Undergraduate Awareness of Sexually Transmitted Infections and Perspectives on Introducing Sexual Health Education Courses: Insights from Students, Psychologists, and Health Practitioners

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You may proceed with contacting your preferred research site and commencing your participant recruitment strategy.

Yours sincerely,

Dr Janet Helmer

On behalf of:
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Abstract

In Kazakhstan, discussions around sexual health education remain limited, and formal courses on sexual health are virtually absent from school curricula. As a result, many undergraduate students enter university with insufficient knowledge about sexual health. While global research highlights the effectiveness of comprehensive sexual health education in reducing risky behaviors and improving public health outcomes, the topic remains controversial in Kazakhstan due to cultural and societal perceptions. In this context, the present study explores undergraduate students' knowledge of sexual health and sheds light on their perspectives, alongside those of psychologists and health practitioners, and argues for the need for sexual health education courses in Kazakhstani universities. A qualitative research design was used, and data were collected through in-depth interviews with students, psychologists, and medical professionals in Astana and Almaty. Thematic analysis was applied to identify gaps in knowledge, prevailing attitudes, and perceived educational needs. Findings reveal that students demonstrate limited awareness of sexually transmitted infections, contraception methods, and the concept of consent. Additionally, the study highlights gender bias in sexual health education at schools and the negative societal and emotional burden of unplanned pregnancies on women. Both students and professionals strongly support integrating sexual health education into university curricula, emphasizing its role in preventing reproductive system disorders, reducing sexually transmitted infection transmission, and addressing widespread misconceptions. This study sheds light on the current state of sexual health awareness among university students in Kazakhstan and underscores the urgent need for evidence-based interventions in higher education.

Keywords: sexual health education, sexually transmitted infections, undergraduate students, higher education, Kazakhstan, gender bias, contraception, consent.

Аңдатпа

Қазақстанда жыныстық білім беру мәселелері шектеулі болып қалып отыр, ал жыныстық білім бойынша ресми курстар мектеп бағдарламаларында дерлік жоқ. Соның салдарынан көптеген студенттер университетке жыныстық денсаулық туралы жеткіліксіз біліммен келеді. Дүниежүзілік зерттеулер жыныстық білім берудің тиімділігін, тәуекелді мінез-құлықтарды төмендету және қоғамдық денсаулық көрсеткіштерін жақсартуда дәлелдегенімен, бұл тақырып Қазақстанда мәдени және әлеуметтік көзқарастарға байланысты даулы болып табылады.

Бұл зерттеуде студенттердің жыныстық денсаулық туралы білім деңгейі, сондай-ақ психологтар мен медициналық мамандардың Қазақстан университеттерінде жыныстық білім беру курстарын енгізуге қатысты көзқарастары мен пікірлері зерттелді. Зерттеу барысында сапалық зерттеу әдісі қолданылып, деректер Астана мен Алматы қалаларындағы студенттермен, психологтармен және медициналық қызметкерлермен сұхбаттасу арқылы жиналды. Зерттеу нәтижесінде білімдегі олқылықтар, басым көзқарастар мен білім беру қажеттіліктері анықтау үшін тақырыптық талдау жүргізілді. Зерттеу нәтижелері студенттердің жыныстық жолмен берілетін инфекциялар (ЖЖБИ), контрацепция әдістері және келісім ұғымы туралы шектеулі білімге ие екендігін көрсетеді. Сонымен қатар, зерттеу мектептердегі жыныстық білім берудегі гендерлік теңсіздікті және әйелдер үшін жоспарланбаған жүктіліктің әлеуметтік және эмоционалдық теріс салдарын айқындады. Студенттер мен мамандар жыныстық білім беруді университеттік бағдарламаларға енгізуді қолдай отырып, оның репродуктивті жүйе ауруларының алдын алуда, ЖЖБИ таралуын төмендетуде және кең тараған қате түсініктерді жоюда маңызды рөл атқаратынын атап өтті.

Бұл зерттеу Қазақстандағы жыныстық денсаулық туралы білім деңгейін айқындап, ғылыми негізделген білім беру интервенцияларының қажеттілігін атап өту арқылы қоғамдық денсаулық сақтау саласындағы ағымдағы дискуссияға үлес қосады.

Түйінді сөздер: жыныстық тәрбие, жыныстық жолмен берілетін инфекциялар, студенттер, жоғары білім, Қазақстан, гендерлік теңсіздік, контрацепция, келісім

Аннотация

В Казахстане обсуждение вопросов сексуального просвещения остается ограниченным, а формальные курсы по сексуальному просвещению, практически отсутствуют в школьных учебных программах. В результате многие студенты поступают в университет с недостаточными знаниями о сексуальном здоровье. Несмотря на то, что мировые исследования подтверждают эффективность комплексного сексуального просвещения в снижении рискованного поведения и улучшении показателей общественного здоровья, эта тема остается спорной в Казахстане из-за культурных и социальных представлений.

В данном исследовании изучается уровень знаний студентов о сексуальном здоровье, а также их взгляды и мнения психологов и медицинских работников относительно возможного введения курсов сексуального просвещения в университетах Казахстана. В данном исследовании использовался качественный метод исследования, а данные были собраны с помощью интервью со студентами, психологами и медицинскими работниками в Астане и Алматы. Для выявления пробелов в знаниях, доминирующих взглядов и образовательных потребностей был применен тематический анализ. Результаты показывают, что студенты обладают ограниченными знаниями об инфекциях, передающимся половым путем (ИППП), методах контрацепции и концепции согласия. Кроме того, исследование выявило гендерное неравенство в области сексуального просвещения в школах, а также негативные социальные и эмоциональные последствия незапланированной беременности для женщин. Как студенты, так и специалисты выражают поддержку интеграции сексуального просвещения в университетские программы, подчеркивая его важность в предотвращении заболеваний репродуктивной системы, снижении распространения ИППП и устранении распространенных заблуждений.

Данное исследование вносит вклад освещая текущий уровень осведомленности о сексуальном здоровье в Казахстане, и подчеркивает необходимость научно обоснованных образовательных интервенций.

Ключевые слова: сексуальное просвещение, инфекции, передающиеся половым путем, студенты бакалавриата, высшее образование, Казахстан, гендерное неравенство, контрацепция, согласие.

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Chapter 1: Introduction

This introductory chapter provides all the relevant information related to this study, which focuses on the need for sexual health education courses for undergraduate students. The background of sexual health education worldwide, including the Kazakhstani context, is presented, highlighting the importance of examining its impact on the health and well-being of young people. This is followed by the statement of the problem: the need for sexual health education to reduce the risk of reproductive system disorders, sexually transmitted infections, and unintended pregnancies among young people. Additionally, the research questions that guided the study, along with the purpose and significance of the study, are presented. The chapter concludes with an outline of the thesis.

Background of the Study

This study examined undergraduate students' views on the introduction of sexual health education courses and their awareness of sexually transmitted infections (STIs). The key concepts are explained in the following paragraphs to help understand the primary focus of this research.

The World Health Organization (2023) describes STIs as infections that mostly spread between individuals through unprotected sexual contact. Furthermore, STIs can be transmitted during pregnancy, childbirth, breastfeeding, and also through infected blood or blood products. According to the World Health Organization (WHO), more than 1 million new STI cases emerge daily across the globe, with four major curable STIs being syphilis, gonorrhea, chlamydia, and trichomoniasis. The current data indicates that public health faces ongoing challenges because STI cases have increased since the previous years (WHO, 2024). Syphilis cases increased by more than 1 million during 2022 to reach 8 million worldwide. The situation regarding drug-resistant gonorrhea continues to

deteriorate because certain nations now show resistance levels reaching 40%. Global collaboration is crucial to address both STI prevention and treatment efforts. The prevalence of STIs remains higher in developing nations because of several identified factors (Gerbase et al., 1998, as cited in Mindel et al., 2013). The main factor behind this trend seems to be that developing countries have a large population of 18–35 year olds who face higher STI risks because they engage in sexual activities frequently. The combination of gender inequalities with insufficient healthcare facilities and insufficient educational resources in these communities enables the ongoing transmission of these infections (Mindel et al., 2013).

Research in Kazakhstan highlights the important role of sexual health education in shaping youth health outcomes and strengthening broader societal norms. Kabatova (2018) examined sexual health education in Kazakhstan by analyzing educational materials and discourse among young Kazakh women. This research study combined educational environments with social media platforms. The findings showed that inadequate formal sexual health education results in negative sexual health outcomes such as increased teenage pregnancy rates and STIs. Kabatova's research demonstrated that Kazakhstan requires immediate implementation of sexual health education policies to improve youth sexual health literacy and results. Arystanbek (2022) investigated the consequences of insufficient sexual health education on gender roles and national identity within Kazakhstan. Arystanbek analyzed school curricula and state-issued textbooks through interpretive political and discourse analysis methods. The research results demonstrated that the absence of sexual health education policies aligns with the state's promotion of traditional gender norms and national identity. The research established that the Kazakh government actively uses insufficient sexual health education to maintain control over

gender norms. In contrast, alternative sexual health education programs encounter significant obstacles because of scarce funding and public opposition.

Kabatova (2018) and Arystanbek (2022) together demonstrate how inadequate sexual health education affects youth sexual health through their research findings. Kabatova's study demonstrates how insufficient sexual health education leads to negative sexual health results in youth populations, thus requiring complete educational policies to resolve these problems.

Statement of the Problem

The prevention of STIs and unintended pregnancies, along with the promotion of general well-being, depends on sexual health education for adolescents and young adults. Comprehensive sexual health education (CSE) has been successfully implemented in several countries, as demonstrated by research from Goldfarb and Lieberman (2021), Guo et al. (2023), and Santelli et al. (2018). The school curriculum of Kazakhstan lacks sexual health education because cultural norms, social attitudes, and political factors prevent its inclusion. The consequences of this lack of sexual health education have severe impacts on the sexual health of Kazakhstan's young people. Adolescents, together with young adults, experience increased health risks because they have restricted knowledge about STIs and reproductive health, as well as safe sex practices (Hansson et al., 2008; Ryskeldiyeva et al., 2023). The prevalence of STIs and unintended pregnancies among young Kazakhstani people becomes apparent through statistical data, which shows a high number of cases in this population group. The 2021 statistics demonstrated 428 cases of induced abortions among minors, with 15 cases being adolescents younger than 14 years old. The highest rates of occurrences were observed in Turkestan, Karaganda, Almaty, along with East

Kazakhstan and Mangystau regions (Ministry of Information and Social Development of the Republic of Kazakhstan, 2022).

The lack of research on CSE's impact and implementation in Kazakhstan exists despite worldwide evidence supporting its benefits (Guo et al., 2023; Goldfarb & Lieberman, 2021; Santelli et al., 2018). Local attitudes, along with knowledge levels and implementation feasibility of CSE, demand thorough examination for creating successful policies and programs.

This study aimed to address these gaps by assessing undergraduate awareness of STIs, exploring perspectives on the introduction of sexual health education courses, and gathering insights from students, psychologists, and health practitioners. It was important to gather insights from undergraduate students to understand their awareness of STIs and their attitudes toward sexual health education. This helped assess the need for sexual health education and customize the content to their needs. Psychologists and health practitioners also played crucial roles in providing expertise on the psychological and health aspects of sexual health education. Psychologists offer insights into students' emotional and developmental readiness, while health practitioners emphasize the importance of STI prevention and overall sexual health, which informs the design of comprehensive and effective curricula. The research results from this study may guide the creation of culturally appropriate sexual health education programs to enhance sexual health results for the Kazakhstan youth population.

Purpose of the Study and Research Questions

The current study aimed to investigate the necessity of sexual health education courses for undergraduate students to mitigate the risks of reproductive system disorders, STIs, and unintended pregnancies. This research was guided by three main questions:

1. What are the attitudes and perceptions of undergraduate students toward integrating sexual health education into their academic experience?
2. What is the level of knowledge among undergraduate students regarding contraception methods, as well as reproductive system disorders?
3. What are the attitudes of psychologists and health workers towards incorporating sexual health education into undergraduate programs?

By addressing these research questions, this qualitative study aimed to explore diverse perceptions of sexual health education in university settings, potentially highlighting its significance for the health and well-being of young adults.

Significance of the Study

According to the WHO (2024), over 30 different bacteria, viruses, and parasites are known to be transmitted through sexual activities resulting in STIs such as syphilis, gonorrhea, chlamydia, and trichomoniasis which are common but curable. On the other hand, viral STIs such as human immunodeficiency virus (HIV), viral hepatitis B, herpes simplex virus (HSV), and human papillomavirus (HPV) either do not have or have limited treatment options. Some STIs can also be passed from mother to child during pregnancy, childbirth, and breastfeeding.

The rates of STIs in Kazakhstan are quite alarming, indicating that little or no education in this area is negatively affecting people's health. The former Minister of Health in Kazakhstan, Azhar Giniyat (2023), reported that HIV infections are a pressing problem in the country. Over the past ten years, the incidence of HIV infection has doubled in Kazakhstan, but the mortality rate from acquired immunodeficiency syndrome (AIDS) has decreased by 1.7 times due to the availability of better medication. The statistics paint a concerning picture of the prevalence of HIV and STIs in Kazakhstan. In 2023, the country recorded 3,862 new HIV cases, with 77.8% of transmissions occurring

through sexual contact—69% via heterosexual and 8.8% via homosexual relationships—while 17.8% were attributed to injection drug use (Kazakh Scientific Center of Dermatology and Infectious Diseases, 2023b). The prevalence of STIs also varies significantly across regions (Kazakh Scientific Center of Dermatology and Infectious Diseases, 2023a). West Kazakhstan reported the highest number of Syphilis cases (159), followed by Karaganda (131) and Kostanay (110), while Ulytau had the lowest (17). Gonorrhea cases were most prevalent in Pavlodar (201) and East Kazakhstan (125), with Ulytau and Kostanay reporting the fewest cases (6 each). Similarly, Chlamydia was most common in Astana (283) and Almaty (255), whereas Ulytau recorded the lowest incidence (6). These disparities highlight the critical need for region-specific sexual health education and prevention programs to address the unique challenges and risks faced by different areas. The data shows that it is important to take on the problem of sexual health education among the population. The high report of STIs and HIV infection, despite medical progress, shows that preventive measures and awareness need to be improved. However, these infections will not be stopped by medical interventions alone. Thus, sexual health education has to be considered a critical aspect of public health programs.

