

**Digitalization of Sex Education: Cross-cultural Analysis of
Post-soviet Countries**

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Abstract	3
1. Introduction	4
2. Background knowledge: Sex education in the Soviet Union	6
3. Cross-cultural analysis of Post-Soviet countries	12
3.1 Education development after the collapse of the Soviet Union	13
3.2 The societal regulations around sex education	15
3.3 Role of NGOs in promoting comprehensive sex education	17
3.4 Religious beliefs against sex education	20
3.5 Teachers' preparation for sex education	23
3.6 Sex education in the digital environment	25
3.6.1 Digital literacy	28
3.7 Conclusion of cross-cultural analysis	29
4. Digitalization of sex education	31
4.1 Digital education	31
4.2 Potential results of digital transformation	32
4.3 Risks of digital transformation	37
5. Methodology: Power of information about sex	39
5.1 Survey Description	40
5.2 Survey Results	42
5.2.1 Unveiling sexual knowledge: Navigating the world of sex education	43
5.2.2 Unlocking the Dialogue: Embracing Perspectives about communication	45
5.2.3 Exploring cultural perspectives: Highlighting varied attitudes towards sex education across nations	47
5.2.4 Preparing for Progress: Assessing Countries' readiness to implementation of sex education	49
5.2.5 Pursuing Comprehensive Sex Education: Insights from Personal Experiences and Opinions	50
5.3 Survey findings	52
6. Discussion	54
7. Conclusion	56
7.1 Limitations and future research	58
References	59

Abstract

A crucial part of contemporary education is sex education, which may assist people of all ages to make decisions about their relationships and sexual health. As individuals become increasingly aware of the importance of sex education in promoting healthy sexual activity, preventing unwanted pregnancies, and combating sexually transmitted infections, this subject is becoming more popular. Moreover, the role of sex education becomes integrative approach since sex and sexuality can define overall well being and life satisfaction. Yet, the topic of sex education is still largely neglected in post-Soviet countries, with few schools and communities giving it much consideration. While traditional sex education has long existed in post-Soviet nations, its scope and accessibility have frequently been constrained. Several obstacles have prevented conventional forms of sex education, such as a lack of resources and cultural taboos around sex. Even with specific difficulties, challenges, and risks, the proper steps and rules can help to provide comprehensive sex education.

This paper aims to explore the role of new media in the context of sex education, which can be made more approachable, inclusive, and interesting for people of all ages by utilizing the advantages of technology. It examines the current situation of sex education in post-Soviet countries and the issues that need to be resolved in order to make improvements. By leveraging the benefits of technology, possibilities to improve access to accurate and reliable information will be discussed, ultimately promoting a healthier and safer society.

The cross-cultural analysis will be used as the primary research method to understand the similarities and differences between post-Soviet countries and communities' cultures toward sex education. The primary research method will be analyzed along with a survey about personal experiences conducted among individuals from three countries: Georgia, Kazakhstan, and Lithuania. The paper's research question is: Why is it necessary to adapt sex education to the digital environment? Sub-questions: 1. How does social-historical background affect the level of sex education? 2. How does information about sex spread?

To overcome the drawbacks and difficulties associated with conventional approaches, the paper suggests that post-Soviet nations must adapt sex education to the digital environment. For people

of all ages, using new media can make sex education more approachable, inclusive, and engaging. By utilizing technology, it is possible to increase access to accurate and trustworthy information, thereby fostering a safer and healthier society. In order to effectively reach and educate people in post-Soviet nations, the research highlights the necessity for comprehensive sex education programs that address cultural taboos, allocate sufficient resources, and engage with digital platforms.

Key Words: Digitalization, Sex education, Sexual health, Post-Soviet countries, Cross-cultural analyze

1. Introduction

Adolescence includes a significant amount of time spent exploring sex and sexual relationships. Therefore, sex education should be a vital component of addressing severe public health issues and fostering the emotional growth of adolescents. For example, proper sex education lowers maternal and infant mortality by preventing unwanted, early, and risky pregnancies and sexually transmitted diseases, but in many parts of the world, unmarried teenagers are barred from informational sessions and sexual health services because following unrealistic and conservative religious and sociocultural norms, they are not supposed to engage in sexual activity (Osterhoff, 2017).

The purpose of sex education is to inform the appropriate age groups about the significance and effects of sex. Students can make informed decisions about sexual activity and minimize risks by having the correct information. At the same time, schools are crucial in passing down historical memories, myths, and symbols. The cultural information that schools teach is essential in forming identity and establishing membership in a particular generation (Wanner, 1995). Sex education should be taught at schools to give students a thorough understanding of sexual health. The education system must include sex education since it imparts information on relationships, sexuality, and sex.

In order to implement sex education in schools, it is first essential to comprehend the cultural and historical context of sex education in post-Soviet countries. Many of these nations have a long history of rigid social norms surrounding relationships and sex that are frequently influenced by fundamentalist religious beliefs (Stepanova, 2022). As a result, there is now a culture of shame and silence surrounding sex, and many people find it uncomfortable to discuss the subject openly. In the Soviet Union, a topic about sex and sexuality was mostly pushed into private conversations because it was taboo in the official public discourse. Moreover, widely practiced methods of contraception persisted in privatized public discourse, fostering the development of sex as a subject that could not be discussed openly (Zdravomyslova, 2001). The development of sex education programs was further hampered by the economic and social instability brought on by the fall of the Soviet Union in 1991.

