that the number of internationally mobile students (i.e., students holding a study permit or student visa status) has increased globally. Also, the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute of Statistics reported over 6.3 million international students in 2020, representing a two million increase from the prior year (Migration Data Portal, 2023). The United States of America (USA), Australia, the United Kingdom (UK), New Zealand, Germany, Russia, and France are the top destination countries for international students, whereas India, China, Vietnam, Nigeria, and Iran are the top feeder nations from where international students emanate (Migration Data Portal, 2023; Top International Managers in Engineering [TIME], 2021).

Research in Canada has shown that settling in a new country has many challenges for newcomers, including language barriers, cultural differences, and securing employment and housing (Chadwick & Collins, 2015). These experiences similarly impact the health and well-being of international students, especially in contexts with less support for these newcomers. Differences in social and cultural understandings around safer sex, sexual taboos and beliefs, being new to a place, lack of sexual health knowledge, and challenges to accessing sexual health services constitute predisposing factors to poor sexual and reproductive health (SRH) (Bunner, 2015; Poljski et al., 2015). While international students need support for sexual health knowledge and services, Poljski et al. (2015) observed that the well-being and sexual health of international students may be invisible to policymakers because of their temporary status in the study destination.

The benefits of studying abroad may include exposure to a new culture, personal development, and fewer constraints that may be imposed on international students in their own countries, especially with respect to sexual behaviors and relationships (Downing-Matibag & Geisinger, 2009). However, international students from developing countries in Western universities experience sexual health issues, such as unplanned pregnancies, sexually transmitted infections (STIs), abortion, sexual violence, and other sexual-associated risks due to lack of knowledge and challenges accessing SRH services (Baek et al., 2012). International students, especially those from cultures where sex and sexual behaviors are not openly discussed, are vulnerable and at a higher risk of STIs because many feel that university life is the time for intensified sexual exploration (Cassidy et al., 2018; Okeke, 2022b). Some students could use sex to cope with isolation and loneliness or develop connections with others (Cassidy et al., 2018).

Research literature reports that the sexual health of newcomers in the USA and other developed countries is often influenced by many factors, including cultural differences, language barriers, and challenges around accessing SRH services (Belcastro, 2018; Du & Li, 2015; Okeke, 2022a; Zhang et al., 2017). For instance, in an interpretive phenomenological study, Okeke (2022a) explored sexual practices around condom use among East Asian and sub-Saharan African international university students in Australia. The study found that, although participants were aware of the risks associated with condomless sex, the stigma

around condom use, the desire for sexual pleasure, curiosity, and the sex culture of the study setting affected these international students' sexual practices around condom use.

Recent systematic reviews explored international students' sexual health knowledge, behaviors, and attitudes (Lim et al., 2022; Mundie et al., 2021) and found that many international students had poor sexual health knowledge and were less sexually experienced. Lim et al. (2022) reported that many international students were engaged in less risky sexual practices (i.e., fewer sexual partners and higher rates of condom use) than their domestic counterparts. International students also reported barriers to accessing sexual health services included difficulty navigating the healthcare system, language barriers, lack of knowledge about the role of specific healthcare, cost of medical appointments and treatments, and stigma/embarrassment related to utilizing these services (Mundie et al., 2021). Thus, international students often use informal sources for their sexual health knowledge (Mundie et al., 2021). Limited SRH knowledge has been associated with unwanted pregnancies (Chen et al., 2018). It was estimated that about 400 international students seek abortion services yearly in Australia (Chen et al., 2018).

In a mixed methods study, Okeke (2022b) explored sex-based protective practices against blood-borne viruses and STIs among East Asian and sub-Saharan African international students in Australia. An online survey among 149 students and in-depth interviews with 20 participants revealed that abstinence from sexual activities and condom use (whether consistent or occasional) were some protective practices against STIs among international students (Okeke, 2022b). However, international students, who were more acculturated to the Australian mainstream culture, engaged less in protective practices, while others stated that condom use was more for pregnancy prevention rather than for STI prevention (Okeke, 2022b).

In a similar study, Douglass et al. (2020) compared the sexual behaviors and knowledge of domestic and Chinese international students in Australia. The study indicated that international students lacked knowledge and information about STIs and contraceptives compared to domestic students. However, domestic students engaged in more risky sexual practices (e.g., more sexual partners, engaged in casual sex, and less likely to use condoms) than international students. About 50% of participating international students indicated needing more targeted sexual health information about preventing and testing for STIs, contraceptives, general sexual health, and unplanned pregnancies (Douglass et al., 2020).

This study aimed to review the literature that explores SRH experiences and needs of international university students in Western countries to identify challenges and gaps. This study focused on international students from developing countries who study in Western countries because of differences in the concept of sexuality and sexual practices between host countries and home countries. SRH is defined in this study as a state of complete physical, mental, spiritual, and social well-being in all matters concerning the reproductive system and its functioning (World Health Organization [WHO], 2006). It also means having satisfied and safe sex and the freedom and capacity to decide one's sex life (WHO, 2006). Also,

international students' SHR experiences entail their knowledge, perceptions, and feelings about sex and sexuality, sexual behaviors and practices, as well as their impressions about access to sexual health services and professionals in the host country (Chaliawala, 2021; Lim et al., 2022). Two reasons necessitated this review: First, to inform an empirical study that explores newcomer international students' sexual wellness experiences in post-secondary institutions in a Canadian province. We needed to identify the gaps and challenges to accessing SRH services among international students in the literature. Secondly, recent literature reviews are limited to Chinese students' SRH practices in Western countries (Mundie et al., 2021) or generally focused on international students' sexual wellness (Lim et al., 2022) globally.