This study examined whether sexual health education courses for undergraduate students would decrease their chances of acquiring STIs, non-sexually transmitted infections, and unintended pregnancies.

STIs have long-term effects on students, which shows the need for CSE. Students who contract STIs experience multiple negative outcomes, which include health problems and school absences, together with emotional difficulties that negatively impact their learning achievement and social connections. The UNESCO (1994) document recognizes the necessity of inclusive educational environments to resolve these problems while extending educational access to students from all backgrounds, including racial and gender

groups and health conditions. The research focuses on eliminating prejudice to establish open discussions about sexual health in educational settings that respect students' cultural backgrounds and age requirements.

This research will provide findings that can possibly contribute to the creation of policies and programs that aim to improve sexual health outcomes for young people in Kazakhstan through targeted sexual health programs in local universities, thus improving students' overall health and well-being. In the United States the work of Goldfarb and Lieberman (2021) on CSE has shown improvement in sexual health literacy. Their work has contributed to students' deeper understanding of sexual diversity and helped to decrease homophobic attitudes and increased social-emotional tolerance of differences. CSE has also led to decreases in partner based violence. The study demonstrates the importance of CSE in increasing sexual and socio-emotional well-being. In addition, it helped to create inclusive learning environments in various academic settings. CSE efforts will promote sexual health education in Kazakhstan.

Summary

This chapter established why sexual health education courses need to be implemented for undergraduate students in Kazakhstan. The program aims to decrease STIs and common genital infections while preventing unintended pregnancies and fostering healthy relationships among young people. CSE has received extensive research and implementation across various nations, Kazakhstan remains one of the countries with minimal studies and practical applications. The following chapter reviews current studies about sexual health education by analyzing worldwide programs for CSE, their effects on sexual health results, and the implementation barriers and opportunities specific to Kazakhstan.

Outline of the Thesis

This thesis is divided into six chapters. Chapter 1 provided an introduction, offering an overview of the study, including the background, problem statement, study objectives, research questions, and the significance of the study. Chapter 2 presents a comprehensive literature review, organizing existing research and findings on themes relevant to the study, such as knowledge, attitudes, and behaviours related to STIs and sexual health, the effectiveness of CSE, cultural and societal influences on sexual health education, and the context of sexual health education in Kazakhstan. Chapter 3 outlines the methodology employed in this research, detailing the qualitative approach using semi-structured interviews with eight students, three university psychologists, and three university health workers. This chapter will also explain the data collection and analysis methods, as well as ethical considerations. Chapter 4 presents the study's key findings, highlighting participants' perspectives on sexual health knowledge, attitudes, and the need for formal sexual health education at the university level. Chapter 5 synthesizes and interprets these findings, drawing connections to existing literature and discussing their broader implications. Finally, Chapter 6 provides a comprehensive summary of the study, outlining its main conclusions, limitations, and recommendations for future research and policy development.

Chapter 2: Literature Review

In the previous chapter, I established the groundwork by presenting background information, the problem statement, research questions, and the significance of the study. This chapter is dedicated to a thorough review of relevant literature, aiming to synthesize research findings on the following themes: knowledge, attitudes, and behaviors related to STIs and sexual health; the effectiveness of CSE; cultural and societal influences on sexual health education; and the context of sexual health education in Kazakhstan. These themes provide a comprehensive understanding of the existing body of knowledge and also highlight gaps and areas for further research, serving as a foundation for assessing the necessity and potential impact of introducing sexual health education courses for undergraduate students in Kazakhstan.

Theoretical Framework

The present study employed Halstead and Reiss's (2003) theoretical framework to analyze the complete scope of sexual health education. The theory of Halstead and Reiss (2003) defines CSE as information sharing, personal autonomy development, and individual and societal interest promotion beyond biological reproduction education. The framework includes human relationships together with important moral aspects. The main goal of sexual health education, according to this framework, is to build up individual growth while fostering both personal contentment and overall well-being.

A person who receives CSE demonstrates the characteristics described by Collyer (1995, as cited in Halstead & Reiss 2003). A person who receives sexual education, according to Halstead and Reiss (2003), must understand sexual health facts and know how to prevent or achieve pregnancy. The person demonstrates two essential personal characteristics, which are resistance to peer influence and boundary assertion. People who

receive this education maintain respectful attitudes when dealing with controversial subjects, including contraception and abortion, as well as celibacy, same-sex relationships, and divorce. A person who receives sexual education develops the ability to make responsible decisions about sex by thinking about their own needs and those of their partner.

Knowledge, Attitudes, and Behaviors Related to STIs and Sexual Health

This section of the literature review chapter presents the results of previous studies on students' knowledge, misconceptions about STIs, and their behaviors concerning sexual health in order to direct the particular knowledge, attitudes, and behaviors concerning sexual health among undergraduate university students. The studies were categorized based on their country contexts, encompassing the United States, Islamic, East Asian, and European regions to provide a comprehensive understanding of global perspectives. Thus, the section highlights the need for more sexual health education in Kazakhstan.

Studies in the United States Contexts

Rittenour and Booth-Butterfield (2006) conducted research in the United States to determine the impact of peer communication on sexual health among college students. The study results showed that students felt okay to talk about sexual health issues with their peers, although females expressed more comfort than males. The most popular subjects of discussion were birth control, condoms, STIs, and the available resources. Although this research was done almost two decades ago, it still demonstrates the enduring impact of peer influence on sexual health behaviors among college students.

Fisher et al. (2020) performed research with young people aged 13-22 years in a Midwestern United States city. The research participants' observed that current prevention programs for teenage pregnancy and STIs were either ineffective or non-existent. The

participants' recommended better school services, media campaigns, and educational programs led by peers or trusted adult educators. The research established that youth need accessible and non-discriminatory sexual health services, which should be developed by service providers and policymakers together with community organizations using youth recommendations.

Studies in Predominantly Islamic Contexts

Shifting to predominantly Islamic contexts, Maatouk et al. (2021) investigated predictors of sexually risky behaviors and sexual health screening among university students in Lebanon, which has a predominantly Islamic population. The research showed that people who identified as religiously devout engaged in fewer risky sexual activities, whereas those who experienced psychological stress were more likely to participate in such behaviors. The research showed that men demonstrated different sexual behavior patterns than women. In particular, men reported more alcohol-related sexual activities and higher rates of STI and HIV screening. The research demonstrates that interventions need to be culturally specific because they must consider religious beliefs together with substance use prevention and sexual health education.

Similarly, the research by Ekşi and Kömürcü (2014) in Turkey evaluated the STI knowledge base of university students. The research showed that students obtained their STI information from books, newspapers, and magazines while demonstrating a need for detailed STI education during their university education. The research supports the requirement for improved sexual health education at universities to address existing knowledge deficiencies.

Studies in East Asian Contexts

In China, Lyu et al. (2020) investigated gender differences in sexual knowledge, attitudes, behaviors, and preferences for sexual health education among undergraduate students. The sexual knowledge levels were moderate, while males reported higher rates of sexual activity than females. Students from urban areas and those who identified as homosexual or bisexual were more likely to have had sexual intercourse. The results indicated the necessity of enhancing sexual health education, primarily through online platforms, to improve sexual knowledge and reduce risky sexual behaviors among Chinese adolescents.

Studies in European Contexts

Zizza et al. (2021) implemented research in Italian educational institutions to assess knowledge changes, information needs, and STI risk perception among students before and after targeted educational interventions in Europe. The research results showed significant knowledge improvement among all tested groups, while most students reported that the information they received proved helpful. The research confirmed that educational interventions effectively boost HIV and STI awareness and knowledge while showing the requirement for sustained targeted educational initiatives.

Seiler-Ramadas et al. (2019) conducted research in Austria, revealing that current sexual health education programs only delivered information without teaching emotional components. Students faced obstacles to open communication because of feelings of shame and embarrassment. The researchers recommended three practical educational methods for sexual health education: using visual materials and tangible objects, conducting school outings, and encouraging student-led discussions and group work.

According to Jaspal (2019), first-year university students in the United Kingdom encounter significant obstacles to maintaining good sexual health because of social norms,

psychological factors, and stigma. Many individuals, especially women, avoided medical care and open discussions about their sexual health because of the existing social stigma. The research recommended that universities establish formal sexual health education programs, including educational content and social and psychological influence management. The authors proposed three key strategies to improve the sexual health of university students: increasing condom availability, promoting open discussions about sexual health, and incorporating mental health education into academic curricula.

The studies reviewed here present diverse cultural contexts, but they share a common finding about the enduring knowledge deficits in sexual health and the urgent requirement for extensive sexual health education. Whether in the United States, Lebanon, Turkey, China, or Europe, students consistently report inadequate education on STIs and sexual health. The studies also reveal the importance of culturally sensitive and context-specific approaches, whether addressing religious influences in Lebanon, leveraging peer communication in the United States, or improving educational methods in Austria. These findings underscore the global relevance of enhancing sexual health education and highlight the importance of adapting programs to meet the specific needs of different populations. This synthesis further supports the need for similar initiatives in Kazakhstan to ensure that students receive the necessary knowledge and resources to navigate their sexual health confidently and responsibly.

Effectiveness of Comprehensive Sexual Health Education

Following the review of knowledge and behaviors, the next section will present the impact of CSE as seen in research. It will include international perspectives and findings from various studies on how sexual health education influences understanding, attitudes,

and behaviors related to sexual health. Highlighting successful approaches will help identify strategies that may be beneficial and applicable to the context of Kazakhstan.

The demand for CSE has emerged as essential to manage the multiple sexual health issues affecting young people in present times. Smylie et al. (2006) provide clear evidence that adolescents engage in risky behavior based on their social capital, which includes their family support, peer group, and institutional connections. This research also demonstrates that achieving positive effects on adolescent sexual health requires moving beyond biological education and engaging in the social factors that shape adolescent sexual practice. Smylie et al. (2006) also reported gender differences in risk-taking behavior, which supports the argument that CSE should be contextual and address the differences in risk among students.

Additionally, Allen (2007) criticized traditional and fear-based sexual health education, which focuses on infections, pregnancy and overlooks other aspects of sex, which include pleasure, relationships, and ethics. This critique increases the need for CSE which expands the scope of education to include topics of sexual empowerment, consent, and respect for sexual diversity. CSE provides a broader understanding of sex and helps in shaping students' sexual behavior and attitudes that are facilitative to good sexual health and reduce bias.

As a result of this understanding, a lot of research has confirmed that CSE is an effective way of improving sexual health. The first research studies on the impact of sexual health education were conducted in 1989 and 1995. Most of the problems identified in the first studies are still valid even today, indicating that these issues are long-term and have not only been a problem for the last two decades. Manning et al. (1989) examined the effects of college-based human sexual health education on students' sexual attitudes,

knowledge, and practices. Feigenbaum et al. (1995) examined how sexual health courses affect students' attitudes and behaviors toward sex. These two studies found that there was no significant change in attitudes toward premarital sex, casual sex, or abortion. The studies revealed that students became more likely to practice safer sex after the intervention because of increased condom use and fewer sexual partners. Students who took the sexual health course demonstrated more positive behavioral changes through reduced sexual partners and birth control use compared to students in the general health course. The research findings showed that human sexual health classes produce positive effects on students' safer sex behaviors without modifying their moral beliefs.

DiCenso et al. (2002) and Santelli et al. (2018) conducted studies on the effects of sexual health education on adolescents and young adults on different but related outcomes. DiCenso et al. (2002) performed a systematic review of different interventions to prevent unintended pregnancy among adolescents in North America, Australia, New Zealand, and Western Europe. The results indicated that multifaceted interventions, including education, contraception access, and counseling, are more effective than single-component interventions. The study indicated that educational programs in combination with contraceptive services are the most effective in the prevention of teenage pregnancies. In the same way, Santelli et al. (2018) assessed the efficacy of pre-college sexual health education in decreasing sexual violence incidents among Columbia college students. Their study involved an online survey of undergraduate students from Columbia University and Barnard College. It revealed that participants' who received sexual health education before enrolling in college were at a lower risk of being sexually assaulted than those who did not receive such education. The study found that pre-college sexual health education is an important step in preventing sexual assault. Thus, it should be supported by the administration in the context of the current education. Both studies support the argument

that CSE is critical in enhancing safe sexual practices and in the prevention of negative consequences. DiCenso et al. (2002) claimed that education should be combined with the availability of contraceptive methods in order to prevent unintended pregnancy. Additionally, Santelli et al. (2018) also confirmed that sexual health education has a positive impact on the declining level of pre-college sexual violence. The findings of these studies confirmed that CSE programs are a solution to improve the sexual health and safety of young people.