Online sex education poses risks because of the possibility of inaccurate information and the scarcity of dependable sources. Without adequate regulation and quality control, false or deceptive information on relationships and sexual health can spread, resulting in faulty knowledge and potentially hazardous behaviors. Online platforms may also expose users, especially kids, to offensive or explicit content, which can have detrimental psychological and emotional impacts (Joodaki, 2020). The digitalization of sex education in post-Soviet nations is not without potential risks. The accuracy and dependability of the information available online are the major worries because not all sources may be reliable or accurate. Before making decisions about their sexual health, people must look for reliable sources and check the information. Implementing digital sex education may also be hampered by political and cultural obstacles, which must be removed to guarantee its efficacy and acceptance. Therefore, it is crucial that organizations with good reputations and expertise offer digital sex education and that the proper security measures are implemented.

At the same time, digitalizing sex education is a developing trend that aims to broaden access to data and materials concerning sexual wellness and health. People can access accurate and current information on topics like anatomy, reproductive health, contraception, STIs, and consent through various digital platforms like websites, apps, social media, and online forums (Brayboy, 2018). Digital sex education also provides a safe and anonymous space for individuals to ask questions, seek advice, and share experiences with others with similar concerns. Online

resources can be particularly useful for those who may not have access to comprehensive sex education in their schools or communities or may feel uncomfortable discussing sensitive topics with a healthcare provider or trusted adult.

Given the privacy and anonymity, the digital environment provides, particularly for young people, digital media interventions for sexual education present a viable way ahead, both via the Internet and mobile phones. Due to their greater adaptability to a range of learning needs and benefits than traditional, face-to-face interventions, they provide plenty of opportunities for customization and interactivity and a safe, controlled, and comfortable environment for transmitting sexual health knowledge and skills. Digital interventions in school, both inside and outside the classroom, offer tremendous opportunities (Lameiras-Fernandez, 2021).

Digitalization of sex education in post-Soviet countries presents both opportunities and challenges. While it can potentially improve access to information about sexual health and relationships, it also requires careful consideration of the cultural, political, and technological factors that impact its implementation. Through further research and analysis, the paper can explore a deeper understanding of why digitalization can effectively enhance sex education in post-Soviet countries.

2. Background knowledge: Sex education in the Soviet Union

There is a famous phrase uttered by a Soviet correspondent during the Leningrad-Boston tele-bridge in 1986: "There is no sex in the USSR." The absurdity of these words clearly shows the hypocritical morality of Soviet society and the anti-sexual nature of its culture. Usually, sex was referred to as a love relationship between a man and a woman. Intimate relationships were non accepted to talk publicly in the USSR, and the innocence of the "builder of communism" was mythologized (Wierzbicka, 2020). So was there sex in the Soviet Union? Of course, there was, and this is why "The Twelve Sexual Commandments of the Revolutionary Proletariat" was

published in 1924. It described the norms and rules that the citizens of the Soviet Union had to obey. Commandments were as follows:

- 1: Sexual life among the proletariat should not begin at an early age.
 - 2: It is necessary to restrain sexual needs before marriage. Marriage is allowed during social and biological maturity, aged 20-25.
 - 3: Sexual intercourse is only the final part of multifaceted sympathies and addictions to the object of love.
 - 4: Sexual intercourse results from deep and complex feelings between a couple at a given moment.
 - 5: Sexual intercourse should not be repeated often.
 - 6: Sexual partners should not be changed too frequently
 - 7: Sexual relationships must be monogamous.
 - 8: Every sexual intercourse act should be committed with the awareness that it might lead to the birth of a child
 - 9: Sexual partners should be selected based on class
 - 10: There should be no Jealousy
 - 11: There should be no sexual perversions
 - 12: In the interest of the revolution, the proletariat must intervene in the sex lives of others
- (Zalkind, 1924)

Zalkin, the author of the above-mentioned "The Twelve Sexual Commandments of the Revolutionary Proletariat " wrote the first Soviet sex education manual. It was published in 1948 and named "Healthy Marriage and Healthy Family." According to this name, it's easy to assume that the system wanted to strengthen the institution of the family. The primary purpose of this manual seemed to reduce divorce rates, reduce the prevalence of venereal diseases, among other undesirable social phenomena that they called depravity, like prostitution (Gorfin, 1940). Eliminating these upcoming consequences was why sex education started in the Soviet Union. Soviet teenagers should be led to have more constrained sexual views, be more enthusiastic about marriage and family, and be more concerned with the collective's and society's interests.

Implementing communist morality and ideology was what the very first manual was propagandizing.

During the early years of the Soviet Union, Makarenko was a well-known progressive educator, and his numerous books continue to impact educators even today. Makarenko was well-known as a person who forbade the teaching of sex in schools and substituted a "hygiene education" program that associated sex with morality and chastity. He was the author of "Lectures on Raising Children" (Volikova, 2014). For decades, the Soviet Union's sex education strategy was based on this paper, which contributed to developing the framework for exploiting sex to further state objectives, including family stability, public health, and civic responsibility (Filonov, 1994). Makarenko contends that only at a doctor's office and only in the context of cleanliness should sexual activity be discussed. In the Soviet Union, a pervasive cultural movement associated sex with hygiene. In place of organized sex education, Soviet authorities did permit instruction on cleanliness and morals. Makarenko defined sex education in his lectures by comparing sex to a type of animal drive that had to be subdued. Because many socialized Soviet citizens did not have a healthy and worthy relationship with sex, Makarenko believed that the animal instinct of sex must be addressed appropriately. This has contributed to a family disruption, which is of utmost importance to Soviet citizens (Makarenko, 1949). In fact, concepts and behaviors related to sexuality and hygiene transcend geographical or historical boundaries, such as the Soviet Union. Both Michel Foucault and Anton Makarenko present viewpoints with worldwide applicability. Their examination of power relationships, disciplinary practices, and body regulation touches on issues that are relevant to cultures everywhere. Power has an impact on sexuality and personal hygiene across all countries and cultures. Instead, these ideas are widely accepted and have had an international impact on society norms and practices (Foucault, 1976). Worth to mention that despite having different philosophical perspectives, Michel Foucault and Anton Makarenko have certain similarities in their views on sexuality and hygiene. Both of them acknowledged the crucial position of power in these areas. In his educational community, Makarenko stressed the power of communal discipline to maintain cleanliness and order, whereas Foucault investigated the power dynamics present in discourses and practices related to hygiene and sexuality. Their efforts have also had a long-lasting influence on educational theory.