METHOD

Search Strategy and Inclusion/Exclusion Criteria

To explore the SRH experiences of international students studying in Western countries, literature was searched across four databases (Scopus, Embase, Web of Science, and PubMed) for peer-reviewed journal articles published from 2000 to 2023. We chose to start our search from 2000 upward because research revealed that the international student population in universities of many Western countries began to rise in the year 2000 (Crossman et al., 2022; Glass & Cruz, 2023). For instance, in Canada, Crossman et al. (2022, p. 1) observed that the number of international students had increased rapidly from 2000 to 2019, decreased in 2020 by 17% due to Covid-19, and increased again in 2021. This evidence provided the rationale for the inclusion criteria of articles published between 2000 and 2023. The following keywords and phrases were employed in the search process: sexuality, sexual wellness, sexual health, sexual behavior, international, recent immigrant, newcomer, foreign, and post-secondary, college, university, and student. These keywords were combined using the Boolean operators OR/AND. For a study to be included in this review, it must have explored the SRH experiences of international students studying in a Western country, peer-reviewed article, and published in English between 2000 and 2023.

Screening and Extracting Data

The titles and abstracts of studies were screened against inclusion and exclusion criteria, and studies that met the inclusion criteria were retrieved for full-text review. A PRISMA diagram (Figure 1) illustrates the literature search, article screening, and selection process. After the full-text review, the following information was extracted from selected studies that met the inclusion criteria: study title, purpose, methods, outcome measures, findings, strengths, limitations, and recommendations/conclusions. This data informed a thematic analysis (Braun & Clarke, 2006, 2019), which synthesized the common findings from each study into themes.

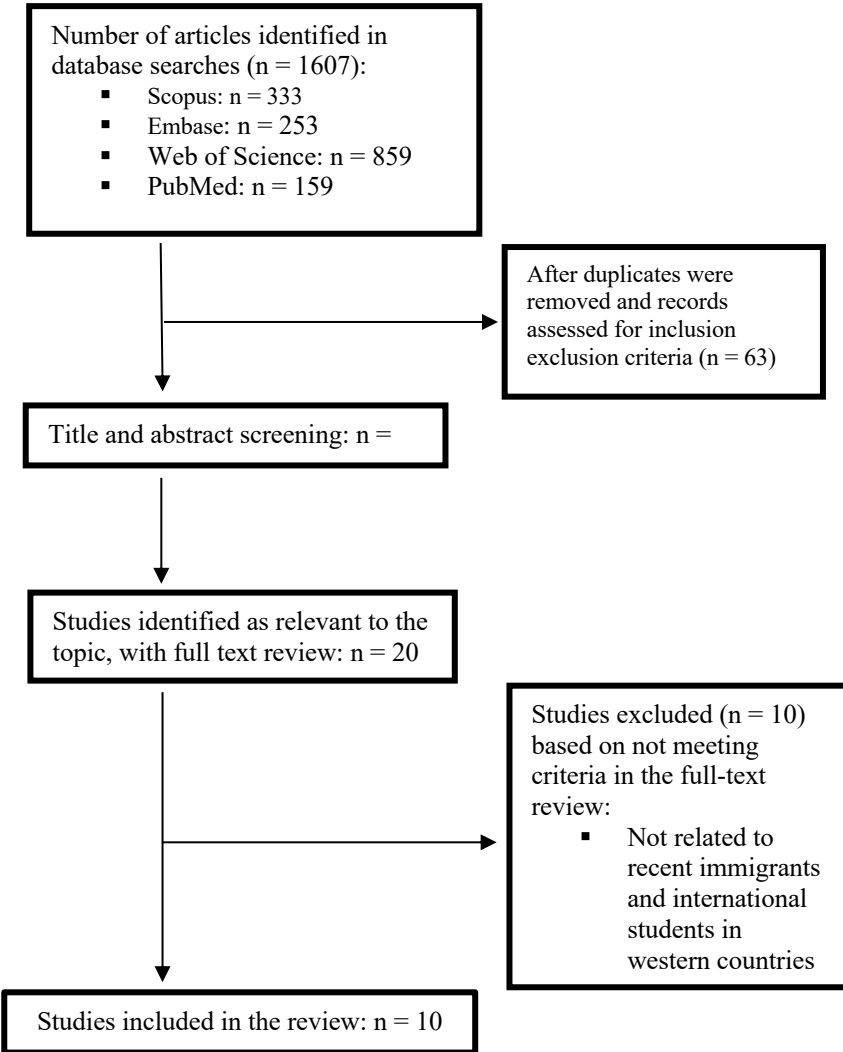


Figure 1: Study selection flow diagram

RESULTS

A total of 1607 articles were retrieved from all databases searched. A Google Scholar search was conducted but did not add new studies to those found through the databases. After duplicates and irrelevant studies were removed, the titles and abstracts of 63 studies were screened, of which 20 studies were selected for full-text review. Ten articles out of the 20 articles reviewed met the inclusion criteria. Figure 1 above presents the study selection process.

Characteristics of Included Studies

Eight of the ten included studies employed qualitative study designs with interviews, focus groups, or both constituting their methods of data collection (Burchard et al., 2011; Chang et al., 2022; Gao et al., 2016; MacPhail & Stratten, 2022; Okeke, 2021, 2022; Parker et al., 2020; Todorova et al., 2022). Thematic analysis was employed in all the qualitative studies. Only two quantitative studies (Douglass et al., 2020; Esagoff et al., 2022) used surveys (online and paper forms) to collect data and provided descriptive statistical analysis. The total sample size for the two quantitative studies was 1492 participants, of which 492 (32.9%) were males. The qualitative studies had a total sample size of 220 participants, of which 65 (41.7%) were males. The 64 participants in Todorova et al.'s (2022) study are excluded from the above gender breakdown since this information was not provided in their study.

Most included studies were conducted in Australia ($n = 7$), with the remaining coming from the USA ($n = 2$) and Canada ($n = 1$). Chinese international students' SRH experiences have been extensively explored compared to students from other countries, with most of these studies being conducted in Australia (Burchard et al., 2011; Chang et al., 2022; Douglass et al., 2020; Esagoff et al., 2022; Gao et al., 2016). The studies with the most diverse participant nationalities were MacPhail and Stratten (2022) and Todorova et al. (2022), with international students from several countries across different continents. Participants in all included studies largely came from Asia, with only a few originating from Africa and Europe (MacPhail & Stratten, 2022; Okeke, 2021, 2022a; Parker et al., 2020; Todorova et al., 2022) (see Table 1).