Goldfarb and Lieberman (2021) and Guo et al. (2023) investigated the impact of the CSE on sexual and reproductive health in the United States and China. The Goldfarb and Lieberman (2021) research is a systematic review of 80 studies from the United States over three decades to assess the effects of CSE. Their study revealed that CSE has a positive impact on numerous outcomes, including tolerance of sexual diversity, preventing dating and intimate partner violence, developing healthy relationships, and preventing child sexual abuse. The results indicated that CSE decreases homophobia, improves social-emotional competencies, and increases awareness of gender and sexual diversity. The study also found that CSE improves sexual, social, and emotional health and encourages affirmative and inclusive sexual health education across various grade levels and subject areas. The research of Guo et al. (2023) examined how a school-based sexual health curriculum positively affects the sexual and reproductive health of first-year students at Shandong University in China. The study employed an online cross-sectional survey on a social network and involved 449 first-year students, with 209 students who took the sexual health curriculum and 240 students who did not. The results showed that students who took the curriculum performed better in reproductive and sexual health knowledge and showed lower preconceptions towards people with STIs. The research also found that the sexual health curriculum had a positive impact on students' knowledge and attitudes,

which reduced the number of risky sexual practices. These two studies show that the benefits of CSE are pretty high. Goldfarb and Lieberman's (2021) study show that CSE has a positive impact on socio-emotional health and its role in promoting inclusive attitudes towards sexual health. At the same time, Guo et al. (2023) also show that the curriculum is efficacious in improving the knowledge of sexual and reproductive health and decreasing prejudice and risky behavior. The two studies recommend the implementation of comprehensive, inclusive, and affirming sexual health education programs in order to enhance the sexual health and well-being of students.

This section of the literature review concentrates on the effects of CSE on students' attitudes and behaviors concerning sexual health across various nations. The findings show that CSE could be an essential tool for enhancing safer sexual practices and social-emotional competencies because it decreases stigma and risky behaviors.

Reassessing and Advancing Sexual Health Education: Findings and Recommendations

This section will analyze recent studies to identify ways to improve CSE. It will also present students' ideas on how to enhance sexual health education, assess the efficacy of various educational approaches and methods, and present the results of various pedagogical approaches. This analysis is important in refining and applying sexual health education that is acceptable to students and that can lead to positive change in their sexual practices.

Astle et al. (2020) conducted a study of college students' opinions on how sexual health education can be enhanced in schools if it goes beyond condoms and STIs. The research used six focus groups of 38 college students at a southwestern US university. According to the results of the study, students expressed that their sexual health education

was awkward, unhelpful, and based on scare tactics. The suggestions they made included giving out basic information about sex, discussing different kinds of sexual behavior and sexual orientations, talking about the social and emotional aspects of sex, starting sexual health education at an earlier age and more frequently, giving updated and realistic information, and being taught by professionals. The study concluded that the current sexual health education paradigms are ineffective and require revision in order to meet the needs of the students effectively.

Lameiras-Fernández et al. (2021) performed a study on the effects of CSE programs in the last three decades. The research included a systematic review of 80 articles that met the criteria for evaluation studies of school-based programs. The study found that consistently implementing CSE in supportive school settings can benefit young people's sexual health, socio-emotional well-being, and academic development. The study proposed that when CSE is sequenced and embedded in supportive school contexts, it can benefit the sexual, social, emotional health, and academic development of young people.

Millanzi et al. (2022) conducted a study on the impact of the Problem-Based Pedagogy (PBP) intervention in sexual and reproductive health education among adolescents in Tanzania. The study was conducted as a clustered randomized controlled trial with 660 adolescents assigned to three research arms: pure PBP, Hybrid PBP, and Lecture-Based Pedagogy (LBP). The results indicated that the LBP group had the highest intention to engage in risky sexual behaviors compared to the pure PBP and Hybrid PBP groups. The study concluded that integrated reproductive health lesson materials in a PBP can positively change the range of sexual behaviors among adolescents. The authors also proposed that school teachers and health workers should work together to deliver reproductive health lessons in PBP to improve safe sex practices among adolescents toward a healthier future and investment.

This subsection of the literature review emphasizes the need for change and improvement in current sexual health education. Findings reveal that current programs lack gaps in addressing students' needs and wants.

Context of Sexual Health Education in Kazakhstan

This section will introduce the current situation of sexual health education in Kazakhstan, provide background information on public opinion, and discuss the implementation of sexual health education programs. Reviewing the current situation will help outline challenges and opportunities for enhancing sexual health education in the country.

Hansson et al. (2008) conducted research to determine the level of knowledge, attitudes, and practices about HIV and other STIs among students in Semey city, Kazakhstan, in order to advise possible further health education interventions and policies to minimize the prevalence of these infections. The study established that most of the students had an incorrect understanding of how HIV is spread, had a high prevalence of risky sexual practices, and had poor knowledge of STIs. Specifically, the male students reported a high rate of sexual intercourse and early age at the start of sexual activity. In addition, some students reported having sex with other students and working in the sex industry for money.

Moreover, two more recent studies in Kazakhstan also focused on the knowledge and perception of sexual health education. Ryskeldiyeva et al. (2023) assessed the role of knowledge, attitudes, and practices towards reproductive health in female adolescents in the Turkistan region. The findings showed that many of the participants had menstrual disorders and had poor knowledge and practices in relation to reproductive health. The research identified alcohol consumption together with high body mass index, low-income

family connections, and infrequent gynecological check-ups as contributing factors to these problems. The research showed that adolescent reproductive health education and services had a substantial deficiency.

Zhuravleva and Helmer (2023) analyzed how Kazakhstani teachers understand and implement sexual health education in Karaganda city. The research demonstrated the requirement to eliminate obstacles while enhancing teacher knowledge and confidence about sexual health education delivery. The research indicates that adolescent reproductive health education and teacher training require improvement. The identified needs hold essential value for enhancing student health through better sexual health education quality.

Telzhan's (2022) research study explored the socio-psychological aspects of sexual health education in Kazakhstan. The methodology included a systematic review of the scientific literature from peer-reviewed articles in Science Direct, Google Scholar, and PubMed. The results showed that the introduction of CSE contributes to enhancing adolescents' sexual health and quality of life. The study also recommended that the introduction of CSE would improve the sexual health and quality of life of adolescents.

Another recent research study by Sarsenova et al. (2024) analyzed the socio-psychological aspects of the sexual culture of the youth. A questionnaire survey of 1000 participants in the age bracket of 18-29 years from six regions was used to gather data for the study, which revealed that there is a shortage of proper sexual health education, the coexistence of traditional and Western cultures, and the persistence of stereotypes, especially on issues of homosexuality and abortion. The findings also showed that the educational and family institutions in Kazakhstan are not good at encouraging positive sexual health. Thus, the conclusion was that there is a need to improve sexual health education programs.

This section, therefore, offers a detailed discussion of the current situation of sexual health education in Kazakhstan and some relevant literature that shows both the problems and the prospects for improving it in the country. The studies reviewed also underscore the fact that there is a critical deficit in the area of CSE that has been associated with various adverse outcomes, such as incorrect beliefs about HIV, unprotected sex, high incidence of teenage pregnancies, and STIs.

Summary

The literature review demonstrates that students remain unaware of sexual health issues, which demonstrates why complete sexual health education remains essential. Research conducted in different nations demonstrates that people lack sufficient knowledge about STIs and sexual health while holding incorrect beliefs about these topics, thus requiring better educational interventions. The absence of legal sexual health education courses in Kazakhstan, together with social avoidance of the topic, worsens the situation. Students face both insufficient knowledge and dangerous behaviors because of absent formal sexual health education, thus requiring effective sexual health education programs that include all students.

Chapter 3: Methodology

The majority of research in the literature review on sexual health education has been based on quantitative methods, using online or offline surveys because they are efficient in collecting data from a large sample size (Guo et al., 2023; Maatouk et al., 2021; Ryskeldiyeva et al., 2023; Sarsenova et al., 2024). However, it is difficult to get authentic responses on such sensitive topics through such methods. For this reason, the present study adopts a qualitative approach to address the following research questions:

1. What is the level of sexual health education knowledge among undergraduate students?
2. What are undergraduate students' attitudes and perceptions toward integrating sexual health education into their academic experience?
3. What are the attitudes of psychologists and health professionals regarding the incorporation of sexual health education into undergraduate programs?

This chapter focuses on the methodology employed in this study, detailing the research design and other methodological aspects such as sample selection methods, and the process of data analysis.

Research Design

The research was built on Halstead and Reiss's (2003) definition of a sexually educated person to assess the value and need for sexual health education for Kazakhstani undergraduates. The research design required a qualitative approach because of its nature and objectives. This design aligned with the study's goal of exploring and understanding the real-life experiences, attitudes, and perspectives.

The qualitative approach enables participants to express their thoughts in their own words, yielding detailed descriptive and interpretive data about the research issues

(Creswell, 2018). This method helps researchers understand the social and cultural factors that shape views about sexual health education by analyzing how participants handle specific problems or issues in their environment. The insights gained through this approach were crucial for informing the design and implementation of effective sexual health education programs that are culturally sensitive and responsive to the needs of the target population.

The phenomenology research design was chosen as the most suitable approach to meet these objectives. Creswell (2018) explains that phenomenology aims to discover the essence of an event by studying how people experience it in their everyday lives. The phenomenology research design was especially appropriate for this study to explore the meaning and importance of sexual health education programs through the experiences of those involved. This design allowed me to explore the participants' experiences, providing valuable insights into the potential advantages and challenges of integrating sexual health education into undergraduate curricula.

Research Philosophy

Ontology is a philosophical concept that refers to how researchers perceive reality and is set within the interpretivist paradigm (Chunqi, 2023). The interpretivist paradigm sees the world as socially constructed while knowledge is based on an individual's interpretation of values and experience (Thomas, 2013, as cited in Chunqi, 2023). According to Gomm (2008) qualitative researchers adopt an interpretive approach to investigate people's experiences and how to make sense of them. This study, which investigated the awareness of STIs and perspectives on introducing sexual health education courses among undergraduate students in both Astana and Almaty, Kazakhstan, was grounded in the interpretivism paradigm. The study aimed to develop a comprehensive

understanding of sexual health education in Kazakhstan, rather than focusing solely on its individual components (Goldkuhl, 2012). The objective of this phenomenological study is aligned with interpretivism since it aims to comprehend the real-life experiences and understandings of those who participated in the study.

The analysis of participant viewpoints led to important findings about the advantages of including sexual health education in undergraduate programs. The interpretive approach aimed to reveal the various dimensions of their perspectives, emphasizing both a comprehensive understanding of sexual health education's impact and the specific elements of their experiences that shaped their attitudes and beliefs (Hammersley, 2008).

The interpretive approach provided a reliable framework for phenomenological research to study authentic sexual health education experiences in Kazakhstan. This research explored the detailed and setting-dependent knowledge needed to support adding sexual health education to undergraduate programs in Kazakhstan by studying participants' real-life experiences. The research followed ethical and reflexive methods to generate important findings that can help advance sexual health education policy development and ongoing discussions.

Research Instrument

The research questions required reliable data to address them without compromising participants' personal preferences, so establishing a trusting relationship between the researcher and participants was essential. According to Patton (2015), interviews provided the most effective way to reach this goal because they established a comfortable setting for participants to share detailed information. The study data collection consisted of semi-structured interviews, which I recorded through audio and then

transformed into text before starting the coding process. A copy of the interview protocol is provided in Appendix B.

Since the study aimed to explore the level of sexual health education among undergraduate students, a semi-structured interview format was selected because it provides more flexibility during the data collection process (Merriam & Tisdell, 2016). The flexible format allowed me to pose questions that emerged during the data collection process. The interview participants discussed their thoughts about implementing sexual health education as an undergraduate curriculum component. The research participants discussed their understanding of addressing STIs and unintended pregnancies through their discussions. The research included feedback from psychologists and health professionals who discussed how such courses benefit students' health and well-being. I protected participant identities through numerical labels that combined the word "Participant" with sequential numbers.

Multiple precautions were established to establish a supportive setting where participants could freely discuss sensitive information. The research interviews started with casual dialogue to help participants feel at ease. Study participants received detailed information about both the research goals and the confidentiality procedures. Participants received open-ended, nonjudgmental questions to freely share their thoughts, while the researcher used neutral, respectful language to create comfort. Participants received extended periods to think about their answers.

The private spaces used for interviews provided comfort to participants, while either in-person or virtual locations included break opportunities for those showing signs of discomfort. The participating health practitioners and psychologists received assurance about the essential value of their input. In the data collection process, I offered support

information to interview participants who displayed distress following the research session. The implemented procedures established a protected environment that fostered both truthful and unrestricted communication.

Research Participants

The selection of suitable sampling techniques remains essential to gathering diverse participant data, which creates more detailed findings for analysis (Patton, 2015). To achieve the research goals, non-probability purposive sampling was used to select participants based on relevant characteristics or experiences crucial for addressing the research questions or objectives (Patton, 2015). Snowball sampling occurred alongside purposive sampling to recruit more participants, as suggested by the first respondents, for a more detailed and focused selection. Three health professionals, eight undergraduate students from all academic years, and three university psychologists participated in this study.

Participants included in the research study were undergraduate students aged between 18 and 22 from universities in Astana and Almaty, as well as psychologists, health practitioners, and educators working in university settings. Participants were excluded if they were younger than 18 or older than 22, or if they were not enrolled in undergraduate studies or medical programs.

The interviews were used to obtain students' thoughts about implementing sexual health education courses. Research participants were able to express their thoughts regarding content and delivery methods for this educational course. The participants offered their perspectives on the different implications of this program on student life. After defining a sexually educated person, according to Halstead and Reiss (2003), as

someone who knows about sexual health, including pregnancy prevention or achievement, I assessed participants' expected sexual education level.

I conducted follow-up interviews with three psychologists and three health workers to obtain professional insights about implementing sexual health education courses in academic programs. Their work experience included negative situations that had arisen because students lacked access to sexual health education courses.

Data Collection Procedure

The data collection started after receiving approval from the Nazarbayev University Graduate School of Education (NUGSE) Ethics Committee. The recruitment process followed a systematic approach that used official university communication channels through email, student portals, and social media platforms to contact potential participants at universities in Astana and Almaty. The research focused on these two cities because they serve as the main enrolment locations for Kazakhstani university students.

Invitations for interviews were sent to participants via email, WhatsApp, and Telegram messaging platforms to recruit them for research. Additional recruitment strategies included posting announcements on relevant social media platforms, ensuring that students were aware of the research purpose and could choose to participate voluntarily. The recruitment letter is included in Appendix C.