Therefore having different viewpoints, Makarenko and Foucault offer important insights into the intricate relationships between power, hygiene and sexuality.

Between the early 1950s and the early 1960s, when the Soviet Union was under the Khrushchev regime, significant changes started, and the position of official Soviets was changing gradually. Opening the Soviet Union to the outside world was more feasible. One process during de-Stalinization in the Soviet Union increased media freedom of information (Cohn, 2009). The Soviet authorities began publishing more sex education guides, and abortion was decriminalized in 1955 due to this freedom, which also extended to issues relating to sexuality, gender, and the family. However, the goal of Soviet sex education didn't change despite these adjustments during the early years of the Khrushchev era, and the first published manual remained the primary source of sex education with slight changes (Alexander, 2018).

Afterward, the government decided to launch a campaign for sex education. It published several manuals about topics related to sex. Manuals discouraged sexual activities among young people in the Soviet Union and increased their knowledge of reproductive health issues, abortion, and basic human physiology (Sosio, 2021). Also, these books contained homophobic phrases that referred to homosexuality as a perversion. Since the attitude of Soviet youth toward sex was influenced by the general lack of discussion of sex topics, manuals seemed to have tremendous affection on people's mindsets. The first brochure published during the Khrushov era was made by Ukrainian doctor A.G. Stankov and published in 1958 and named "Sex Life and the Family" They were followed by a manual called "Questions of Sex Education," published in 1959 (Stankov, 1959).

In contrast to Stankov's Sex Life and Family, which emphasized the value of educating children about venereal diseases and human physiology, Atarov's book changed from this perspective to place a premium on moral education. The brochure was an instrument for creating a physiological influence on mindset and had more life-guiding examples. These examples stated that everyday life was easier to proceed and believe, especially if it's recommended by trustworthy people or authorities. For instance: Pre-marital relationships and harmful awakenings were widespread among young people working in cafes or restaurants. Atarov recommended

firms only employ adults in such a position. Such a sex education strategy was linked with the requirements of communist morality, which Soviet leaders declared to be the main moral compass for Soviet citizens (Rustam, 2017).

In 1960 new brochures were released about sexual education named "The Youth Becomes a Man" and "The Girl Becomes a Woman." Such publications stood in stark contrast to the Soviet sex education manuals that had previously been published. They dared to start a somewhat helpful discussion about sex with young readers. The ideological foundations present in earlier Soviet sex education books were all but changed in these new publications, and now it was used as anti-western propaganda (Rustam, 2017). Especially interesting topics were gay men, often called pedophiles who seduce young boys. Homosexuality was sometimes referred as sodomy and it introduced as one of the ideological influences of the West and was framed as the result of unemployment in the West, lack of housing, or unaffordability. Discussions about this topic, which was presented as both a crime and a disease, were quite intense, and recommendations were given to parents to protect their boys (Englestein, 1995). However, lesbianism was not discussed in the manual written for girls, which denied the reality of female homosexuality.

Brezhnev-era sex guides emphasized raising young people's knowledge of the physiological components of their physical development. Some main ideas were increasingly broadcast into Soviet people's homes in the late 1960s and early 1970s due to a rise in the number of television and radio owners. Significant changes in official policy on sex and sexuality, particularly in STI and STD control, were a defining feature of the Brezhnev era. Criminal law was chosen as the primary method for controlling the spread of infection as the definition of a "malicious" VD transmitter dramatically broadened. Meanwhile, sex education materials promoted the notion that VD was disseminated solely by participation in immoral or antisocial acts (Hearne, 2022).

The Soviet Union had many transformations in the 1980s. Midway through the 1980s, Gorbachev's glasnost sped up the pace of change, paving the door for increased media attention. In the Soviet Union, the term "glasnost" was used to describe enhanced transparency and openness in government organizations and operations. That time the international media included stories about prostitution, child abuse, rape, sexual assault, and group sex. Since access to international media became more available these kinds of stories started to be sensationalized

and became typical in Soviet media. Many Soviet residents were shocked since this was the first time they had heard of such things (Berry, 1995). This sudden, abrupt entry into sex culture and media resulted in a clear moral division between the "left" and "right," which prompted the politicization of the sex issue. Many on the left considered glasnost an opportunity to spread knowledge and alter how sex was perceived, and they quickly turned into proponents of sex education. Also, groups of people supported the pro-sex movement (Berry, 1995).

The years without a proper state-run sex education strategy have finally started to have a significant detrimental impact. Several people realized that the Soviet stance on sex led to odd perceptions about sex (Stern, 1980). By the 1980s, under Gorbachev's regime, glasnost had helped to enable the conversation about reform. It seemed that some Soviet residents' views on sex might have been slightly distorted by the nearly three decades of no-sex education. Public opinion welcomed changes in the perspective of opening taboo topics, although views on sex education varied widely nationwide. Brezhnev's campaign was attempted to be continued by the Ministry of Education but with the phrase "a few minutes of pleasure might result in death". The Ministry of Public Health created the strategy with input from parents, educators, and medical professionals. Teenagers' frequent worries were addressed to enable them to discuss love and intimacy, and their parents were given the option of attending specific courses to assist them better to gain knowledge properly. On the one hand, local officials and educators frequently attempted to block this plan in the hope that sexual "innocence" would shield children from unwanted encounters (Williams, 1994).