A significant finding from the included studies was the lack of information about the impact of Covid-19 on international students' SRH, although eight of the studies (Chang et al., 2022; Douglass et al., 2020; Esagoff et al., 2022; MacPhail & Stratten, 2022; Okeke, 2021, 2022a; Parker et al., 2020; Todorova et al., 2022) were published in 2020 and beyond. An in-depth analysis of these studies revealed that their data were collected in 2019, except for Todorova et al. (2022). Moreover, Esagoff et al. (2022) acknowledged the need for a study on the impact of Covid-19 on attitudes, knowledge, and HPV vaccination uptake. However, Todorova et al. (2022) did not explore the effects of the pandemic on international students' SRH despite the study being conducted at the heart of the Covid-19 pandemic.

Themes

Five themes emerged from the current review to capture the experiences, challenges, gaps, and interventions regarding international students' SRH experiences. The themes include international students' sexual health knowledge, behaviors, and practices, the impact of cultural values and norms on sexual health, accessing sexual health services and information, institutional sexual wellness norms setting, and suggested interventions.

Theme 1: SRH Knowledge

This theme relates to participants' knowledge of various STIs, including HIV/AIDS, cervical cancer, genital warts, chlamydia, and human papillomavirus (HPV); sources of sexual health knowledge, and whether any differences existed between international and domestic students' sexual health knowledge. Many of the included studies showed that, in general, international students have less knowledge about SRH (Burchard et al., 2011; MacPhail & Stratten, 2022) than their domestic counterparts. The studies reported that many international students lack knowledge and information about STIs, their causes, and treatment options (Douglass et al., 2020; Esagoff et al., 2022; Gao et al., 2016). For instance, Douglass et al. (2020) reported that domestic students were more knowledgeable about chlamydia and contraception usage and more likely to go for STI testing than international students. Despite the lack of sexual health knowledge among international students, one study revealed that female international students were more knowledgeable about HPV than their male counterparts (Esagoff et al., 2022).

Todorova et al. (2022) reported that international students do not possess knowledge regarding sexual health, predicating their exclusion in the design of sexual wellness educational materials. Hence, Todorova et al. (2022) argued that the lack of knowledge about sexual health is not problematic, but rather the absence of international student voices in the program design and development is at issue. Therefore, international students' perspectives on program design and development have not been considered. Included studies in this review found that many international students obtained information about their sexual health from informal sources, including family members, friends, magazines, the internet, social media, and posters (Burchard et al., 2011; Esagoff et al., 2022; Gao et al., 2016).

Not accessing information from formal sources and healthcare professionals could directly impact the type of or lack of knowledge about STIs and other sexual wellness practices among international students. For example, participants in Gao et al.'s (2016) study believed that cervical cancer was caused by abortion and miscarriage, while others assumed that women, sexually promiscuous people, homosexuals, and people born in the 1990s are the most vulnerable people to HPV and, as such, should get vaccinated.

Theme 2: Sexual Practices and Behaviours

International students' experiences and understanding of safe sexual practices, sexual misconduct, and sexual violence, as well as risky sexual behaviors, were explored in several studies. Some risky sexual practices reported in the studies were having multiple sexual partners, engaging in condomless sex, and testing for STIs (Douglass et al., 2020; Okeke, 2021, 2022; Parker et al., 2020). Overall, international students were reported to engage in less risky sexual behaviors than domestic students where these studies were conducted (Douglass et al., 2020; Esagoff et al., 2022). Douglass et al. (2020) found that Australian students engaged in more risky sexual behaviors and practices, including condom use, than Chinese international students. Male international students were more sexually active than females (39% of females and 49% of males reported being sexually active), yielding an increased risk of exposure to STIs (Esagoff et al., 2022). Furthermore, the qualitative studies which explored international students' SRH experiences found that some of these students who engaged in risky sexual practices and behaviors did so out of curiosity and the desire for sexual pleasure (Okeke, 2021; 2022a).

Unanticipated sexual encounters, influence of alcohol, and misunderstanding regarding sexual consent were reported as predictors of risky sexual behaviour (Okeke, 2022a; Parker et al., 2020; Todorova et al., 2022). Students reported that when under the influence of alcohol, sexual intercourse may occur without condom use (Okeke, 2022). Furthermore, Todorova et al. (2022) found that international students are aware of and know about sexual health, including sexual violence and misconduct. However, the fear of losing their visa and residence status affected many international students' ability to report sexual violence and misconduct to school authorities (Todorova et al., 2022). Therefore international students' experiences of sexual violence and misconduct may go unaddressed due to this fear.

Moreover, condom-related stigma, misconceptions and gender stereotypes about sex and sexual behaviours impacted international students' sexual practices and outcomes. For instance, international students reported that impromptu sexual encounters affected their condom use practices, whereas others assumed that it was not decent for a woman to carry condoms with her, as that might imply sexual expectation (Okeke, 2022).

Theme 3: Effects of Cultural Values and Norms on SRH

This review uncovered that differences in cultural values, norms, and beliefs about sex and sexuality affect international students' sexual health. Beliefs about premarital sex and/or virginity, sex taboos, sexual consent, and stigma, as well as conversations around causal sex, vary among students from Western and non-Western cultures (Okeke, 2021; Parker et al., 2020). For instance, cultural beliefs about premarital sex (virginity) and the fear of being judged or embarrassed affected the SRH (e.g., contraception access, safe causal sex) of international students in Australia (Burchard et al., 2011). Furthermore, MacPhail and

Stratten's (2022) study found that cultural norms and values about sex and differences in cultural perspectives and taboos around premarital sex influenced sexual behaviors and well-being among Asian students studying in Western countries. Some students felt ashamed talking about sex, engaging in pre-marital sex, or losing their virginity before marriage due to the sex taboos in their cultures (MacPhail & Stratten, 2022).