After recruiting participants, I interviewed undergraduate students, psychologists, and health practitioners. In these interviews, participants' expressed their thoughts about introducing sexual health education in undergraduate students' curricula and shared their understanding of STI and unintended pregnancy prevention. Each interview lasted approximately 45 to 60 minutes and was audio-recorded with the participant's informed

consent, ensuring accurate data collection while maintaining strict confidentiality protocols.

Ethical Considerations

Research integrity depends on ethical principles to maintain study credibility when studying sexual health education and STIs and unintended pregnancies. This section of Chapter 3 presents the ethical aspects of this research and describes the procedures used to protect participants' rights while maintaining confidentiality and ensuring voluntary participation. This research study applied ethical concerns identified by Hammersley and Traianou (2012). The research required special attention to informed consent and confidentiality because it involved interviews with undergraduate students, psychologists, and health practitioners who discussed personal and potentially stigmatized experiences. The research environment was prepared to be comfortable. To ensure a comfortable environment, the following strategies were implemented: confidentiality measures, neutral language, and a respectful tone were implemented. I gave participants breaks and suggested breathing as a calming technique. They also were provided with information about counseling services if they became stressed. The implemented measures aimed to establish both comfort and open participant responses. The study implemented these ethical considerations to achieve the highest research integrity standards while protecting participants from potential harm or discomfort.

Informed Consent

All participants received a consent form that described the research objectives, participants' rights, and procedures for maintaining confidentiality. The consent form, which is presented in Appendix D, was distributed ahead of time for participants to read carefully. I sent each potential participant the research details along with the consent form through email before their recruitment. The participants who joined the study signed two

copies of the consent form because one copy stayed with the researcher for documentation purposes, and the other copy went to the participant as a reference.

Benefits of the Study

The study participants received information about the advantages their involvement would bring to the research. The research has three main potential benefits. First, it supports current discussions about sexual health education in Kazakhstan by analyzing undergraduate students' STI knowledge while health professionals and psychologists discuss the need for this education. Second, the research findings may guide upcoming initiatives that aim to decrease STI prevalence and stop unplanned pregnancies while improving sexual health knowledge, according to Kabatova (2018) and Ryskeldiyeva et al. (2023). The research findings have the potential to enhance the health outcomes of university students throughout the region.

STIs tend to have long-term effects on students, which makes CSE more valuable. The combination of health difficulties and psychological distress due to STIs creates negative impacts on academic performance and social integration. The UNESCO (1994) document established that inclusive educational settings serve as the foundation to resolve these challenges by providing equal educational opportunities to students of all backgrounds, health statuses, and genders. Students need a stigma-free environment when discussing their sexual health concerns during sexual health education. Students who receive culturally appropriate and suitable sexual health education for their age will have the ability to make better decisions about their sexual health, which leads to better overall well-being.

Confidentiality

Hammersley and Traianou (2012) pointed out that confidentiality is an important ethical issue in research because it helps protect the participants' privacy. That is why this study did not reveal the names of the universities attended by students or the workplaces of psychologists and health practitioners. As noted earlier, participants' names were replaced with numerical identifiers, such as "Participant 1" and "Participant 2," ensuring confidentiality throughout the study. Additionally, no personal characteristics that could reveal participants' identities were included in the data description.

Interviews were conducted in a private and comfortable setting, either in person or virtually, to foster an open and secure environment. Given that the primary working language of this study was Russian, only Russian-speaking participants were included. While I understand Kazakh, I am not fully proficient in conducting interviews or performing an in-depth analysis in the language; therefore, Kazakh-speaking participants were not included.

Data Security and Management

All information obtained during this study was treated with the highest level of confidentiality. To ensure the security and privacy of participants, all data was stored on password-protected devices, with access restricted solely to the researcher. No unauthorized individuals had access to the raw data at any stage of the research process.

In accordance with ethical guidelines, all recorded interviews, emails, consent forms, notes, and the list of participants will be securely retained for five years following the completion of the study. After this period, all data will be permanently destroyed to further safeguard participants' privacy and confidentiality.

Risk of the Research

Although this study is classified as minimal risk, it is important to note that, "there is always some potential for harm from qualitative research" (Hammersley & Traianou, 2012, p. 74). In this case, the primary risk involves potential emotional discomfort associated with discussing sensitive topics such as sexual health education. I conducted interviews in a supportive environment that avoided judgment to let participants skip uncomfortable questions or exit the study at any time without penalty.

The selection of interview locations focused on creating environments that would provide participants with safety and comfort. I interrupted the interview to offer support services when participants showed visible distress during the research session.

The study implemented a respectful data collection approach to establish participant safety while properly addressing potential risks. The dedication to protecting participants' welfare served two essential purposes: maintaining ethical standards and protecting research quality and integrity.

Bias

Qualitative research studies face two potential biases: social desirability bias and researcher bias during data interpretation (Bergen & Labonté, 2020). The responses collected from participants might reflect what they think society wants to hear instead of their actual opinions because of social bias.

Precautions were implemented in the study to encourage honest and non-biased answers during the interview. All participants were informed about voluntary participation and the right to leave the study at any time without any negative consequences. The participants with prior relationships with the researcher received instructions to maintain

neutral perspectives during interviews to minimize research bias while obtaining relevant data.

Bergen and Labonté (2020) identified multiple approaches researchers can use to reduce their bias during studies. The researcher guaranteed all participants' confidentiality throughout the interviews. In addition, I used clarifying questions and provided context to help participants provide more honest answers to sensitive questions. All of these methods helped create an open environment that allowed participants to provide truthful answers without outside influence.

Researcher bias, which means self-bias, requires special attention to prevent personal beliefs and assumptions from affecting data interpretation (Bergen & Labonté, 2020). I maintained reflexive awareness throughout the research process by keeping a journal to document thoughts, reflections, and potential biases. also adhered to a systematic data analysis approach, ensuring that interpretations were grounded in participants' actual responses rather than preconceived notions. The systematic data analysis process was followed to base interpretations only on the actual responses from participants instead of using preconceived ideas. The implemented strategies minimized participant and researcher bias, which enhanced the credibility and reliability of study findings.

Data Analysis

Creswell (2018) states that data analysis in qualitative research is a systematic process of the data analysis spiral. The following five stages were crucial for interpreting and describing the data collected in this study. Furthermore, the analysis was conducted based on Braun and Clarke's (2006) six phases of thematic analysis. The first stage was the structuring of the data. This stage contained file management, transcription, and data

security (Creswell, 2018). Lester et al. (2020) state that data organization is an important aspect of protecting the integrity and accessibility of qualitative data. Data conversion entails determining how the audiovisual materials from interviews are converted into text and digital formats to facilitate coding and analysis of the data (Creswell, 2018; Lester et al., 2020).

In the second stage I started reading the transcripts of the interviews and my reflective notes (Creswell, 2018). Memo writing can link data collection and analysis, and these reflective memos assisted in developing my understanding and initiating the coding process (Saldana, 2016).

In the third stage, the data was coded and thematized by repeated reading of the data (Creswell, 2018). This conformed with Braun and Clarke's first phase, data familiarization, where I engaged myself in the transcripts to internalize the information. This phase is explained in detail in Appendix E, where an example of the interview coding for one student is provided. I consider coding to be an essential activity in the process of data reduction and classification in order to extract patterns and meanings from the data. This stage involved identifying the codes, grouping them into more general themes, and developing a codebook to aid the data analysis (Creswell, 2018; Lester et al., 2020).

After coding the data, I explained its connection to the theoretical framework. This stage aligns with Braun and Clarke's (2006) phases of theme development, where the researcher moved into the analysis and validation of the themes to ensure that they were a good representation of the data.

In the last stage, the results were presented in the form of narrative descriptions, visual displays, or both, depending on the research (Creswell, 2018). Lester et al. (2020) outline different ways through which qualitative results can be presented, and the author

stresses that the last representation should be clear and logical. This last step was in line with Braun and Clarke's reporting phase, in which I provided a comprehensive report that included participant quotes to support the themes and relate them to the literature.

The data analysis methods described by Creswell (2018) and Braun and Clarke (2006) were applied in this study as demonstrated in the following a systematic approach to ensure a comprehensive examination of the participants' viewpoints on incorporating sexual health education into undergraduate curricula. The research study used semi-structured interviews to gather data that underwent transcription followed by coding and thematic sorting to achieve a thorough exploration of students' views on sexual health curriculum integration. The analysis process combined various perspectives to achieve a detailed understanding of research questions.

Summary

This chapter presented the methodology for this study; in particular, the research design, methodology, questions, sample selection, instruments, data collection procedures, and data analysis were presented. The study employed a qualitative research design with a phenomenological approach to explore the attitudes and perceptions of eight undergraduate students, three university psychologists, and three health practitioners regarding the integration of sexual health education courses into academic programs.

Chapter 4: Findings

This chapter presents the findings of this research study. The primary aim of this research was to explore undergraduate students' knowledge of sexual health, evaluate their perspectives on the necessity of sexual health education courses, and gather insights from psychologists and health practitioners regarding the implementation of such courses.

The findings are organized into themes derived from the analysis of interview responses. These themes correspond to the study's research objectives, focusing on three key areas: the current state of sexual health education, the level of sexual health awareness among undergraduate students, and suggestions and attitudes regarding the integration of sexual health education courses into undergraduate programs in Kazakhstan from undergraduate students, psychologists, and health practitioners.

This chapter begins by presenting the participants and their perspectives on the current situation of sexual health education. It then discusses the level of awareness among undergraduate students regarding sexual health. Finally, the chapter explores perspectives on the introduction of sexual health education courses in universities, focusing on the challenges and potential solutions for their implementation, setting the stage for further discussion in the next chapter.

Sample of the Study

Table 1 presents the study sample's composition, detailing the participants' demographic information. Each participant was assigned a number for identification. The sample includes eight students (four male, four female), three psychologists, and three health practitioners from Kazakhstan's Almaty and Astana regions.

Table 1
Sample Characteristics of the Participants

Participant group	ID	Gender	Age (years)
Undergraduate student	Participant 1	Male	21 y

Undergraduate student	Participant 2	Male	22 y
Undergraduate student	Participant 3	Male	22 y
Undergraduate student	Participant 4	Female	20 y
Undergraduate student	Participant 5	Female	20 y
Undergraduate student	Participant 6	Female	19 y
Undergraduate student	Participant 7	Female	18 y
Undergraduate student	Participant 8	Male	18 y
Psychologist	Psychologist 1	Female	
Psychologist	Psychologist 2	Female	
Psychologist	Psychologist 3	Female	
Health practitioner	Health practitioner 1	Male	
Health practitioner	Health practitioner 2	Male	
Health practitioner	Health practitioner 3	Female	

Key Themes and Subthemes Identified in the Study

After the stages of coding and theme development (see Appendix F), three overarching themes and six subthemes (see Table 2) emerged. These themes reflect the perspectives of students, psychologists, and health practitioners on sexual health education in Kazakhstan. The main themes were named as follows: (1) the Current Situation of Sexual Health Education; (2) the Level of Sexual Education Among Undergraduate Students; and (3) Perceived Need for Sexual Health Education Courses. The first theme provides an overview of the problems and challenges of sexual health education faced by the participants in this study. The second theme presents the findings that help to understand the undergraduate students' level of sexual health knowledge. The last theme explains what participants think about the necessity of introducing sexual health education courses. Each theme was further divided into subthemes to provide a nuanced understanding of the challenges, knowledge gaps, and proposed solutions regarding sexual health education.

Table 2
The Study Themes and Subthemes

Themes	Subthemes
Current Situation of Sexual Health Education	• Stigma and Cultural Barriers • Gender Bias in School-Based Sexual Health Education
Level of Sexual Education Among Undergraduate Students	• Gaps in Knowledge About STIs • Limited Awareness of Consent • Gender Disparities in Sexual Health Knowledge • The Impact of Unplanned Pregnancy on Women
Perceived Need for Sexual Health Education Courses	

Current Situation of Sexual Health Education

This section describes the participants' perceptions regarding the current situation with sexual health education in schools and universities and students' opinions on its effectiveness. An in-depth understanding of the current state of sexual health education is essential for assessing students' knowledge levels and identifying the potential need for implementing dedicated sexual health courses within university curricula. This theme was divided into two subthemes. The first is stigma and cultural barriers, and the second is gender bias in school-based sexual health education. The first subtheme describes how cultural barriers hinder open discussions in sexual health courses, while the second outlines the problem of gender bias in sexual health education. These findings provide important information about the gaps in knowledge and the implications for improving educational frameworks to address sexual health more comprehensively in higher education.

Stigma and Cultural Barriers

The participants reported that there are many cultural and societal barriers that prevent people from talking openly about sexual health. All the participants mentioned that there is a stigma related to these topics, especially in public and educational settings. They suggested that cultural norms support this stigma and have become a significant challenge for the delivery of sexual health education.

Many students initially struggled to express their opinions on sensitive topics, such as contraception, during interviews, highlighting their discomfort and the influence of pervasive cultural taboos. However, then they became more open as the conversation progressed. One female undergraduate student mentioned: "The meetings focused on what not to do, like how not to get pregnant, rather than helping us understand what is normal" (Participant 4). Another female participant shared a similar perspective: "The meeting discussed sexually transmitted diseases, methods of contraception, and unplanned pregnancy" (Participant 5). The statements demonstrate a more significant problem because sexual health discussions tend to center on warnings and taboos instead of providing constructive educational content.

Both health practitioners and the psychologists participants, observed that social and family expectations stop students from looking for reliable sexual health information. One of the health practitioners (Health Practitioner 2) explained: "Students fear judgment from society and their parents, particularly if they are unmarried."