In the 1980s, glasnost created a forum for open discussion on improvements to the Soviet sex education system. Even though a sex education program was never implemented, it appears that many Soviet residents were amenable to the concept (Lipton, 2014). In order to provide sexual education in schools and universities and to instruct parents and instructors on how to manage these dialogues, the Soviet "Family Planning" group was first established in 1991. Scientists created a specific curriculum for Russian schools, but the public and religious officials immediately stopped them (Dmitriyeva, 2018). On the other hand, the authorities were also unable to offer sufficient sex education programs due to a lack of qualified instructors and a refusal to reject "puritanical views towards sex" (Williams, 1994).

In 1991, a series of events led up to the Soviet Union's collapse, and from that time, there are 15 sovereign nations in place of the old superpower. The countries faced the most significant reformation period; they had to overcome the most complex processes while finding their path. Finally, the thought that sex education might be needed entered some Soviet people's heads, even though most of them had extreme thoughts of equating sex education with amorality and Western ideas, which were not generally embraced. Therefore, the frequently used ironic idiom "There is no sex in the USSR" refers to the antisemitism and prejudice of the Soviet society as well as the taboos against discussing sexuality in public. Culturally, reversing the influence of years of communism required much time and work. It became difficult to change the mindset formed over the years by the Soviet Union and moreover, this was not on the priority list due to economic hardship.

3. Cross-cultural analysis of Post-Soviet countries

Every human society is unique and has its own sociocultural system. Language, thoughts, convictions, traditions, taboos, codes, organizations, apparatuses, methods, creations of art, rituals, ceremonies, and symbols all makeup culture (Creanaza, 2017).

This part of the paper will describe cross-cultural analysis which is an important approach for studying the similarities and differences between different cultures. In cross-cultural studies, various cultures are systematically compared in an effort to comprehend how cultural context affects human behavior variations (Papayiannis, 1977). The main goal of this research strategy is to determine whether or not our understanding of people and their behaviors from one culture applies to those from another.

The implementation and content of sex education vary greatly between nations and frequently take into account cultural, political, and religious considerations. The paper will compare and contrast sex education after the collapse of the Soviet Union in the context of Georgia, Kazakhstan, and Lithuania. These nations provide an interesting comparison of sex education policies and practices because they are spread out across different parts of the Soviet union, and

have different histories, cultural norms, and political systems. This analysis can be a great opportunity to learn more about the difficulties and chances for promoting comprehensive sex education globally by comparing and contrasting the sex education systems in these nations.

3.1 Education development after the collapse of the Soviet Union

After the collapse of the Soviet Union, Georgia, Kazakhstan, and Lithuania underwent significant educational changes which were aimed at promoting greater autonomy, decentralization, and a more student-centered approach to learning. They also sought to promote practical skills and entrepreneurship and to create greater opportunities for private education and investment in higher education, however, in each country this process took a different amount of time.

Georgia experienced two violent ethnic conflicts in 1991–1992, along with the economic and political hardships that all post-Soviet nations experienced. The nation's educational system has struggled to give its citizens a high-quality education as a result of these events (Chakhaia & Bregvadze, 2018). The Georgian educational system was totally corrupted with no access to quality education during the post-Soviet era. As a result, thousands of post-graduate students graduated with degrees but lacked actual knowledge in many fields (Todria, 2016). These problems are likely to have had an impact on sex education as well, and access to high-quality instruction in this area has probably been constrained. The corruption element changed only after the Rose Revolution in 2004 when significant changes started to take place (Bryant & Zhvania, 2008). These changes occurred in the rules governing admission to colleges and universities with the introduction of state educational grants. At the same time, the government started to open up the educational market to competition from private institutions rather than maintaining a monopoly on it, however, these remarkable changes happened earlier in Kazakhstan and even earlier in Lithuania.

During the early development of education in the independent Republic of Kazakhstan, the government's primary goal was to establish a network of secondary and higher education institutions that could meet the needs of the market economy and various regions of the country.

In the period between 1995-1998, the Kazakhstan system of higher education was modernized through the conceptual definition of development, new normative legal statuses, and the acceptance of educational standards. Additionally, the private sector of education began to actively develop. The period of 1999-2000 marked a significant change in the principles of entering higher education institutions, with the introduction of state educational grants and credits on a competitive basis. The government also moved away from a monopoly on education and began to allow private institutions to compete on equal terms (Kzykeyeva, 2011).

What is worth mentioning is significant changes in the credit system of training, which encouraged students to work independently and actively, were adopted in place of the traditional system of organization for the educational process. It allowed students and postgraduates to choose their own educational paths, was mobile, gave them a great deal of academic freedom, and promoted the acceptance of education-related documents in the global educational community (Kzykeyeva, 2011).

In Lithuania with the adoption of the first regulatory frameworks in 1991, the system had chronic underfunding, low wages, high inflation, and declining quality at the same time, despite maintaining the characteristics of elite higher education. In 1993, 84% was the number of gross enrollment ratio in Lithuania which shows the proportion of all enrolment, regardless of age, to the population in the age bracket that is considered to formally correspond to the education level displayed. The same data in Georgia and Kazakhstan was 78% and 95% respectively. A newly established Department for Science and Higher Education of the Republic of Lithuania and the government of Lithuania were tasked with overseeing higher education institutions. Access to Western European higher education markets and increased academic mobility as a result of EU membership also played a role. Legislative changes that were made gradually led to changes (Leišyte, 2018).