The studies reported that, in many Asian and African cultures, sex is not openly discussed or talked about, compared to most Western cultures where open conversations about sex are normal (MacPhail & Stratten, 2022; Okeke, 2021; Parker et al., 2020). Such cultural and contextual differences in sex beliefs and taboos impacted the sexual experiences of international students profoundly (Okeke, 2021, 2022a; Parker et al., 2020). To illustrate, Okeke (2021) reported that participants revealed that casual sex in Australia was not tied to love and committed relationships, which is associated with engaging in unhealthy sexual practices and behaviors among international students. Todorova et al. (2022) also observed that the culture of sexual consent in the Canadian context was Western-centric and biased toward other cultures, thereby influencing international students' efforts to deal with sexual misconduct and violence.

Theme 4: Accessing Sexual Health Services and Information

Based on the findings of the included studies, international students face several challenges in their efforts to access SRH information and services (Burchard et al., 2011; MacPhail & Stratten, 2022; Parker et al., 2020). MacPhail and Stratten (2022) reported that participants expressed feeling uncertain regarding where to seek sexual health support; as a result, this resulted in a series of trial-and-error processes to access sexual wellness services, including healthcare specialists.

Language barriers also affected these students' ability to navigate the healthcare systems in Australia (MacPhail & Stratten, 2022). Many students felt shamed and pressured due to the high English language skills required to access the healthcare system (MacPhail & Stratten, 2022). Moreover, SRH terminologies (e.g., using PrEP vs. PEP) can confuse students, especially those not exposed to or informed about safe sex practices (MacPhail & Stratten, 2022).

Similarly, Parker et al. (2020) related that international students faced the challenge of an information paradox, meaning they had access to large amounts of information about sexual health, but had difficulty processing it and accessing sexual wellness support. Many students acknowledged a vast amount of information but lacked the skills to manage it for their sexual health needs (Parker et al., 2020). Furthermore, many students were reluctant to access STI testing services for fear of stigmatization or shame if they test positive (Douglass et al., 2020; Gao et al., 2016).

Although the cost of accessing sexual wellness care was not a problem for many students, lack of knowledge about the role of general practitioners (GPs) and feelings of embarrassment or guilt for visiting GPs for sexual health services prevented some students from utilizing sexual health services and professionals

(Parker et al., 2020). Also, fear of being judged, insufficient priori knowledge about sexual wellness before moving abroad, difficulty in navigating the host country's healthcare system, and cultural differences about sex and sexuality impacted many international students' access to and uptake of sexual health professionals, services, and information (Burchard et al., 2011). These factors were reasons for seeking sexual health information from informal sources among international students.

Another critical finding was that university policies do not consider international students' unique cultural and religious needs (Todorova et al., 2022). Lack of consideration for the needs of international students in sexual health policies and interventions informs prevailing approaches to sexual health education in many universities (Todorova et al., 2022). Most crucially, Todorova et al. (2022) report that university sexual health coordinators and counselors often assume that international students' perspectives on sexual health come from "backward cultures," with the students lacking an understanding of sexual well-being.

Theme 5: Suggested Interventions

Across the included studies, a strong message of sensitivity to cultural differences and awareness of international students' unique cultural perspectives about SRH was evidenced (Burchard et al., 2011; Douglass et al., 2020; Okeke, 2021, 2022a). Thus, the design of SRH policies, educational materials, and delivery of such interventions must be culturally sensitive and acceptable to international students. To make this approach possible, it was recommended in the literature that different educational approaches, including telehealth and seminar-style education, peer mentorship, professional guest lectures, and international students' local social media outlets must be used to provide SRH education and information (Burchard et al., 2011; Chang et al., 2022; Douglass et al., 2020; Esagoff et al., 2022; Todorova et al., 2022).

A few studies developed interventions or educational materials to promote international students' SRH. Esagoff et al.'s (2022) study produced an educational infographic about HPV disease and vaccination to increase awareness and knowledge among international students. However, the effectiveness of the intervention was not evaluated. Also, MacPhail and Stratten (2022) developed a resource guide (The Sexual Health and Relationship Kit) with information about sexual health and relationships, safer sex practices, STIs, and links to additional online resources, copies of which were distributed to new international students. The design, content, cultural appropriateness, and accessibility of the resource guide were evaluated through focus groups. These components were revised to enhance the quality of the resource guide through positive feedback from the students. However, the effectiveness and acceptability of the guide itself continue to be assessed and evaluated.

Furthermore, it is recommended that university sexual wellness programs target different components of sexual health: STI prevention, contraceptive use, and misconceptions about STIs (Douglass et al., 2020; Esagoff et al., 2022; Gao

et al., 2016); impacts of cultural orientation on sexual health practices (Okeke, 2021, 2022; Todorova et al., 2022); roles of health care providers and how to access the host country's healthcare services (Parker et al., 2020); practicing safer sex, dating and intimate relationships, and negotiating power dynamics in sexual relations (Todorova et al., 2022). Moreover, university campuses must create inclusive and safe spaces (Chang et al., 2022; Parker et al., 2020) while providing context-sensitive, freely available sexual wellness education programs (MacPhail & Stratten, 2022; Okeke, 2021, 2022a).

DISCUSSION

This review aimed to examine international students' sexual health experiences to identify challenges, gaps, and recommendations to promote the SRH of this population. Our findings achieved the study aims, which were highlighted in the themes and discussed in this section.

Research on International Students SRH

This review revealed that most studies on international students' SRH experiences focus on students from Asia, with Chinese students forming the majority. Besides, there is a skewed geographical distribution of the study locations, with about 70% of them being conducted in Australia. Based on the information, in 2020, 4.4 million international students were enrolled within the OECD, with the USA hosting 22%, the UK 13%, and Australia 10% of all international students (Migration Data Portal, 2023; OECD, 2022). This pattern suggests that studies on the SRH experiences of international students in Western universities, particularly in the US and the UK, are limited, reflecting a considerable gap in the SRH literature about international students' sexual wellness.