Additionally, cultural norms play a profound role in perpetuating these challenges. A psychologist (Psychologist 2) noted: "We have uyat in our culture, which is probably the most significant barrier. Societal judgment weighs heavily on students and often silences them." Thibault and Caron (2022) define "Uyat" as a cultural concept of shame in Kazakhstan and other Central Asian societies, which acts as a moral regulator that enforces

social norms, particularly restricting discussions on topics like sexuality and individual expression. The psychologist further elaborated on the psychological impact of these norms, stating: "Losing virginity outside of marriage often results in inner collapse due to beliefs that link a person's value to their virginity" (Psychologist 1).

These findings indicate that cultural prohibitions and social norms create substantial barriers that prevent students from discussing or seeking sexual health information. The barriers must be overcome to establish an environment that supports sexual health education for all students.

Gender Bias in School-Based Sexual Health Education

Based on the responses from undergraduate students, sexual health seminars in schools are often either exclusively targeted at girls or not conducted at all. Several female participants recalled, "We had a little meeting for the girls," reflecting the public perception that girls need sexual health education more than boys due to the perception that they have more responsibility and face higher risks. Participant 6, a female student, shared: "I was told about this from childhood and knew that it was important. I was always taught, for example, that no one has the right to touch me." Similarly, another female student observed: "Sexual health education in schools was focused only on girls, but boys also need to learn about their health" (Participant 7). Another female participant recalled: "The questions were directed at girls, telling us not to dress brightly or talk to boys" (Participant 4).

The responses demonstrate an evident gender bias in sexual health education at schools because girls bear most responsibility for sexual health. The approach both dismisses boys from the conversation and maintains that sexual health responsibilities belong to girls only.

The bias produces noticeable effects that become visible through student attitudes about health checks. The interviews revealed that male students never went to a doctor for sexual health issues, but female students visited their doctor for sexual health concerns at least every six months. According to male respondents they would seek medical care only when they experienced pain or detected any alterations in their health status.

The clear difference in health check behavior demonstrates why sexual health education must provide equal attention to both genders to achieve balanced health awareness.

Level of Sexual Education Among Undergraduate Students

This theme focuses on reflecting students' current knowledge regarding sexual health. Understanding undergraduate students' level of sexual education is critical in assessing their vulnerability to health issues and identifying gaps in knowledge that sexual health education courses can address. For a better understanding, this theme was divided into three subthemes named the following: Gaps in Knowledge About STIs, Limited Awareness of Consent, Gender Disparities in Sexual Health Knowledge, and The Impact of Unplanned Pregnancy on Women.

Gaps in Knowledge About STIs

The data shows that students have limited and inconsistent knowledge about STIs. Most of the participants were able to name only HIV or AIDS when asked to name STIs. This implies that sexual health is often equated with these two infections only, and there is low awareness of other infections.

While a few students were able to name syphilis, several admitted they had never heard of chlamydia or were unaware of its symptoms. Some even held misconceptions. For example, when asked about HIV protection, one male student responded, "As far as I

know, if you have unprotected sex, you should use a disinfecting antiseptic rinse afterward" (Participant 3). This highlights a significant knowledge gap. A health practitioner (Health Practitioner 2) supported this concern, stating: "Cases of STIs are often discovered during pregnancy screenings rather than through direct consultations."

The results indicated that students do not consider STI prevention or periodic health check-ups as important, which emphasizes the importance of CSE to handle critical gaps and empower students in terms of sexual health.

Limited Awareness of Consent

The study identified that students lack an understanding of the concept of consent. In the interviews, many participants had difficulty explaining what consent is and needed more time to answer questions related to it.

When asked to define consent, most students responded, "Consent is when both partners are okay with sexual contact." Only a female student (Participant 4) added: "Both partners should be completely comfortable, without pressure or fear."

Some students had trouble identifying situations where consent was absent. When asked how they would know if a partner does not want to engage in sexual activity, most male students said they would ask directly. In contrast, female students emphasized the importance of non-verbal cues. A psychologist (Psychologist 1) supported this observation, explaining: "Many students struggle with recognizing verbal and non-verbal indicators of consent."

Additionally, misunderstandings about the continuity of consent were evident. A health practitioner (Health Practitioner 2) noted: "Many students mistakenly believe that prior consent implies consent for future actions." One of the psychologists further elaborated on the emotional and psychological challenges that female students encounter about consent, noting that some of them come to seek advice on whether their sexual

encounters were truly consensual (Psychologist 2). Another psychologist stated: "It seems like the girl wanted it at first, but then, when they had sex, she realized she did not want to. In the end, she is left questioning whether it was harassment, violence, or something she had agreed to herself" (Psychologist 1).

This statement underscores the confusion and emotional distress students experience due to a lack of clear understanding about consent, reinforcing the need for comprehensive education on the topic and relationships in general.

The participants, through the interview, indicated that the curriculum should include extensive education about relationships and consent, which covers both verbal and non-verbal communication and the requirement of ongoing and affirmative agreement during all sexual encounters. As one psychologist mentioned: "Students need to understand that ‘no’ means ‘no’" (Psychologist 3).

Gender Disparities in Sexual Health Knowledge

The findings demonstrate that female students possess a greater level of sexual health knowledge compared to their male counterparts in three key ways. In first, women perceive sexual health as a more comprehensive concept. A female student defined sexual health as: "an awareness of potential consequences, knowledge of infections, and the courage to discuss these issues with trusted individuals" (Participant 5). On the other hand, a male student explained it more narrowly: "Sexual health is knowing how to protect yourself and your partner during sex." (Participant 2). This difference indicates that men primarily associate sexual health with the prevention of STIs and unwanted pregnancy. In contrast, women view it as a more complex concept that encompasses awareness, communication, reproductive health, and overall well-being.

Secondly, women showed better comprehension of contraceptive methods and their effects, whereas men only knew about basic condom usage. Participant 1 (male) described

hormonal contraceptives as “pills that women take” and failed to explain proper usage. Similarly, other male participants failed to recognize that hormonal contraceptives need to be taken according to a scheduled plan instead of randomly.

Finally, women showed a better understanding of STIs because they could identify various infections and their transmission methods and symptoms. The female participants showed better awareness of STI symptoms, which included abnormal menstrual cycles and unexplained bleeding and skin ulcers. However, male students showed restricted knowledge about STI symptoms and risks. The ability to make knowledgeable choices and understand untreated STI health consequences requires knowledge from both males and females. The results demonstrate why sexual health education should be expanded to include complete information that benefits students of all genders.

The Impact of Unplanned Pregnancy on Women

The findings indicate that women experience more social and emotional repercussions when they become pregnant unexpectedly. Students frequently stated that women experience most of the consequences of unplanned pregnancy while men face minimal educational interruptions. A third participant stated that girls usually must abandon university studies, but boys might stay in school despite facing challenges. A male student observed how men typically avoid responsibility, which results in women facing the situation by themselves (Participant 2).

The belief was strengthened by female students who observed that men tend to escape responsibility after such situations occur: "Most likely, the woman would have to leave university, and the man might deny responsibility" (Participant 6). Health practitioners echoed this sentiment, highlighting that men rarely take an active role in addressing unplanned pregnancies. One health practitioner stated: "I have not encountered

men raising concerns about unintended pregnancies in my practice" (Health Practitioner 3).

Psychologists also emphasized the severe emotional distress and social stigma that female students experience. They reported that many women delay seeking help due to societal judgment, which can have serious psychological and physical health consequences. One psychologist shared a particularly troubling case: "A student who sought an abortion described the treatment she received at the medical center. She said that they spoke to her as if she were the lowest of the low, treating her with complete disrespect" (Psychologist 2).

These findings highlight deep-rooted gender inequalities in how unplanned pregnancies are perceived and handled, emphasizing the need for significant support systems and awareness initiatives to address the disproportionate burden placed on women. Men need additional education on their responsibility if a sexual partner gets pregnant.

Perceived Need for Sexual Health Education Courses

The perceived need to introduce sexual health education courses, based on participants' suggestions, is explained through three main reasons. First, when asked about their university's efforts in sexual health education, only one student recalled attending a single meeting on the topic. The rest reported a complete lack of information or programs related to sexual health. This absence reinforced students' strong support for the introduction of university-level sexual health education courses. One male student emphasized the necessity of such courses, stating, "University is a place where sexual activity is likely, so these courses are necessary" (Participant 3).

Notably, female students advocated making these courses mandatory, while male students preferred them to be optional. The majority of participants also recommended

online courses because of their better accessibility and privacy. As one male student stated, "If it (sexual health courses) will be online, I would be more likely to attend it" (Participant 8). In terms of content, students recommended topics such as infections, hygiene and health, consent, and building healthy relationships.

Secondly, most participants agreed that sexual health education should start in childhood and that topics should be gradually added as children grow up. Health practitioners also agreed with early intervention and suggested that a structured program be developed in consultation with medical professionals. Psychologists also emphasized the need for CSE at the school and university levels and the role of psychologists in developing these courses. As one psychologist said, "There is a need for CSE at the school and university levels. Psychologists should play a significant role in designing these courses" (Psychologist 3).

In conclusion, all students responded positively to implementing confidential online support services. One male student said, “Many people are shy to ask questions face to face, so an online portal would be beneficial” (Participant 2). The participants proposed teaching students about contraception methods, consent education, and emotional support for victims of sexual violence. They also stressed that medical professionals and psychologists should run such a platform to offer technical and emotional help.

Students also indicated that they do not know where to turn to in case of sexual violence since none of them was aware of any existing support platforms. This shows a significant gap in the availability of resources and information. Also, when asked about their sources of sexual health information, most of the students indicated that they got their information from the Internet. At the same time, only a few of them paid attention to the credibility of their sources. This lack of reliable, structured education points to the need for

well-developed sexual health programs and easily accessible support services in universities.

Summary

The findings highlight that students have poor knowledge of sexual health and that there are still cultural and societal barriers that prevent people from discussing the topic. In addition, the results show that there is a gender gap in sexual health education and that female students are more likely to be affected by psychological factors such as consent and unintended pregnancies. Furthermore, the lack of verified and easily accessible resources—online and within the university environment—points to the need for more CSE programs.

The next chapter will explore these findings in more detail, placing them within the context of existing research and theoretical perspectives. This analysis aims to identify practical recommendations for enhancing sexual health education in universities and addressing students' key challenges.

Chapter 5: Discussion

This qualitative phenomenological study explored the necessity of introducing sexual health education courses at the university level in Kazakhstan. The first three chapters established the research problem, provided a synthesis of existing literature on sexual health education, undergraduate students' knowledge levels, the effectiveness of CSE, the current context of sexual health education in Kazakhstan, and the methodology employed in the study. The previous chapter presented the study's findings, incorporating direct voices of participants.

This chapter interprets the findings and discusses their broader implications. It situates this issue within existing research and the theoretical framework by addressing the research problem through the following questions:

1. What is the current level of sexual health knowledge among undergraduate students?
2. How do undergraduate students perceive the integration of sexual health education into their academic curriculum?
3. What are the viewpoints of psychologists and health professionals regarding including sexual health education in undergraduate programs?

Level of Knowledge About Sexual Health

Regarding the first research question, the findings of this study reveal that undergraduate students in Kazakhstan lack comprehensive, values-based sexual health education, which significantly limits their ability to make informed, ethical, and responsible decisions about their sexual health. Halstead and Reiss (2003) argue that sexual health education should extend beyond biological knowledge and include moral reasoning, critical reflection on societal norms, and the development of personal values to support students in navigating complex sexual health issues. Students in Kazakhstan

demonstrate inadequate knowledge about contraception, STIs, and sexual consent because their education lacks a complete approach, thus demonstrating the immediate necessity for structured educational interventions.

One of the most worrying findings of this study is that students have poor knowledge of how to prevent pregnancy. Most of the participants mentioned condoms as the most common form of contraception, while some mentioned hormonal contraceptives without knowing much about how they work or how effective they are. The foundation of sexual literacy requires individuals to assess different choices and select responsible options through accurate information, according to Halstead and Reiss (2003). The study shows that students lack this fundamental ability by depending mostly on unverified or insufficient information sources.

The research findings match international studies that show comparable knowledge deficiencies. Turkish university students, according to Ekşi and Kömürcü (2014), depended on books and magazines instead of formal education to learn about STIs and contraception, which resulted in numerous inaccurate beliefs. Similarly, Lyu et al. (2020) found that Chinese students had moderate sexual knowledge with a gender difference in level of knowledge and sexual activity. That additionally highlights the need for comprehensive education to ensure that both men and females have access to the correct information.

According to Halstead and Reiss (2003), sexual health education should help students learn how to evaluate information sources and develop their moral reasoning so they can actively engage with sexual health information instead of uncritically accepting it. However, the results of the present study indicate that Kazakhstani students do not have a good evaluating skill, which makes them susceptible to misinformation and causes them to make poor decisions regarding their reproductive health.

One of the biggest problems in Kazakhstan is the cultural taboo on discussing sexuality, especially the concept of "Uyat," which means shame or honor. Halstead and Reiss (2003) state that cultural and religious values are an important factor in determining sexual attitudes, and often, they perpetuate traditional gender roles that make it difficult for students to get the information they need. Similar barriers were found in Jaspal's (2019) study, where female students in a British university felt that they would be judged by their peers and healthcare providers and, therefore, did not seek sexual health services. These findings indicate that cultural norms affect students' participation in sexual health education and services, and therefore, culturally sensitive approaches to sexual health promotion are required in Kazakhstan.

The research revealed that female students received criticism for unplanned pregnancies, but male students avoided accountability because of societal moral and gender expectations. The study results match Sarsenova et al. (2024), who determined that Western values have not eliminated traditional sexual restrictions in Kazakhstan, which continue to harm women more than men.