Following the dissolution of the Soviet Union, significant educational reforms were implemented in Georgia, Kazakhstan, and Lithuania with the goal of fostering greater autonomy, decentralization, and a more student-centered approach to learning. However, the time it took for change to occur varied depending on the nation. Due to corruption, political unrest, and other adverse conditions, Georgia's educational system had difficulty. To meet the demands of the

market economy, Kazakhstan's government concentrated on creating a network of higher education institutions and implemented a training credit system. The adoption of regulatory frameworks in Lithuania changed how higher education institutions were supervised and increased access to the Western European higher education market.

3.2 The societal regulations around sex education

There is a particularly strong taboo against sex education in post-Soviet nations. Many people in these nations continue to view sex education as a Western import that is unwelcome or inappropriate in their own cultural context, despite decades of social and political change since the fall of the Soviet Union. There are many reasons for this reluctance to participate in sex education, including a lack of public awareness of sexual health and ongoing political tensions.

In Georgia, the book "Funny conversations about Hygiene, sex, and a healthy lifestyle" was published by the "Diogene" publishing house in 1998 and 2003, which both discuss how sex education is taboo among children. The majority of people had a very negative response to this book. When the book was republished in 2003, the sign for the "Diogene" publishing house was burnt as a form of protest. There were attempts to raid the stand and break into the publishing house's office. Outraged by the book's publication, some citizens publicly burned it (Tarkhnishvili, 2021). Even though Psychologists were trying to explain that sex education is one of the most important ways to prevent early marriage, unwanted pregnancy, sexually transmitted diseases, and violent relationships, it had no real effect and negativity was still spreading in a radical form. There are still many myths and misperceptions about sex education in society; lack of awareness, lack of knowledge, religious or other, the activity of organizations opposed to this issue contributes to the creation of a negative attitude towards sex education; since 2014, the "Information Medical-Psychological Support Center" has been involved in the revision process of school subjects (Gorgodze, 2021).

It is clear that one of the contributing factors to the worsening of sexual and reproductive issues in Kazakhstan is the absence of sex education in the educational system and the family institution (Kabatova, 2018). Based on the fact that talking about sex is shameful in Kazakhstan,

sex education considers as an inappropriate subject. However, sexual ignorance is what has unfavorable effects. Due to unprotected sexual activity, early pregnancy at a young age can result in a variety of illnesses and infections, issues with the unborn child's health due to pregnancy at an inappropriate age when reproductive health is still developing, an increase in abortions, issues with education, and even an unhappy life (Nurtaza,2021). The fact that sex education is a taboo in society, it makes the nation's sexual and reproductive health problems worse. Kazakhstan views sex education as inappropriate due to cultural norms that place shame and stigma around discussing sex.

Many people in the country believe that sex education is the reason girls start their sex life earlier, however comprehensive sex education that is timely and age-appropriate does not lead to teenagers having sex earlier. In fact, test runs of The United Nations Population Fund developed sex education courses in Kazakhstan which have revealed that students generally delay their first sexual outing. These students have more information about STDs, are able to resist peer pressure to have inappropriate sex, and are empowered to cultivate positive behaviors like upholding respectful relationships and negotiating safe sex. This statistic are similar for Georgia and Lithuania as well (UNFA, 2020). However, government organizations have begun to make cautious progress in putting sex education programs in schools. The Ministry of Health published a new public health code that outlined a child's right to sex education and required parents to vaccinate their children. However, the code was unacceptable for some people since it would normalize sex, after that there was a petition that circulated online against the code that received 32,000 signatures. The ministry responded by removing the section on sex education from the new healthcare code (Shabdanova, 2020).

The majority of textbooks in Lithuania contained information that was demonstrably false in terms of science. It is evident that the content of evaluated biology textbooks does not align with the rules and guidelines of the health and sexuality education program intended for preparing individuals for family life, as per the textbook evaluation.. The majority of textbooks present human reproduction in the broader context of animal reproduction and do not clearly distinguish between human and animal reproduction. For 12–13-year-old teenagers, there is only one textbook that discusses human conception in relation to parenthood and family. Most discussions of pregnancy are negative. Sexual puberty is seen as a problem (Obelenienė, 2017).

Biology classes frequently only mention sexual education in an inaccurate and extremely poorly way, some individuals in Lithuania have incorrect ideas about what sex education entails. Some people think that educating young people about safe sex and contraception will encourage promiscuity, while others think that sex education is unnecessary. Lithuania experienced protests in opposition to a proposed sex education program. The purpose of this program was to educate young people about gender equality, sexual health, and consent. Concerns that the program was too explicit and went against traditional Lithuanian values fueled the protests (Jegelevicius, 2013). In accordance with the law, sex education must also be age-appropriate and must promote "healthy relationships, gender equality, and prevention of violence and sexual abuse." Critics contend that the law does not go far enough to guarantee that young people receive thorough sex education, though. They draw attention to the law's lack of funding for sex education programs and requirements for teacher preparation (Žiugždienė, 2016).

Sex education is frequently met with resistance, discomfort, and even opposition in conservative societies and they are the one who makes it taboo. This is due to the fact that traditional sexual values and beliefs are frequently prioritized in conservative societies, which can conflict with more contemporary, progressive views on sex education. Due to its assumed potential to encourage 'promiscuity' or other sexual behaviors normatively considered to be 'inappropriate', sex education is frequently perceived in these societies as inappropriate itself, immoral, or even harmful to young people. In order to advance healthy relationships, gender equality, and the prevention of sexual abuse and violence, it is critical to dispel myths and misconceptions about sex education. The lack of knowledge, lack of awareness, religious convictions, and organizational opposition have all contributed to the unfavorable attitude toward sex education. Despite efforts by health professionals and some advancements made by governmental agencies, the taboo still exists and governments do not take responsibility to provide comprehensive sex education.