International Students' Knowledge of and Access to SRH Services

Knowledge of SRH among international students was found to be inadequate (Burchard et al., 2011; Douglass et al., 2020). According to MacPhail and Stratten (2022), many international students have poor knowledge about SRH (e.g., building healthy sexual relationships, STIs, protection and contraception usage), which negatively impacts their ability to fulfill their SRH needs. For instance, the literature suggests that many international students do not receive comprehensive sexual education compared to Australians (Chen et al., 2018). It is further believed that many international students from Southeast Asia or Africa lack a basic understanding of safe sex and how to access sexual healthcare services while in Australia (Chen et al., 2018). Therefore, the lack of SRH education in Western universities may partly contribute to the challenges international students face regarding their sexual health. Research shows that SRH education is primarily delivered during high school in Western countries (Chen et al., 2018; MacPhail

& Stratten, 2022); hence, Western universities focus more on SRH promotion than SRH education.

The literature review revealed that educational institutions often ignore international students' SRH needs (Poljski et al., 2015; Todorova et al., 2022). Todorova et al. (2022) reported that many SRH service providers and university policymakers perceived international students to lack SRH knowledge. They believe that the students have nothing to offer in policy creation and educational material preparation on sexual health; as a result, international students are not invited to be involved in SRH policy and program design and development.

The challenge of accessibility of SRH services has been highlighted in this review. Several barriers identified include language barriers, difficulties in navigating the healthcare systems of their host countries, and healthcare coverage issues. Since many international students must meet language standards before admission or are enrolled in language classes to help them participate in the social life of their host countries, language barriers should not be a factor in accessing SRH services. However, accessing healthcare systems can be challenging even among residents of host countries. For example, difficulties in navigating healthcare services have been reported among patients in Canada (Garrod et al., 2020) and the USA (Griese et al., 2020). Health literacy has been associated with navigating healthcare services (Griese et al., 2020). Therefore, universities in Western countries should consider health literacy as a part of improving the accessibility of SRH services when developing programs targeting international students.

Accessing SRH services and healthcare professionals can also be impacted by health coverage restrictions these students face if SRH services are not covered by government health insurance in their host countries. Out-of-pocket payment for SRH services (e.g., abortion, transportation, and SRH consultation) may significantly impede international students' ability to utilize the services. For instance, the cost of an abortion procedure could be \$1000 for people without access to the Medicare subsidy in Australia (Chen et al., 2018).

Moreover, Roesch et al. (2022) noted that, in the UK, international students may not understand their rights regarding the confidentiality of the information they provide SRH professionals, which may be a barrier to accessing SRH services. Meherali et al. (2022) found that confidentiality is essential to preventing people from accessing SRH. Many participants in Meherali et al.'s (2022) study revealed that they would prefer to seek SRH care from strangers or unfamiliar people due to concerns about confidentiality.

Universities can play a critical role in enhancing SRH among international students by developing programs that involve international students. All programs should meet students' needs, including being culturally sensitive, easily accessible, and appropriate to the knowledge level. In addition, health literacy, stigma, and confidentiality should be components of the programs. Universities should also work with governments and communities to help international students who endure financial constraints when accessing healthcare services.

Cultural Beliefs and International Students' SRH Behaviours and Practices

International students' sexual behaviors and practices were safer than domestic students in most of the included studies (Douglass et al., 2020; Esagoff et al., 2022). However, some international students were engaged in risky sexual practices out of curiosity due to a more liberal sexual culture (Gamanya, 2021; Okeke, 2022) or high sexual attention from men (Martins et al., 2020). Similarly, studies have explored international students' sexual practices, behaviours, and knowledge of STIs in China (Yang et al., 2018; Zhou et al., 2022) and found that the participants had little knowledge about HIV and were primarily engaged in unprotected sex. Yang et al. (2018) and Zhou et al. (2022) observed that the students engaged in unsafe sexual practices, including having multiple sexual partners, less condom use during oral and vaginal intercourse, and male students engaged in risky sexual behaviors than female students. Some of these risky SRH practices were associated with reduced mental health due to acculturative stress (Yang et al., 2018). Pedersen et al. (2020) reported similar findings of risky sexual behaviors among American college students studying in Italy, the UK, and Spain. Alcohol usage, pre-departure sexual risk behaviors, and length of stay abroad were correlated with the students' harmful SRH practices.

Research has also shown that international students are prone to sexual violence, including harassment and assault (Parker et al., 2020), due to differences in cultural orientations, fear of losing their visas, or impacts of alcohol. Furthermore, Ryan et al. (2016) argued that international students could be at risk of STIs due to incidents of sexual assault and the inability of these students to report such experiences. Hutcheson (2020) also observed that international students have higher rates of sexual violence experiences. According to Hutcheson (2020, p. 200), it is often perceived that "international students experience sexual violence because they did not know enough about the host culture," laws, and norms around sexual interactions. Hutcheson (2020, p. 204) advised that instead of "focusing on what students do or do not know, it is more advantageous to focus on the structural barriers that prevent international students from accessing the right information" to support their SRH needs. Moreover, students do not often report experiences of sexual violence for fear of losing their student and visa status, for not being believed, or for feeling ashamed and embarrassed (Hutcheson, 2020; Pedersen et al., 2020). Students must be provided with information about their responsibilities and rights, including SRH rights, where to seek redress should such rights be infringed upon, and what limits exist in the local laws and policies for domestic and international students (Poljski et al., 2015).

Cultural values and beliefs around sex and sexuality profoundly impact the SRH practices of international students. The sexual cultures of these students determine how they relate to others and access SRH information. This review found that international students' sex taboos, beliefs, and practices often prevent them from using SRH services (MacPhail & Stratten, 2022). These beliefs can predispose international students to or prevent them from engaging in risky sexual practices. For instance, studies have shown that moving from a sexually

conservative culture or society to a more liberal one can expose international students to risky sexual practices (Okeke, 2021). Sexual beliefs around condom use and gender stereotypes about who should carry a condom affected condom use among international students (Okeke, 2022a). Similarly, a study on international students' well-being in Sydney, Australia (Ryan et al., 2016) revealed that these students are at an increased risk of acquiring STIs, especially young gay male international students, due to taboo perceptions around sex and a lack of information about safer sex practices.