This gendered burden to manage sexual consequences is not unique to Kazakhstan. According to Maatouk et al. (2021), students in Lebanon experienced restricted sexual health information access because cultural and religious norms-maintained gender-based inequalities. Seiler-Ramadas et al. (2019) discovered that Austrian students faced shame and embarrassment as obstacles to sexual health education. The studies mentioned above demonstrate the global influence of cultural taboos on sexual decision-making. However, according to Halstead and Reiss (2003), sexual health education should focus on teaching students to challenge societal norms while developing their ethical thinking instead of teaching them to follow traditional expectations.

The present study exposed insufficient knowledge about sexual consent as a critical issue because it creates dangerous situations of coercion and miscommunication during sexual relationships. Several participants believed that giving consent at the start of a sexual encounter automatically committed them to complete sexual activity without acknowledging the right to revoke consent during the encounter.

According to Halstead and Reiss (2003), sexual health education should include moral reasoning and ethical responsibility in sexual relationships so that students are able to engage in respectful, mutual, and informed decision-making. This lack of education in Kazakhstan puts students at risk of situations in which they may not be able to assert their rights due to a lack of confidence or awareness.

Astle et al. (2020) also found that students in the United States wanted to include in sexual health education not only biological aspects but also topics such as consent, sexual communication, and emotional well-being. These are consistent with the findings of present study that current sexual health education programs in Kazakhstan do not teach essential ethical and communicative aspects, which results in students being unprepared for real-life consent and boundary-asserting situations. The international research shows that sexual literacy improves through peer communication and structured educational interventions despite existing challenges. The research by Rittenour and Booth-Butterfield (2006) showed that American students benefited from discussing sexual health topics with their peers. Additionally, Zizza et al. (2021) highlighted that specific educational interventions enhanced Italian students' knowledge about HIV and STIs.

Halstead and Reiss (2003) propose that sexual health education should enable students to participate in open dialogue, learn how to evaluate social norms and build moral reasoning skills for ethical sexual choices. This aligns with the research by Goldfarb and Lieberman (2021), which shows that complete sexual health education programs

produce better knowledge retention and healthier relationships, and they decrease the number of unintended pregnancies and STIs.

The finding of the present indicates that Kazakhstani universities should implement culturally appropriate evidence-based sexual health education because it will address knowledge deficits and provide students with essential information to make sound sexual health choices. The programs must include biological content about sexual health together with ethical reasoning com, communication training, and cultural competency instruction to fully prepare students for responsible sexual relationships.

The research adds to worldwide evidence showing that sexual health knowledge deficits persist while values-based sexual health education remains essential. Students across the United States, Europe, East Asia, and the Middle East demonstrate through research that they lack sufficient education about STIs con, contraception, and consent, which renders them unable to make informed decisions about their sexual health.

The international research evidence and Halstead and Reiss's (2003) theoretical framework demonstrate why Kazakhstan needs educational initiatives to help students acquire responsible and ethical sexual health knowledge and skills.

Attitudes and Perceptions on Introducing Sexual Health Education

Regarding the second research question, the findings of this research indicate that most participants support the introduction of sexual health education courses in university curricula. However, opinions differ on how these courses should be implemented. Students have different opinions about whether these courses should be required or left voluntary. The lack of mandatory attendance at sexual health education courses may lead students to skip these sessions. The absence of any impact on Grade Point Average (GPA) might cause students to ignore sexual health education courses because they are not mandatory and graded. Students requested online resources that would address three main areas:

sexual health knowledge deficits, sexual violence experiences, relationship difficulties, and self-identification based on sexual orientation. The research results support Fisher et al. (2020), who reported that young people expressed disappointment with current sexual health education approaches while showing interest in easily accessible, confidential, non-judgmental resources. Lyu et al. (2020) discovered that Chinese students now depend on online sexual health education resources because these platforms offer private and convenient learning options.

The students in this research study indicated that their former sexual health education failed to meet their needs because it primarily used fear-based methods and neglected essential topics. According to Astle et al. (2020), U.S. college students experienced school-based sexual health education as awkward and unhelpful because it mainly focused on contraception and STIs. Students requested educational content from qualified instructors who would teach about various sexual behaviors and identities as well as emotional and social aspects of sex. The research conducted by Lameiras-Fernández et al. (2021) in their systematic review showed that scaffolded school-based CSE programs lead to better outcomes for students' sexual, emotional, and social well-being.

The participants in this study, including health practitioners and psychologists, recommended starting sexual health education in kindergarten and continuing it until adolescence while increasing the complexity of topics according to student age. The study supports Goldfarb and Lieberman (2021), who stated that ongoing sexual health education at suitable ages produces lasting positive effects, which lead students to make better decisions while reducing their involvement in risky sexual activities. Zizza et al. (2021) showed that students who received structured sexual health educational interventions learned more about HIV and STIs, which confirms the requirement for continuous and advancing educational programs.

The health professionals and psychologists in this study recommended that universities establish sexual health education programs through specialist-led development to achieve medical accuracy, cultural sensitivity, and psychological support. Seiler-Ramadas et al. (2019) established that successful programs must move past basic facts to incorporate emotional and social aspects of sexual health. Millanzi et al. (2022) demonstrated that Problem-Based Pedagogy (PBP) proved superior to traditional lectures for teaching adolescents in Tanzania about safe sexual practices. Their research findings indicate that interactive educational approaches focusing on student engagement might be essential for creating effective sexual health education programs.

The research demonstrates an immediate requirement for a well-organized, evidence-based sexual health education system in Kazakhstan. Universities should implement international best practices that fit Kazakhstan's sociocultural environment to provide students with complete sexual health knowledge and support for responsible decision-making.

Necessity of Comprehensive Sexual Health Education

Regarding the third research question, sexual health education, for the most part in Kazakhstan, is inadequate because of significant gaps in students' knowledge of important topics such as STIs, consent, healthy relationships, pregnancy, and contraception. Previous studies (Hansson et al., 2008; Sarsenova et al., 2024; Telzhan, 2022) have also shown that there is a lack of systematic and CSE, which results in the prevalence of misconceptions and risky behaviors. Those findings are supported by this research, which shows that many students are not knowledgeable about consent and STIs. Furthermore, the study shows that there is a high gender bias in sexual health education, which worsens the gender gap in knowledge between men and women.

The results of this study indicate a need for CSE that is not limited to infection prevention and unintended pregnancies. Kazakhstani students, psychologists, and health practitioners' views also support incorporating social, emotional, and ethical aspects into sexual health education.

Smylie et al. (2006) state that adolescent sexual behaviors are influenced by social capital, which includes family, peers, and institutional support. In addition, the authors note gender differences in risk behaviors, which is consistent with the results of this study. That supports the necessity for gender-sensitive CSE programs that are responsive to the needs of different students. In addition, Allen (2007) points out that traditional sexual health education is based on fear of infection and does not consider pleasure, relationships, and consent. This correlates with the participants' perception of the current situation in Kazakhstan. A more comprehensive curriculum that includes aspects proposed by Allen (2007) would benefit students more and help them make the right sexual health decisions. Both studies support the need for a more comprehensive and inclusive approach to CSE in Kazakhstan. Sexual health education should include factors such as social influences and gender differences in order to come up with more effective programs that will empower young people to make the right decisions in terms of their sexual and reproductive health.

Research findings from other countries have shown that CSE has many advantages in filling the knowledge gaps and encouraging safer sexual practices. The studies by DiCenso et al. (2002) and Santelli et al. (2018) show that well-implemented CSE programs help to reduce the incidence of unintended pregnancies and sexual violence, supporting the idea of CSE began at an early age and continued throughout life. They have established that CSE equips young people with the correct information and skills to enable them to make the right decisions concerning their sexual and reproductive health.

The research of Goldfarb and Lieberman (2021) and Guo et al. (2023) supports the positive effects of CSE in more recent studies. The authors determined that comprehensive programs enhance sexual health knowledge dec, reduce STI stigma, and promote gender equality and healthier relationships. The study by Guo et al. (2023) found that students who received CSE instruction developed better reproductive health literacy and showed increased acceptance of sexual diversity.

CSE teaches social-emotional learning through improved communication abilities, boundary respect, and consent understanding. The accurate information and critical thinking abilities students receive through CSE enable them to handle relationships responsibly while making informed decisions, which leads to better overall well-being.

The students in this research study demonstrate strong support for implementing sexual health education courses in university settings. Several participants proposed an online educational platform that would extend school curriculum coverage and serve as a private resource for students to discuss delicate matters. Ryskeldiyeva et al. (2023) support these findings because they showed that adolescents lack essential knowledge about reproductive health, especially concerning menstrual health and contraception, while requiring youth-oriented accessible resources. The research conducted by Goldfarb and Lieberman (2021) and Guo et al. (2023) demonstrates that CSE leads to better sexual and reproductive health knowledge while decreasing stigma and risky sexual practices internationally. Both studies demonstrate that educational programs should include comprehensive sexual health content that covers social-emotional development alongside relationship education and gender and diversity awareness.

The psychologists and health practitioners interviewed in the present study emphasized the importance of introducing sexual health topics through a gradual progression toward complexity. This approach aligns with Telzhan’s (2022) research,

which shows that inadequate sexual health education can lead to negative social outcomes, including teenage pregnancy, elevated STI rates, and mental health problems. Medical practitioners and psychologists that participate in this study emphasize the need for specialist collaboration when designing university-level courses because they ensure both accuracy and cultural appropriateness. The educational role of teachers is a vital element, according to Zhuravleva and Helmer (2023), because their research shows teachers lack preparedness and feel uncomfortable teaching sexual health material. Teacher training programs must be implemented to resolve this problem because they will improve the effectiveness of school-based sexual health education.

The present study and previous research show that consent remains a major unknown factor among students. Most participants in this study and numerous students face difficulties identifying verbal and non-verbal signals that indicate readiness or discomfort. The majority of participants in this study thought that initial consent was enough but failed to understand that people maintain the right to change their consent at any moment. The current societal gaps in knowledge about consent and healthy relationships become evident through this finding. Medical experts, together with psychologists, suggest that sexual health courses should include specific discussions about these matters to correct false beliefs while teaching people how to make responsible decisions. The research conducted by Goldfarb and Lieberman (2021) supports this recommendation by showing that detailed sexual health education leads students toward better social-emotional development and improved relationship comprehension and consent knowledge.

Multiple studies demonstrate that Kazakhstan faces a critical educational deficiency in sexual health instruction, which leads to elevated teenage pregnancy rates, STI cases, and dangerous sexual conduct. Kazakhstan can create successful evidence-

based sexual health education programs through psychologists' recommendations while overcoming cultural barriers such as uyat. Future research needs to develop and assess various educational approaches that should be adapted to match Kazakhstani students' social environment and cultural characteristics. Teacher training expansion, healthcare professional involvement, and digital platform utilization will improve accessibility and educational impact.

Improving sexual health education in Kazakhstan demands a joint effort between educators, medical professionals, policymakers, and students. Kazakhstan can achieve its goal of providing comprehensive, inclusive, stigma-free education to its youth through which they will obtain the necessary knowledge and skills for making informed decisions about their sexual and reproductive health.

Summary

The research findings discussed in this chapter presented the current state of sexual health education among undergraduate students, along with their opinions about formal education in this subject. The study results showed that students showed different knowledge levels about sexual health because numerous participants lacked essential information about reproductive health and contraception and STIs and consent. Students showed different levels of understanding about fundamental concepts, but many held incorrect beliefs about asymptomatic STI infection count, contraceptive protection against STIs, and the permanent effects of unplanned pregnancy. The research outcomes matched earlier studies, which showed insufficient sexual health education and ongoing knowledge deficits among young adults (Lameiras-Fernández et al., 2021; Zizza et al., 2021).

The students disagreed on whether sexual health education should be included in university programs. The majority of students recognized the importance of sexual health education for STI prevention, intended pregnancy prevention, and harassment reduction.

Some students hesitated because of cultural and social taboos about sexual health discussions. The results demonstrate the same socio-psychological barriers that previous research found in Kazakhstan regarding sexual health education (Sarsenova et al., 2022; Telzhan, 2022). Students in this study demonstrated different levels of understanding about sexual health since some limited it to infection prevention. In contrast, others saw it as a combination of quality of emotional health relationships and reproductive rights.

The participants, from the healthcare and psychology fields, confirmed the necessity of developing an organized sexual health education framework. The experts underlined that students need scientifically correct information about sexual health, healthy relationships, and decision-making in addition to STI prevention. The research findings support global educational standards such as CSE because it promotes an integrated approach to sexual health that includes biological, psychological, social, and ethical aspects (Goldfarb & Lieberman, 2021; Santelli et al., 2018). The research demonstrated that an effective educational framework should use evidence-based content that preserves the cultural specifics of Kazakhstan.

The participants recognized three main obstacles to implementing sexual health education, which consisted of cultural restrictions, insufficient trained instructors, and opposition from educational institutions. Students proposed that teaching sexual health content through health and wellness subjects would be more acceptable to students. The research supports the idea of implementing a culturally appropriate and gradual approach to education, which would boost student participation and acceptance (DiCenso et al., 2002; Hansson et al., 2008). The research indicates that implementing CSE components according to Kazakhstan's educational system and cultural norms would create a bridge to fill knowledge gaps and improve accessibility and acceptance.

Overall, the research demonstrates that undergraduate students require formal sexual health education, which should expand from STI prevention into a complete sexual well-being curriculum. The study reveals how students, healthcare professionals, and psychologists support creating an inclusive, evidence-based framework that provides scientific knowledge and social aspects of sexual health. The successful implementation requires culturally appropriate methods combined with trained instructors who follow international educational standards and respect Kazakhstan’s social environment.

Chapter 6: Conclusion

This chapter provides a comprehensive overview of the research. It summarizes the main results and clarifies the study's broader importance. Additionally, this chapter includes an analysis of the study's advantages and disadvantages, including its methodological approach and participant number, which may have influenced the results. The research discusses future research implications by defining investigation needs and proposing new study directions to extend the current study.