3.3 Role of NGOs in promoting comprehensive sex education

The global promotion of comprehensive sex education is greatly assisted by non-governmental organizations (NGOs). Through education on contraception, consent, and healthy relationships, NGOs work to ensure that people have access to accurate and age-appropriate information about sexual and reproductive health. Additionally, they promote comprehensive sex education and people's rights to make educated decisions about their sexual and reproductive health through policies and programs.

Several NGOs have been working in Georgia to give young people proper knowledge about sex education. Since 2001, the Georgian Center for Psychosocial and Medical Rehabilitation of Torture Victims (GCRT) has advocated for the rights and advancement of sexual and reproductive health. The organization offers a variety of services, such as advocacy and counseling, and trains teachers and healthcare professionals on topics related to sex education. Since 1998, "Tanadgoma", another NGO, has worked to advance reproductive rights and health. Tanadgoma provides youth with educational opportunities and has been crucial in spreading awareness of the need for thorough sex education in Georgia (Gagniashvili, 2018).

Some representatives of non-governmental organizations summarized issues that came up when putting together a small project related to sex education for students in the report on the issue of early marriage. The project was named "Aesthetic Lifestyle for Young People" and should have been presented with a therapist, and a gynecologist. However, when it came to permission from the headmaster of schools to show students a video about sex education, most of them rejected it with the explanation that most parents refused to let their kids take part in the project.

Non-governmental organizations' attempts have mostly reacted negatively in rural areas (Gvasalia, 2019) which in most cases leads to the spread of negative reputation for NGOs.

Due to the conservative attitudes and religious values of many Kazakhs, NGOs have a harder time promoting sex education in Kazakhstan as the same happened in Georgia. But some groups have been working to advance sex education in the nation. For instance, since 2000, the Reproductive Health Alliance of Kazakhstan has been working to advance the nation's sexual and reproductive health. The group offers educational materials to children and training for healthcare professionals. The Central Asian Association of People Living with HIV is a different organization that has been working to educate vulnerable populations about the importance of

comprehensive sex education (Sultan, 2020). As in Georgia, in Kazakhstan, NGOs and private initiatives by individuals can be seen as one of the main responsible stakeholders for providing comprehensive sex education. They provide training for volunteers, meetings in schools, and workshops on HIV prevention and teen sexual and reproductive health.

Since pre-marital sex is widely stigmatized in Kazakhstan despite the fact that it is not uncommon, the effects of unintended pregnancy can be disastrous. New young mothers are frequently accused of leaving their infants in highway restrooms or trash cans by the side of the road. Since minors are only permitted to access medical services when accompanied by a parent, many of these babies are born without medical assistance (UNFPA EECA, 2020). One of the non-governmental organizations in Kazakhstan works on the above-mentioned problem: Y-PEER is a peer education network for young people, which is growing in Kazakhstan and offers sex and sexuality education. The primary goal of the Y-PEER network, which was established in Kazakhstan in 2007, is to develop and disseminate peer-to-peer education in the area of SRH and HIV prevention. Additionally, the Kazakhstan Association for Sexual and Reproductive Health and The International Professional Practices Framework member association educates children, parents, and teachers about sexual and reproductive health and research. It operates a hotline for teens to discuss family planning and pregnancy-related issues (Ketting & Ivanova, 2018). Undoubtedly, these programs have their effect however they are irregular and do not apply to all of the youth society. Therefore, experts insist that schools need to offer a special course that includes comprehensive information (Sultan, 2020).

Several NGOs have also been promoting sex education in Lithuania. The Lithuanian Centre for Human Rights is one such group that has promoted thorough sex education since 1994. The organization has been actively engaged in policy advocacy and has been working with schools to develop sex education curricula and educational materials. Since 1998, the Lithuanian Society of Sexual Health, another NGO, has offered sex education services. The organization provides young people with educational materials as well as training for educators and healthcare professionals.

In Lithuania, there are some preventive sexual education programs separate from the "Preparation for Family Life and Sexual Education Programme." Instead of official state

practitioners, expert-volunteers are currently making the biggest effort to educate young people. However, due to financial constraints, these types of lectures cannot be held frequently, meaning that fewer people can benefit from them. Furthermore, Lithuania only has some known Peer Education teachers who receives further education and training with the goal of sustaining positive behavior change among the group's participants (Cerniauskiene, 2015). In 2016, 60 non-governmental organizations in Lithuania urged the Minister of Education to introduce science-based sex education in schools, while discussing the actions and actual steps taken by these organizations. The upcoming Sexuality Education and Preparation for Family Life program, which does not even mention sex education and instead advocates abstinence based on religious principles, drew criticism from organizations. NGOs expressed their concern over the rising rates of STIs and teenage pregnancies in Lithuania, which are both higher than those of the majority of other European nations (HRMI, 2016).

In summary, NGOs in Georgia, Lithuania, and Kazakhstan actively promote comprehensive sex education. They have been able to advocate for policy change, educate young people, and raise awareness through their initiatives. In order to address the issues and gaps in sex education in these countries, their programs and activities have been essential. To make sure that all young people can access comprehensive sex education, more assistance and cooperation with governments and other stakeholders are still required.

3.4 Religious beliefs against sex education

Officially, the Soviet Union was an atheist nation; the state actively discouraged religion and did not support it. This resulted from the Marxist-Leninist ideology that guided the Soviet government and saw religion as a tool of the ruling class used to subjugate the working class. The Soviet Union's history as a member of the Russian Orthodox Church, which was perceived as a repressive force that supported the czarist regime, also had an impact on the country. Religious leaders and followers faced persecution, incarceration, and even execution while living under Soviet rule, which frequently suppressed religious institutions and practices. Churches and other places of worship were shut down, and religious instruction was outlawed. The Soviet

Union's government aimed to displace religion with a new ideology founded on atheistic and socialist ideals (Childers, 2012).