The impact of cultural differences on international students' SRH and overall engagement with the educational system in Western countries has been noted in other studies (Abu Rabiou, 2017; Chaliawala, 2021). Chaliawala (2021) studied sexual health among South-Asian international students and found that most students believed their religious values were against premarital sex. Over 50% of the participants indicated that virginity was a valuable possession that females and males must maintain before marriage (Chaliawala, 2021). These beliefs influenced the students' SRH practices and behaviors. Chaliawala (2021, p. 36) found that 35% of the students never searched for "information on sexual health or sex-related topics," and the same number of students had no knowledge about the sexual health resources available on the university campus.

Some international students adopted a more liberal sexual culture in the Western world; what Wang (2022, p. 329) called "sexual remittances" informs how cultural perspectives influence SRH among international students. According to Wang (2022, p. 329), sexual remittances consist of "the ideas, values, norms, and practices that students transmit through cross-border communication," which can lead to new identity formation even after they return home post-studies. Wang (2022) observed that the international students from Singapore who participated in the study initially had nonaccepting attitudes towards certain genders due to the influence of their home cultural values and norms. Thus, in general, several factors, such as culture, gender, migration, and language proficiency, intersect to determine international students' SRH outcomes.

Promoting Positive International Students' SRH Experiences

To enhance international students' SRH experiences, culturally sensitive SRH education and sensitivity to cultural differences in SRH service provision must be paramount. Accessibility to SRH information and professionals and challenges around navigating the healthcare systems of host countries require critical attention to support international students in meeting their SRH needs. Research has shown that many international students face severe challenges accessing SRH information, leading many to consult informal information sources, including the internet, social media, and friends/peers (Meherali et al., 2022; Parker et al., 2020). Based on these challenges, different approaches to delivering SRH information and knowledge must be adopted, and international students' input and participation in designing SRH content and delivery must be encouraged and supported. For instance, it is reported that using locally based

international communities and student peer groups to provide peer support and education can be vital, as students learn best from their peers (Chen et al., 2018). In addition, using digital technologies, such as virtual consultation, can be convenient and yield a better experience since they reduce the stress associated with face-to-face meetings with healthcare providers (Meherali et al., 2022).

Limitations of the Study

First, this study focused on the experiences of international students in Western countries. International students in non-western countries may have unique SRH experiences which might complement those from Western countries. Therefore, future reviews of international students' SRH experiences from universities in non-Western countries would provide a different aspect of international students' SRH experiences. Second, given that our inclusion criteria were limited to studies published in English, studies published in other languages were excluded. Lastly, since this study was not a systematic review, the quality of included studies was not assessed. Despite these limitations, the review's findings have uncovered critical issues central to international students' SRH. Important suggestions were noted regarding how to enhance international students' SRH in higher institutions of learning in Western countries.

CONCLUSION

This study reviewed the literature on international students' SRH experiences in Western countries to identify the challenges and gaps and proposed evidence-based SRH interventions that target this student population. The findings suggest that to improve SRH among international students in Western universities, culturally sensitive and appropriate programs and educational interventions are required and should be developed with the involvement of international students.

DECLARATIONS

Declaration of conflicts of interest

The authors declare that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author contributions

HL conceived the topic. AK searched the literature and drafted the manuscript. HL, PMP, and GM edited and reviewed the article for intellectual content. All authors read and approved the final version of the article.

Availability of Data and Materials

Data used in this article are reported as part of the findings, and the evidence table is attached as an appendix.

Ethical Approval

This study did not require institutional ethics approval.

REFERENCES

- Abu Rabiou, H. M. (2017). Undergraduate Arab international students adjustment to US universities. *International Journal of Higher Education*, 6(1), 131-139. doi:10.5430/ijhe.v6n1p131
- Baek, Y., Akbar, H., & Baguley, G. (2012). Relationships and sexual health promotion project for QUT. In S. M. Chang (Ed.), *In 23rd ISANA International Education Association Conference Proceedings* (pp. 1-13). Auckland, New Zealand.: ISANA International Education Association Inc. <https://eprints.qut.edu.au/55039/1/55039P.pdf>.
- Belcastro, P. A. (2018). Examining the sexual enigma of the immigrant paradox with international students. *Journal of International Students*, 8(4), 1783-1814. <https://doi.org/10.5281/zenodo.1469857>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589-597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Bunner, K. E. (2015). A global snapshot of sexual health education: Insights from international students at BGSU [MA Thesis, Bowling Green State University]
- Burchard, A., Laurence, C., & Stocks, N. (2011). Female international students and sexual health: A qualitative study into knowledge, beliefs, and attitudes. *Australian Family Physician*, 40(10), 817-820. <https://www.racgp.org.au/getattachment/389f5fd3-e164-437e-a159-351f96a2d91c/Female-international-students-and-sexual-health.aspx>
- Cassidy, C., Bishop, A., Steenbeek, A., Langille, D., Martin-Misener, R., & Curran, J. (2018). Barriers and enablers to sexual health service use among university students: A qualitative descriptive study using the Theoretical