The research findings may have practical implications for policymakers and university administrators who need evidence-based decisions to enhance sexual health education programs, curriculum development, and institutional policies. Educational institutions should follow these recommendations to implement inclusive, practical solutions for addressing student knowledge deficits and concerns.

Finally, the chapter makes recommendations for future sexual health education studies while underlining its value for future educational discussions about higher education sexual health programs. This chapter unites research evidence with actionable suggestions to connect academic studies to practical implementation, enhancing educational practices and policy development.

The Study Summary

This qualitative phenomenological study provides an in-depth analysis of the level of sexual health knowledge of undergraduate students and participants' perspectives on the introduction of sexual health education courses in a university curriculum. It captures the views of students, psychologists, and health practitioners on the perceived need for such courses in order to minimize the risks of reproductive system disorders, STIs, and unintended pregnancies. Data were collected through semi-structured interviews. The study involved participants from Almaty and Astana, including four male and four female

undergraduate students, three psychologists, and three health practitioners. The study drew on the Halstead and Reiss (2003) framework, which provides a comprehensive approach to understanding sexual health education. By applying this framework, the research explored undergraduate students' level of sexual health knowledge, particularly about STIs, contraception, unintended pregnancy, and consent. The study also explored critical factors such as attitudes and recommendations from psychologists and health practitioners.

The study produced several important findings regarding sexual health education. One of the main insights was that the majority of undergraduate students in this research showed considerable gaps in their knowledge about sexual health, particularly regarding contraception, STIs, consent, and reproductive health, with many holding misconceptions about asymptomatic infections and the long-term effects of unintended pregnancies. Although most students acknowledged the need for sexual health education, there was some resistance to fully supporting its inclusion in the curriculum. Students expressed a desire for structured, expert-led education covering STI prevention, emotional well-being, healthy relationships, and informed decision-making.

The study also highlighted issues related to consent and gender biases, with students demonstrating a limited understanding of consent and often placing the sole responsibility for sexual health on women. Healthcare professionals and psychologists emphasized the importance of a comprehensive, evidence-based approach considering Kazakhstan's cultural context.

Practical Implications

The research findings have important practical implications that are most relevant to policymakers and university and school administrators. The research concentrates on young adults but indicates wider problems with sexual health education in Kazakhstani educational institutions. The study interview findings clearly show that schools and

universities need to immediately implement full sexual health education programs. In the following subthemes, I will first describe the potential practical applications of the present research for policymakers and, secondly, for institutional administration.

Policy Implementations

For policymakers, the present findings offer two key recommendations. Firstly, the study findings indicate that CSE should start at school and continue at the university level as the student participants in present study lacked knowledge, and many of them revealed that their institutions offer no sexual health education programs. This shows the urgent need for educational policy change. The research by Goldfarb and Lieberman (2021) shows that students who receive CSE develop better sexual health knowledge and behaviors over time. The present study findings highlights that current sexual health education discourse contains substantial gender bias, which requires gender-neutral educational approaches to deliver equal knowledge and support for all students (Smylie et al., 2006).

Secondly, the research findings indicate that cultural and social barriers require special attention to enable the successful implementation of sexual health education programs. Research evidence indicates that fear-driven disease prevention methods neglect essential aspects of sexuality, including consent and relationship education and empowerment (Allen, 2007). The educational scope of sexual health education should expand to include routine reproductive health check-ups, which include STI screenings and gynecological/urological examinations, to educate students about preventive healthcare practices (Zizza et al., 2021).

Institutional Implementations

For policymakers, the present findings offer three key recommendations. In first, students need digital health resources, which include verified apps and websites that

provide anonymous consultation services. Research evidence demonstrates that digital interventions effectively enhance sexual health knowledge and risk perception among young adults, according to Zizza et al. (2021). Most participants underlined the necessity of psychologist and health practitioner-led comprehensive courses that deliver medically accurate and stigma-free professional guidance about sexual health topics (Goldfarb & Lieberman, 2021).

In second, sexual health care education needs to extend its focus points beyond pregnancy prevention and STI protection. Students need to learn about regular health check-ups, building healthy relationships, and understanding consent (Allen, 2007). Research shows that fear-driven sexual health education methods neglect essential aspects that restrict students from developing proper decision-making skills about their health (Santelli et al., 2018).

In third, a CSE program should teach students knowledge and abilities to make well-informed decisions about their well-being while supporting their physical and emotional health (Lameiras-Fernández et al., 2021). The partnership between universities and healthcare institutions enables the delivery of workshops, health screenings, and confidential counselling services (Millanzi et al., 2022). The promotion of male participation in sexual health discussions helps break down the gender-based stigma that sexual health education targets women exclusively while establishing mutual responsibility in sexual health practices (Smylie et al., 2006).

Strengths and Limitations

This research is one of the few studies examining sexual health education in Kazakhstan. In this country, sexual health topics are not only not often discussed but also sensitive. As such, this study helps highlight the current awareness, beliefs, and practices concerning sexual health among students in this particular society. The findings contribute

to the awareness of how sexual health education is received and its possible effects on students' knowledge of issues like STIs, reproductive health, and other related topics.

This study has notable strengths that make it significant. A key strength inclusion of both males and females to give a more general view of the perceived relevance of sexual health education and sexual health issues among students. Furthermore, interviews with psychologists and health practitioners improve the study by providing expert opinions on the effectiveness and challenges of sexual health education in Kazakhstan. This multi-perspective approach improves the findings by including the viewpoints of other stakeholders who have a role to play in sexual health education. Finally, the focus on adolescents' level of knowledge is particularly important because it focuses on a developmental stage at which sexual health education can influence students' attitudes and behaviors in the long run.

However, the following limitations should be acknowledged to evaluate the research outcomes accurately. A significant limitation is the language of data collection because it has affected the sample selection process since Kazakh-speaking participants were not included. The exclusion of Kazakh-speaking students may have produced an unrepresentative sample that fails to capture the complete student diversity in Kazakhstan. Additionally, the study's small sample size may have reduced the reliability of this study's findings because it restricted the ability to apply results to the wider student populations. The research examined students from two big cities, Almaty and Astana. Although this approach delivers knowledge about urban student populations, it fails to include the experiences of students from rural areas and smaller cities where sexual health education access patterns probably differ substantially.

Recommendations for Future Research

This research will be valuable for researchers studying inclusive education, gender bias, and sexual health knowledge, particularly among adolescents and young adults. The study provides a foundation for conducting additional interviews with students, psychologists, and health practitioners, including an interview protocol with themes derived from the interviews.

Firstly, for future research, it would be beneficial to extend the study to rural areas and various other regions of Kazakhstan. Since this research was conducted in Russian, conducting a similar study in Kazakh would offer a comparative perspective and a deeper understanding of the situation among Kazakh-speaking citizens. The research should extend to evaluate sexual health knowledge among teenagers and older adolescents. The study would show how sexual health knowledge develops through time and reveal possible knowledge deficits in Kazakhstan's adult population regarding sexual health.

Secondly, research should investigate the impact of cultural factors and social norms on sexual health education attitudes within Kazakh and Russian-speaking communities. Analyzing cultural and linguistic variations would deliver a significant understanding of how people accept sexual health education and how to develop more effective educational approaches for different population segments.

Lastly, future research should include longitudinal studies to monitor the development of sexual health knowledge across different age groups. This would allow researchers to understand how the level of education and awareness changes from adolescence to adulthood, and the research would identify important patterns in the development of sexual health knowledge that may guide future approaches to education.

Conclusion

This thesis delivered extensive research about undergraduate students' knowledge of STIs, together with their opinions on implementing sexual health education courses in Kazakhstan. The present study investigated student' understanding of sexual health topics along with their incorrect beliefs about sexual health education while demonstrating how formal education serves as a crucial solution to these problems.

The thesis includes an extensive evaluation of its background and importance, a literature review and methodology, and the main results and their analysis through previous study frameworks. The research combines student perspectives with those of psychologists and health practitioners to create a comprehensive understanding of why and how to implement full sexual health education in higher education institutions.

The research adds significant value to the field by analyzing student knowledge and attitudes and the urgent requirement for organized sexual health education. Incorporating insights from psychologists and health practitioners, it sheds light on the psychological and medical dimensions of sexual health education, emphasizing the importance of evidence-based, stigma-free, and culturally sensitive approaches.

The findings of this study have significant practical implications. They can serve as a foundation for policy development, curriculum design, and institutional initiatives to improve sexual health education in Kazakhstan. Policymakers, university administrators, psychologists, and health practitioners can utilize these insights to develop and implement practical, inclusive, and medically accurate sexual health education programs that address existing knowledge gaps, challenge harmful misconceptions, and foster a more informed student population.

Final Thoughts

My experience writing this thesis taught me about the vital nature and intricate aspects of sexual health education research. The topic initially interested me because scholars have not fully explored it, even though it holds great importance. I discovered the difficulties of researching this sensitive topic when I started my investigation because the stigma surrounding it persisted.

The process of finding interview participants proved to be one of the most difficult obstacles I encountered. The reluctance of students and health practitioners to participate in the study strengthened the exact problem this research aimed to solve regarding the widespread sexual health stigma. The hesitation demonstrated the necessity for more open discussions about this subject.

The research process strengthened my knowledge about sexual health education while showing that dedicated effort is necessary to tackle important yet delicate matters. I want to contact a larger-scale study because this research serves as a foundation to promote educated dialogue while reducing social barriers. The study should stimulate additional academic research together with policy dialogues that work to improve accessible sexual health education without stigma.

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Appendix A: AI Declaration Form

Thesis Title:

Declaration of the Use of Generative AI

I hereby declare that I have read and understood NUGSE's policy concerning appropriate use of AI and composed this work independently (please check one):

☑ with the use of artificial intelligence tools, or

☐ without the use of artificial intelligence tools.

(*If you have used AI tools as defined in the GSE policy document, please complete the rest of this form.*)

During the preparation of this thesis/examination, I used ChatGPT and Grammarly for brainstorming, rephrasing and grammar checking

I also declare that I

☑ am aware of the capabilities and limitations of AI tool(s),

☑ have verified that the content generated by AI systems and adopted by me is factually correct,

☑ am aware that as the author of this thesis I bear full responsibility for the statements and assertions made in it,

☑ have submitted complete and accurate information about my use of AI tools in this work, and

☑ acknowledge that there may be disciplinary consequences if I have not followed NUGSE's guidelines regarding appropriate AI use.

Name: Karina Mukatayeva Signature:

Date: 25.04.2025

Appendix B: Interview Protocol

For Student Participants

Introduction:

My name is Karina Mukatayeva. Thank you for agreeing to participate in this interview. I am doing research on undergraduate awareness of sexually transmitted infections (STIs) and perspectives on introducing sexual health education courses. The aim of this study is to gather insights that could help improve sexual health education in Kazakhstan. No answers are wrong or stupid so please just answer to the best of your ability. This interview will take about 45-60 minutes, and your responses will not be shared with anyone, so will remain confidential. If you are ready, let us begin.

1. General Understanding and Experience with Sexual Health Education:

Can you briefly describe your understanding of sexual health?

Have you ever participated in any formal or informal sexual health education programs? If yes, can you share your experience?

2. Knowledge of STIs:

What sexually transmitted infections are you aware of?

One such infection is Chlamydia. How do you think infections like Chlamydia are transmitted?

Have you heard of Syphilis? What do you know about the symptoms of Syphilis? How might someone recognize if they have it?

Do you think it is possible to have an STI without showing symptoms? If so, which infections do you think this applies to?

If you suspected you had contracted an STI, what steps would you take?

3. Knowledge of HIV:

What do you think is the most common way HIV is transmitted?

Can someone with HIV have sex with a partner who does not have HIV without transmitting the virus? How do you think that could be managed?

4. Understanding of Unintended Pregnancy:

Can you describe some of the methods available to prevent unintended pregnancies?

In your opinion, which contraceptive methods are the most effective, and why?

How do you think an unintended pregnancy could affect a student's academic life?

5. Consent:

How would you define consent in a sexual context?

What situations do you think might prevent someone from giving proper consent?

Are you aware of any support services for individuals who have experienced sexual assault or rape?

6. Experience with Sexual Health Education in School:

Did your school provide any type of sexual health education? If so, what topics were covered?

How effective do you think your school's sexual health education was in preparing you to deal with issues like sexual consent, STIs and unintended pregnancies?

What topics do you wish had been covered in school but were not?

Do you believe it is important to receive sexual health education before attending university? Why or why not?

7. Perspectives on University-Level Sexual Health Education:

Do you think your university has done enough to provide education on sexual health? Why or why not? What topics or themes should be included in such education?

How would you feel about introducing a sexual health education course at the university level?

Do you think an online help line for students around issues of sexual health is needed. Can you give some reason a student might use this if available?

Conclusion:

Thank you so much for sharing your thoughts and experiences. Your insights are incredibly valuable and will help us better understand the needs and gaps in sexual health education. If you have any additional thoughts or suggestions, feel free to share. I may reach out for follow-up, if necessary, but rest assured, your responses will remain confidential. Thanks again for your time.

For Psychologist Participants

Introduction:

My name is Karina Mukatayeva. Thank you for agreeing to participate in this interview. I am doing research on undergraduate awareness of sexually transmitted infections (STIs) and perspectives on introducing sexual health education courses. The aim of this study is to gather insights that could help improve sexual health education in Kazakhstan. No answers are wrong or stupid so please just answer to the best of your ability. This interview will take about 45-60 minutes, and your responses will not be shared with anyone so will remain confidential. If you are ready, let us begin.

1. Introduction and Professional Background:

Can you briefly describe your experience working in university settings?

Do you work with students or young adults on issues related to sexual health?

How often do sexual health-related issues come up in your practice?

2. Knowledge of STIs and Sexual Health:

From a psychological perspective, how can late diagnosed STIs affect a student's mental health?

3. Unintended Pregnancy:

In your experience, how do students typically respond emotionally or psychologically to unintended pregnancies?