In many areas of the former Soviet Union, religion has seen a resurgence since the fall of the Soviet Union in 1991. Although levels of religiosity differ greatly across different regions and age groups, the majority of people of former Soviet states today identify as members of religious faith. Religion has remained a significant component of the cultural and social fabric of many post-Soviet societies despite the legacy of repression left by the Soviet Union (Pankhurst, 2012). It also continues to influence attitudes toward a variety of issues, such as sex education.

Even though the constitution of Georgia prohibits religious persecution and recognizes equality for all regardless of religion, the majority of people in Georgia are members of the Georgian Orthodox Church, which supports conservative ideas about sexuality and gender roles (Chedia, 2022). Discussions about sex education are therefore frequently seen as taboo and are not generally endorsed by the church or conservative social groups. Even the slightest suggestion that Georgia's Ministry of Education might talk to children about sexuality in schools has caused a great deal of tension among the public. Therefore, the ministry has not yet tried to make sex education mandatory in Georgia. The Georgian Ministry of Education and Science announced its intention to introduce the "Society and I" subject for the 2016–2017 academic year as early as the summer of 2015. The topic was intended to increase youth public awareness. In class, lessons on gender, tolerance, a healthy lifestyle, and personal hygiene would be given to the students. Nevertheless, the project was shelved; clerics were the first to oppose it, then prominent members of society (Machavariani, 2016).

A group of people who were against this subject in classes wrote the “Warning Bells” petition stating that the European Union had given the Ministry of Education of Georgia permission to launch a significant offensive subject. “The new required subjects, “Society and Me” and “My Georgia”, aim to degrade and pervert the religious and national consciousness of children aged 7 to 13 and corrupt and poison them with obscene and horrifying sodomite values”(Nonikashvili, 2018) stated petition. Famous directors, singers, composers, athletes, scientists, and members of the business elite all added their signatures to the letter.

Although the notion that religion and churches have an influence on political decision-making is not new, questions about the role of religious actors in politics have been disregarded for a while due to the increased academic focus on the processes of societal modernization and secularization (Knill,2014). As a response, the minister of education at that time Tamar Sanikidze said that the public had been misinformed and that the textbook's final draft had not yet been created, and that the textbook would be made after consulting the Patriarchate, the main religious stakeholder. Eventually, following the protests, terms like “Sex”, “gender” and “minority” were taken out of the draft of the subject “Society and Me” curriculum that was made available on the Ministry's official website (Machavariani, 2016).

The influence of religion, particularly Islam, on attitudes toward sex education in Kazakhstan, is significant. Sex education is opposed to Islamic values and is seen as a threat to traditional gender roles and family structures by many conservative religious leaders and groups. Kazakhstan weaponizes Muslim identity to promote a heteronormative stereotype in educational textbooks (Mingisheva, 2012). To look at the bigger picture of what norms of hegemonic femininity and masculinity are promoted in schools rather than just the policies that directly deal with sex education, it will be clear why the Kazakhstani government has not yet included comprehensive sex education in its school curriculum. Even though there is no national policy on sex education, school students are still exposed to a variety of materials that contain specific messages about women's bodily autonomy, gender roles, and femininity and masculinity (Arystanbek, 2021).

Article 43 of the Lithuanian Constitution states unequivocally that "There shall be no state religion in Lithuania," however "Constitutions alone are generally inaccurate and misleading guides to political reality" (Minkenberg, 2003). The majority of people in Lithuania are Catholic, and historically, public policies regarding sexuality and reproductive health have been influenced by religious values. Due to the Catholic Church's historical opposition to comprehensive sex education and contraception, young people have limited access to resources and services.

Country repressions and antireligious politics plagued the Catholic Church in Lithuania while it was under Soviet occupation. The totalitarian regime repressed people and institutions in order to integrate Lithuania into the social, legal, and economic system of the Soviet Union. Because

many Lithuanians associate the Catholic Church with nationalism and national culture, the regime wished to eradicate the Catholic Church in some way became the Communist regime's number one enemy (Vitkauskas, 2000).

The religious factor is prominent in implementing sex education in Lithuania as in Georgia. The working group that developed sex education guidelines was largely made up of pro-abortion Catholic organizations. However the sexuality education guidelines that the Lithuanian Board of General Education approved in 2005 were not acceptable for Catholic church. The Catholic Church was successful in stopping youth health programs and services that would have helped Lithuania at the time fill in some gaps in its inadequate sexual education system. (Hodžić, 2012).

Under Soviet rule, religious institutions and practices were suppressed and religious leaders and followers were subject to persecution, imprisonment, and even execution. Despite the legacy of repression left by the Soviet Union, religion has seen a resurgence. Even though in none of these countries there is no official religion, still religion significantly influences attitudes toward sex education in nations like Georgia and Lithuania, leading to restricted access to resources and services. Also in Kazakhstan, Islam plays a crucial role in shaping conservative attitudes toward sex education, and even more, sex education is mostly viewed as a threat to traditional gender roles and family structures.

3.5 Teachers' preparation for sex education

To assist young people in making educated decisions about their sexual health and relationships, sex education is an important subject however, ensuring that teachers have the necessary skills to teach the subject is essential as well. Providing in a sensitive and effective manner the proper knowledge is one of the biggest challenges of effective sex education.

The only aspect of biology that is covered in the curriculum of the Georgian educational system is anatomy, but the kids have so many other questions without answers, so one of the solutions was introduced by Khatuna Gogoladze the Minister of Environment and Natural Resources Protection of Georgia and its called “Black box method”. Students collect their questions from

the lesson on pieces of paper about topics that they don't feel comfortable asking and then toss them into a box. Teachers should discover the solutions to every query together as this box opens. But here another obstacle appears, how well-informed the teacher is, what is their education level, whether is it proper to communicate and answer every question, and how comfortable the students feel with them (Tarkhnishvili, 2021).