- Domains Framework and COM-B model. *BMC Health Services Research*, 18(581). <https://doi.org/10.1186/s12913-018-3379-0>
- Chadwick, K. A., & Collins, P. A. (2015). Examining the relationship between social support availability, urban center size, and self-perceived mental health of recent immigrants to Canada: A mixed-methods analysis. *Social Science & Medicine*, 128, 220-230. <https://doi.org/10.1016/j.socscimed.2015.01.036>
- Abu Rabiou, H. M. (2017). Undergraduate Arab international students adjustment to US universities. *International Journal of Higher Education*, 6(1), 131-139. doi:10.5430/ijhe.v6n1p131
- Baek, Y., Akbar, H., & Baguley, G. (2012). Relationships and sexual health promotion project for QUT. In S. M. Chang (Ed.), *In 23rd ISANA International Education Association Conference Proceedings* (pp. 1-13). Auckland, New Zealand.: ISANA International Education Association Inc. <https://eprints.qut.edu.au/55039/1/55039P.pdf>
- Belcastro, P. A. (2018). Examining the sexual enigma of the immigrant paradox with international students. *Journal of International Students*, 8(4), 1783-1814. <https://doi.org/10.5281/zenodo.1469857>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589-597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Bunner, K. E. (2015). A global snapshot of sexual health education: Insights from international students at BGSU [MA Thesis, Bowling Green State University]
- Burchard, A., Laurence, C., & Stocks, N. (2011). Female international students and sexual health: A qualitative study into knowledge, beliefs, and attitudes. *Australian Family Physician*, 40(10), 817-820. <https://www.racgp.org.au/getattachment/389f5fd3-e164-437e-a159-351f96a2d91c/Female-international-students-and-sexual-health.aspx>
- Cassidy, C., Bishop, A., Steenbeek, A., Langille, D., Martin-Misener, R., & Curran, J. (2018). Barriers and enablers to sexual health service use among university students: A qualitative descriptive study using the Theoretical Domains Framework and COM-B model. *BMC Health Services Research*, 18(581). <https://doi.org/10.1186/s12913-018-3379-0>
- Chadwick, K. A., & Collins, P. A. (2015). Examining the relationship between social support availability, urban center size, and self-perceived mental health of recent immigrants to Canada: A mixed-methods analysis. *Social Science & Medicine*, 128, 220-230. <https://doi.org/10.1016/j.socscimed.2015.01.036>
- Chaliawala, K. S. (2021). Sexual health knowledge, attitudes, and behaviours amongst South-Asian international students at the University of Central Oklahoma [Master's Thesis, University of Central Oklahoma].
- Chang, S., Kuang, P., & Trumpour, S. (2022). A qualitative study of international students' sexual health information behavior: The case of Chinese men who

- have sex with men. *Transitions: Journal of Transient Migration*, 99-118. https://doi.org/10.1386/TJTM_00045_1
- Chen, H., Blakkarly, J., & McKenny, L. (March 2018). The sex education gap haunts Australia's international students. SBS News. <https://www.sbs.com.au/news/article/sex-education-gap-haunts-australias-international-students/ibp7qvfyb>
- Crossman, E., Choi, Y., Lu, Y., & Hou, F. (2022). International students as sources of labour supply: A summary of recent trends. *Statistics Canada*. <https://doi.org/10.25318/36280001202200300001-eng>
- Douglass, C. H., Qin, C., Martin, F., Xiao, Y., El-Hayek, C., & Lim, M. S. C. (2020). Comparing sexual behaviours and knowledge between domestic students and Chinese international students in Australia: Findings from two cross-sectional studies. *International Journal of STD & AIDS*, 31(8), 781-790. <https://doi.org/10.1177/0956462420921726>
- Du, H., & Li, X. (2015). Acculturation and HIV-related sexual behaviours among international migrants: A systematic review and meta-analysis. *Health Psychology Review*, 9(1), 103-122.
- Esagoff, A., Cohen, S. A., Chang, G., Equils, O., & van Orman, S. (2022). Human papillomavirus and Chinese international students in the United States: Attitudes, knowledge, vaccination trends, healthcare behaviors, and sexual activity. *Human Vaccines & Immunotherapeutics*, 18(1), 1882283. <https://doi.org/10.1080/21645515.2021.1882283>
- Gamanya, T. (2021). Analysis of international students' health determinants in Australia [MPH Thesis, The University of South Africa]. https://uir.unisa.ac.za/bitstream/handle/10500/28959/dissertation_gamanya_t.pdf?sequence=1&isAllowed=y
- Gao, H., Okoror, T. A., & Hyner, G. C. (2016). Focus group study of Chinese international students' knowledge and beliefs about HPV vaccination before and after reading an informational pamphlet about Gardasil. *Journal of Immigrant and Minority Health*, 18, 1085-1092. <https://doi.org/10.1007/s10903-016-0349-7>
- Garrod, M., Vafaei, A., & Martin, L. (2020). The link between difficulty in accessing healthcare and health status in a Canadian context. *Health Services Insights*, 13, 1178632920977904. <https://doi.org/Artn1178632920977904.1177/1178632920977904>
- Glass, C. R., & Cruz, N. I. (2023). Moving towards multipolarity: Shifts in the core-periphery structure of international student mobility and world ranking. *Higher Education*, 85, 415-435. <https://doi.org/10.1007/s10734-002-00841-9>
- Griese, L., Berens, E.-M., Nowak, P., Pelikan, J. M., & Schaeffer, D. (2020). Challenges in navigating the health care system: Development of an instrument measuring navigation health literacy. *International Journal of Environmental Research and Public Health*, 17(16), 5731. <https://doi.org/10.3390/ijerph17165731>
- Hutcheson, S. (2020). Sexual violence, representation, and racialized identities: Implications for international students. *Education & Law Journal*, 29(2), 191-221.