What challenges have you observed when counselling students dealing with the consequences of unintended pregnancies?

4. Consent

Do you work with students who have encountered issues related to sexual consent? What aspects of consent are most misunderstood by young adults?

What psychological indicators might suggest that someone has not given full, informed consent in a sexual relationship?

5. Perspectives on Sexual Health Education:

In your opinion, how should universities approach the topics of sexual health and consent in their educational programs? What specific topics or themes should be included?

What role do you think psychology should play in the development of CSE programs?

Conclusion:

Thank you so much for sharing your thoughts and expertise. Your insights are incredibly valuable and will help us better understand the gaps in sexual health education. If you have any further thoughts or ideas, feel free to share them. I may reach out for a follow-up if needed, but rest assured, your responses will remain confidential. Thanks again for your time.

For Health Practitioner Participants

Introduction:

My name is Karina Mukatayeva. Thank you for agreeing to participate in this interview. I am doing research on undergraduate awareness of sexually transmitted infections (STIs) and perspectives on introducing sexual health education courses. The aim of this study is to gather insights that could help improve sexual health education in Kazakhstan. No answers are wrong or stupid so please just answer to the best of your ability. This interview will take about 45-60 minutes, and your responses will not be shared with anyone so will remain confidential. If you are ready, let us begin.

1. Introduction and Professional Background:

Can you describe your experience working with university students on matters related to sexual health?

What are the most common sexual health issues you encounter in your practice?

2. Sexual Health:

Do you believe students are sufficiently aware of the risks posed by asymptomatic STIs?

How often do students come to you with issues stemming from a lack of knowledge about STIs or sexual health and hygiene?

3. Unintended Pregnancy:

From your perspective, how well do students understand the various contraceptive options available to them?

What are the main concerns students express when dealing with unintended pregnancies?

Do males ever come with worries of unintended pregnancies as this affects both the mother and father?

4. Consent:

Do you work with students who have experienced issues related to sexual consent?

Based on your experience, what are some common misconceptions students have about sexual consent? How does this a differ between males and females?

5. Perspectives on Sexual Health Education:

How effective do you think current educational efforts are in preparing students for safe sexual practices?

What improvements would you suggest to better address sexual health and consent issues in university settings?

In your opinion, how should universities approach sexual health education in their curricula? What topics or themes should be included?

What role do you think health workers should play in the development of CSE programs?

Conclusion:

Thank you so much for sharing your thoughts and experiences. Your insights are incredibly valuable and will help us better understand the gaps and needs in sexual health education. If you have any additional thoughts or suggestions, feel free to share. I may follow up, if necessary, but rest assured, your responses will remain confidential. Thanks again for your time.

Appendix C: Recruitment Letters

For Student Participants

Subject: Invitation to Participate in Research on Sexual Health Education in Kazakhstan

Dear Undergraduate Students,

I hope this message finds you well. My name is Karina Mukatayeva, and I am a graduate student at Nazarbayev University conducting research for my thesis on "Undergraduate Awareness of Sexually Transmitted Infections and Perspectives on Introducing Sexual Health Education Courses: Insights from Students, Psychologists, and Health Practitioners." I am reaching out to invite you to participate in this important study.

Purpose of the Study:

The aim of this research is to assess the level of awareness regarding sexually transmitted infections among university students and gather professional opinions from psychologists and health practitioners on the introduction of sexual health education courses in Kazakhstan's university curriculum.

Who Can Participate?

I am seeking undergraduate students who are willing to share their knowledge, opinions, and experiences related to sexual health and sexual health education.

What Will Participation Involve?

Participants will be invited to take part in a one-on-one interview that will last approximately 45-60 minutes. The interview can be conducted in person or virtually, depending on your preference, and can be held in either Russian or English. Your responses will be kept strictly confidential, and no identifying information will be included in the final report. Additionally, during the discussion, participants may gain helpful new insights into sexual health.

Why is Your Participation Important?

By participating in this research, you will contribute to the development of policies and programs related to sexual health education in Kazakhstan. Your input will help inform decisions that may positively impact students' knowledge and health outcomes.

How to Participate:

If you are interested in participating or would like to learn more about the study, please reply to this email or contact me at karina.mukatayeva@nu.edu.kz or 8(777) 434 0735. I will be happy to provide additional details and schedule a convenient time for the interview.

Thank you for considering this opportunity. Your insights are valuable, and I look forward to hearing from you.

Warm regards,

Karina Mukatayeva

GSE Student, Nazarbayev University

For Psychologist/Health Practitioner Participants

Subject: Invitation to Participate in Research on Sexual Health Education in Kazakhstan

Dear Psychologists/Health Practitioners, I hope this message finds you well. My name is Mukatayeva Karina, and I am a graduate student at Nazarbayev University conducting research for my thesis titled "Undergraduate Awareness of Sexually Transmitted Infections and Perspectives on Introducing Sexual Health Education Courses: Insights from Students, Psychologists, and Health Practitioners." I am reaching out to invite you to participate in this significant study.

Purpose of the Study: The aim of this research is to assess the level of awareness regarding sexually transmitted infections among university students and gather professional opinions from psychologists and health practitioners on the introduction of sexual health education courses in Kazakhstan's university curriculum.

Who Can Participate?

I am seeking psychologists/health practitioners who are willing to share their professional knowledge, experiences, and perspectives on sexual health and the potential for implementing sexual health education in higher education settings.

What Will Participation Involve?

You will be invited to take part in a one-on-one interview lasting approximately 45-60 minutes. Interviews can be conducted either in person or virtually, depending on your preference, and can be held in either Russian or English. Your responses will be kept strictly confidential, and no identifying information will be included in the final report. Additionally, this discussion will provide a chance to share insights that could help shape future sexual health education initiatives in Kazakhstan.

Why is Your Participation Important?

Your professional insights are invaluable for informing the development of policies and programs related to sexual health education in Kazakhstan. Your input will directly contribute to improving students' sexual health education, ensuring that young people are better informed about their reproductive health and safety.

How to Participate: If you are interested in participating or would like more details about the study, please reply to this email or contact me directly at karina.mukatayeva@nu.edu.kz or 8(777) 434 0735. I will be happy to provide more information and schedule a convenient time for the interview.

Thank you for considering this opportunity. Your expertise and input are highly appreciated, and I look forward to hearing from you.

Warm regards,

Mukatayeva Karina

GSE Student, Nazarbayev University

Appendix D: Informed Consent Form

For Student Participants

Title of the study: Undergraduate Awareness of Sexually Transmitted Infections and Perspectives on Introducing Sexual Health Education Courses: Insights from Students, Psychologists, and Health Practitioners

DESCRIPTION: You are invited to participate in **a** research study on investigating undergraduate students' awareness of sexually transmitted Infections (STIs) and to gather stakeholder perspectives on the introduction of sexual health education courses in university curricula. The study will also explore professional opinions from psychologists and health practitioners. You will be asked to take part in an audio recorded interview, either in person or virtually. The interview will focus on their knowledge and opinions regarding sexual health, STIs, and sexual health education in university settings.

TIME INVOLVEMENT: 45-60 minutes.

RISKS AND BENEFITS: There are minimal risks involved in this study. The discussion may involve sensitive topics, but participants are free to skip any questions they find uncomfortable. Demographic data will not be collected, and confidentiality will be strictly maintained to the best of my ability. In addition to contributing to the development of policies related to sexual health education in Kazakhstan.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your **participation is voluntary** and you have the **right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate.** You have the right to refuse to answer particular questions. The results of this

research study may be presented at scientific or professional meetings or published in scientific journals.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks, and benefits, contact the master's Thesis Supervisor for this student work, Janet Helmer (janet.helmer@nu.edu.kz).

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the GSE Research IREC subcommittee at gse.irec@nu.edu.kz.

Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that any confidential information will be seen only by the researchers and will not be revealed to anyone else;
- I understand that I am free to withdraw from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Participant Signature: _____ Date:_____

Researcher Signature: _____Date: _____

For Psychologist / Health Practitioner Participants

Title of the study: Undergraduate Awareness of Sexually Transmitted Infections and Perspectives on Introducing Sexual Health Education Courses: Insights from Students, Psychologists, and Health Practitioners

DESCRIPTION: You are invited to participate in a research study focused on exploring undergraduate students' awareness of sexually transmitted infections (STIs) and collecting professional opinions from psychologists and health practitioners regarding the introduction of sexual health education courses in university curricula. As a psychologist or health practitioner, your expertise is crucial for understanding professional perspectives on sexual health, STI prevention, and the potential impact of sexual health education in university settings. You will be asked to take part in an audio-recorded interview, either in person or virtually. The interview will center on your views and professional experiences related to sexual health education and STI awareness in the university environment.

TIME INVOLVEMENT: Your participation will take approximately 45-60 minutes.

RISKS AND BENEFITS: The risks associated with this study are minimal. Discussions may touch on sensitive topics, but you are free to skip any questions that you find uncomfortable. Your insights will contribute to shaping policies regarding sexual health education in Kazakhstan, benefiting the broader academic and health communities.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand **your participation is voluntary** and you have the **right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate.** The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact my Master's Thesis Supervisor for this student work, Janet Helmer (janet.helmer@nu.edu.kz).

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the GSE Research IREC subcommittee at gse.irec@nu.edu.kz. Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that any confidential information will be seen only by the researchers and will not be revealed to anyone else;
- I understand that I am free to withdraw from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Signature: _____ Date: _____

Researcher's signature:_____ Date: _____

Appendix E: Data Analysis Coding Samples

Thems	Interview quotes	Male participant
Understanding of Sexual Health	*The participant described sexual health as "mostly about understanding how to interact with a partner and how to protect yourself and your partner during sexual intercourse. For example, by using contraceptives."*	This demonstrates a narrow definition of sexual health, focusing on individual responsibility rather than broader aspects like emotional well-being or public health initiatives.
Awareness of Sexually Transmitted Infections (STIs)	*The participant identified only two STIs: syphilis and HIV, stating, "That's all I remember."* *When asked about syphilis symptoms, they admitted, "I don't know about the symptoms."*	This highlights a gap in knowledge, emphasizing the need for sexual health education that provides comprehensive information about STIs, their symptoms, and prevention.
Perceptions of Risk and Preventative Actions	*The participant acknowledged that STIs could be asymptomatic: "Yes, quite possible".* *When asked what they would do if they suspected an STI, they responded, "I would go*	Although the participant recognizes risks, their limited knowledge about appropriate actions (e.g., which specialist to visit) reflects gaps in practical sexual health education.

	to a doctor" but showed uncertainty about which specialist to consult.	
Contraceptive Knowledge and Preferences	*The participant viewed condoms as the most effective method, explaining, "They are the cheapest and most accessible".* *They contrasted this with hormonal contraceptives, stating they "need to be taken as a course" and are less convenient.*	This suggests a need for sexual health education on the full range of contraceptive options, including their effectiveness and ease of use, to address misconceptions.
Unintended Pregnancy and Academic Impact	*The participant remarked, "Most likely, the grandparents will take on the child-rearing responsibilities, or the mother will have to drop out of school".* *They also noted gender disparities, stating, "In most cases, the man might leave the woman and deny responsibility."*	These views highlight the social and academic consequences of unintended pregnancies, particularly for women, and the importance of addressing gender dynamics in sexual health education. 'The man might leave the woman and deny responsibility which keeps her from getting an education and puts her at risk of poverty.

Understanding and Barriers to Consent	*The participant defined consent as "When both partners are of the age of consent, they have the right to engage in sex" but failed to address verbal or non-verbal cues.* *They identified barriers such as "pressure from a partner" and "influence of alcohol or drugs" but lacked nuance in recognizing subtler dynamics.*	This underscores the need to include nuanced discussions on consent in sexual health courses to address gaps in understanding.
Views on Sexual Health Education	*The participant suggested, "It would be useful to address such topics in grades 9–11 because that's when teenagers start showing interest".However, regarding university-level courses, they commented, "Not that they are unnecessary, but at the very least, they aren't very essential".*	This indicates a belief that sexual health education is most impactful during adolescence and highlights a perception that university students already have sufficient knowledge, even if this is not the case.

Recommendations for Sexual Health Resources	*The participant supported an online service for students, stating, "If such a program appears, it would definitely be helpful".* *They recommended covering "the most basic topics: contraception, how a normal sexual act should occur under proper conditions, and partner consent."*	This highlights the demand for accessible, foundational sexual health resources tailored to students' needs.

Appendix F: List of Themes According to Interviews

Students

1. Level of sexual health educated person
    a. Women are more knowledgeable in sexual health than men
    b. Women are more likely to view sexual health as holistic, including both physical and emotional well-being
    c. Students have limited and inconsistent knowledge about STIs
    d. Women exhibited greater familiarity with diverse contraceptive methods
    e. Women were perceived to face greater societal and emotional consequences in unplanned pregnancy compared to men
2. Sexual health education at school is gender biased and is not comprehensive, but it is valued
3. Students do not understand the concept of consent. Women are more likely to understand it as a comprehensive topic
4. Students strongly support introducing university-level sexual health education courses. Women want to see them ongoing, while men want to see them as optional because their universities do not offer anything about sexual health
5. Students appreciated the idea of confidential online support services

Health Practitioners

1. Sexual health awareness among students is at a low level
    a. Awareness of STIs is low, and most students do not come to the doctor if they do not have problems. In particular, Men's students said they do not have regular consultations
2. Stigma and financial barriers in contraception
3. Students do not have a comprehensive understanding of sexual consent

4. Early intervention suggested by Health practitioners: They suggested making a program in collaboration with health practitioners to provide accurate data

Psychologists

1. Cultural taboos in sexual health education open discussion
2. Students have lack of foundational knowledge of consent
3. Gender-specific challenges
4. Unplanned pregnancy provided stress and emotional turmoil among students
5. There is a need for Comprehensive sexual education at the school and university levels
6. Psychologists should play a significant role in designing these courses