- Lim, M. S. Y., Hocking, J. S., Sanci, L., & Temple-Smith, M. (2022). A systematic review of international students' sexual health knowledge, behaviours, and attitudes. *Sexual Health*, 19(1), 1-16. <https://doi.org/10.1071/SH21073>
- MacPhail, C., & Stratten, M. (2022). Sexual health in a new cultural context: A resource for international students in regional Australia. *Health Promotion International*, 1-11. <https://doi.org/10.1093/heapro/daab212>
- Martins, S. L., Hellerstedt, W. L., Bowman, S. B., Brady, S. S., & Mason, S. M. (2020). International travel as a context for sexual and contraceptive behaviors: A qualitative study of young women traveling outside the U.S. *Archives of Sexual Behavior*, 49, 1039-1052. <https://doi.org/10.1007/s10508-019-1400-2>
- Meherali, S., Louie-Poon, S., Idrees, S., Kauser, S., Scott, S., Salami, B., Valliantos, H., Meherali, K. M., Patel, K., Suthar, P., Akbarzada, Z., Marcus, I., Khangura, M., & Mangat, A. (2020). Understanding the sexual and reproductive health needs of immigrant adolescents in Canada: A qualitative study. *Frontiers in Reproductive Health*, 4:940979. doi:10.3389/frph.2022.940979
- Migration Data Portal. (2023, March 3). International students. Retrieved from Migration Data Portal: <https://www.migrationdataportal.org/themes/international-students>
- Mundie, A., Lazarou, M., Mullens, A. B., Gu, Z., & Dean, J. A. (2021). Sexual and reproductive health knowledge, attitudes and behaviours of Chinese international students studying abroad (in Australia, the UK and the US): A scoping review. *Sexual Health*, 18(4), 294-302. <https://doi.org/10.1071/SH21044>
- Okeke, S. R. (2021). How perceived Australian sexual norms shape sexual practices of East Asian and sub-Saharan African international students in Sydney. *BMC Public Health*, 21(395). <https://doi.org/10.1186/s12889-021-10445-0>
- Okeke, S. R. (2022a). "I always prefer to withdraw than use a condom": Condomless sex among East Asian and sub-Saharan African international students in Sydney. *BMC Public Health* volume, 22(2168). <https://doi.org/10.1186/s12889-022-14512-y>
- Okeke, S. R. (2022b). "It was protected, except, it wasn't [with] a condom": a mixed-methods study of BBVs/STIs protective practices among international university students in Sydney, Australia. *Archives of Public Health*, 80(20). <https://doi.org/10.1186/s13690-021-00777-z>
- Organization for Economic Co-operation and Development (OECD). (2022). International students: A growing group of migrants in the OECD. OECD. <https://www.oecd-ilibrary.org/sites/ec0742a4-en/index.html?itemId=/content/component/ec0742a4-en>
- Parker, A., Harris, P., & Haire, B. (2020). International students' views on sexual health: A qualitative study at an Australian university. *Sexual Health*, 17, 231-238. <https://doi.org/10.1071/SH19209>

- Pedersen, E. R., D'Amico, E. J., LaBrie, J. W., Klein, D. J., Farris, C., & Griffin, B. A. (2020). Alcohol and sexual risk among American college students studying abroad. *Prevention Science*, 21, 926-936. <https://doi.org/10.1007/s11121-020-01149-9>
- Poljski, C., Quiazon, R., & Tran, C. (2015). Ensuring rights: Improving access to sexual and reproductive health services for female international students in Australia. *Journal of International Students*, 4(2), 150-163.
- Roesch, C. G., Alldred, P., Brady, G., Siebert, P., Burns, F. (2022). Sexual and reproductive health of international students in the UK: Access and inequality. *Sexually Transmitted Infections*, 98(Suppl 1). <http://dx.doi.org.cyber.usask.ca/10.1136/sextrans-BASHH-2022.149>
- Ryan, R., Dowler, B., Bruce, S., Gamage, S., & Morris, A. (2016). The well-being of international students in the city of Sydney. University of Technology Sydney, Institute for Public Policy and Governance.
- Todorova, M. S., Brooks, H. H., Persaud, R. S., & Moorhouse, E. A. (2022). Sexual violence prevention and international students in Canadian universities: Misalignments, gaps, and ways forward. *Comparative and International Education/Éducation comparée et internationale*, 50(2), 33-50. <https://doi.org/10.5206/cieeci.v50i2.14250>
- Top International Managers in Engineering (TIME). (2021). International student mobility report. Secretary General - T.I.M.E. Association. https://timeassociation.org/wp-content/uploads/2021/10/TIME_Association_International_Mobility_Report.pdf
- Wang, S. (2022). Migrant allies and sexual remittances: How international students change the sexual attitudes of those who remain behind. *Sociological Perspectives*, 65(2), 328-349. <https://doi.org/10.1177/0731121421992801>
- World Health Organization. (2006). Defining sexual health: Report of a technical consultation on sexual health, 28-31 January 2002. Geneva, WHO.
- Yang, N., Xu, Y., Chen, X., Yu, B., Yan, H., & Li, S. (2018). Acculturative stress, poor mental health and condom-use intention among international students in China. *Health Education Journal*, 77(2), 142-155. <https://doi.org/10.1177/0017896917739443>
- Zhang, X., Rhoads, N., Rangel, M. G., Hovell, M. F., Magis-Rodriguez, C., Sipan, C. L. et al. (2017). Understanding the impact of migration on HIV risk: An analysis of Mexican migrants' sexual practices, partners, and contexts by migration phase. *AIDS and Behavior*, 21(3), 935-948. <http://dx.doi.org/10.1007/s10461-016-1622-4>
- Zhou, Q., Wu, W., Yi, M., Shen, Y., Goldsamt, L., Alkhatib, A., Jiang, W., & Li, X. (2022). HIV knowledge, sexual practices, condom use and its associated factors among international students in one province of China: A cross-sectional study. *BMJ Open*, 12(e058108). <https://doi.org/10.1136/bmjopen-2021-058108>

Author bios

Abukari Kwame, BA, MPhil, MPhil, PhD, is a postdoc and interdisciplinary researcher in the College of Nursing, Prince Albert (PA) campus, University of Saskatchewan (Usask). His major research interests lie in the areas of patient-centred care and communication, health communication, medical anthropology, language acquisition, and Indigenous research. Email: abukarikwames@yahoo.com / abk384@usask.ca

Hua Li, RN, BSN, MPH, PhD, is an Assistant Professor and a faculty of the College of Nursing, Usask. Her major research interests lie in the areas of mental health and addiction, maternal and child health, immigrant health, and participatory community-based research. Email: hua.li@usask.ca

Pammla M. Petrucka, RN, MN, PhD, is Professor and a faculty of the College of Nursing, Regina campus, Usask. Her research interests lie in the areas of global health, maternal health, Indigenous Peoples' health, participatory diagramming, and participatory community-based research. Email: pammla.petrucka@usask.ca

Geoffrey Maina, RN, BScN, MN, PhD, is an Associate Professor and a faculty member in the College of Nursing, PA campus, Usask. His major research interests lie in the areas of participatory and community-based research, HIV/AIDS prevention, mental health, and substance use and addiction. Email: Geoffrey.maina@usask.ca