In Kazakh society, parents think sex education should be taught in schools, whereas teachers think it is best to discuss it with parents. It is clear why there is resistance to sex education instruction: In Kazakh culture, there is a strong reluctance to openly discuss reproductive and sexual health topics, respectively, and the two parties may not want to, know how to, or understand the proper conversation about them. Asel Shanazarova, a psychologist and the creator of the sexual literacy program "Straight Talk", claims that educational institutions lack experts while psychologists are tasked with various duties. Gynecologists are the ones who are dispatched to schools to impart some sex education (Kabatova, 2018).

The pilot subject valeology which means the science of healthy living implemented in Kazakhstan which provided additional details on sexual and reproductive health. This subject eventually vanished from the school curriculum due to a lack of qualified teachers, resistance from parents and communities, and a shoddy implementation procedure. However, in 2012, UNFPA successfully piloted an educational project on sexual and reproductive health for students at selected colleges (secondary professional education) as part of the regional joint program of the Government of Kazakhstan and United Nations agencies. The pilot project involved modifying the already-existing topic of valeology with a new, added emphasis on Sexual and Reproductive Health problems. Despite the fact that there was no organized training program for teachers, specially created teaching materials were utilized, and college instructors from the pilot areas received valeology training before instructing the classes in accordance with the created teaching curriculum (Kabatova, 2018).

There are a few "Youth Centers" that debuted in 1999 in some of Lithuania's largest cities. Gynecologists provided guidance to volunteers in these youth centers who lacked specialized training and helped out in the pregnancy field. The preparation for Family Life and Sexual Education Program was officially confirmed by the Ministry of Education in 2007. The

program's long-term goals were to strengthen members' independent, reciprocal care and responsibility, lower the frequency of early sexual encounters, postpone sexual debut, and increase responsibility for their sexual behavior. This program's lack of functionality is one of the main issues since there are no educators who are in charge of or are knowledgeable about sexual education. Second, this program does not include any medical information on the reproductive system, contraceptives, or sexually transmitted diseases. As a result, there is not enough reliable, research-based medical information in this program. At the same time conservative attitudes toward sexuality and a lack of funding and support for sex education initiatives may make it challenging for teachers to provide comprehensive sex education. Since in Lithuania, sex education is a part of the secondary school curriculum and is typically taught by qualified educators, however, the standard and thoroughness of sex education can differ depending on the institution and the instructor (Cerniauskiene, 2015).

The provision of thorough sex education can be hampered by a lack of qualified teachers. To overcome this difficulty, innovative teaching strategies are all beneficial. It's critical to make sure that accurate, research-based information about sex education is taught in a sensitive and effective manner. To support healthier and safer communities by arming young people with the proper knowledge and abilities is essential and for that proper education, and sources should be provided.

3.6 Sex education in the digital environment

When teenagers first become interested in sexual issues, they frequently run into challenges, such as parents who are embarrassed to talk about it and teachers who are ashamed of it. Eventually, the child turns to the Internet, where it is hard to find literature that is suitable for their age group, is simple to understand, and is of value. Teenagers frequently develop misconceptions due to misinformation, sex myths, and pornography that are easily accessible online; this causes stress. Healthy sex life, right to access to proper information and education itself in the future is therefore in danger (Mefarishvili, 2019).

A few years ago, an employer from the "Education and Labor Association" in Georgia conducted a survey in schools in Tbilisi to assess students' knowledge and beliefs concerning sexual education, sexually transmitted diseases, early marriage, violence, and related topics. He claimed that it turned out that most of this information was inaccurate and misleading. Later, the group started offering training on these subjects to parents and individuals aged 12 and above and produced video lessons to spread the knowledge to a wider audience. Together with her coworkers, Khatia Akhalaia, prepared these lessons. She chose the subject, consulted with experts, and then started to record the video at home or at work. She created a personal portfolio with topics related to sex education and explained the related topic to make it understandable for youths. This should have been a good idea to avoid all shameful moments among youths and moreover, the video lessons were created by professionals, therefore information was accurate and trustworthy. However, Khatia Akhalaia, the author of video lessons on sexual education, received multiple rape and death threats because of the content is she making on social platforms. The Ministry of Internal Affairs initiated a case against the threats however the case is not resolved. Although the police are aware of who made the threat, no one has yet been charged with it, so the investigation into the case has not yet begun (Bidzinashvili, 2019).

The same brave work has been done by Karlygash Kabatova who is influencing Kazakhstani society's views on sex education. She is about to expand the reach of her online platform, Uyat Emes. UyatEmes.kz is an online community for young people. The name of the website, which offers brief articles on subjects like puberty, bullying, relationships, sex, contraception, and others, means "No Shame". Young people are able to access trustworthy information in Kazakh and Russian on subjects like family, sex, health, relationships, psychology, and physiology thanks to a chatbot that Kabatova is developing in collaboration with UNESCO and launching via a Telegram channel (JST, 2019).

Her programs aim to create a parent community to discuss relationship advice and sex education for their kids. Karlygash wanted to expand on her platform by creating plans to integrate sex education into Kazakhstan's educational system. Although Karlygash is aware that changing policies will take time, she seized the chance to spread her message as parents and children have grown more at ease using online platforms and technology during the pandemic (JST, 2021). Young people have a place on UyatEmes.kz where they can ask our consultants questions about

sexual and reproductive health, even very private ones, in an anonymous manner. Additionally, they can read stories written by adult contributors recalling challenging times in adolescence and share their own experiences. The platform is available to parents as well as children. It is significant that it is available in both Kazakh and Russian because there are very few resources on sexual health in Kazakh (Kabatova, 2018).

Access to comprehensive sex education in Lithuania can be limited, as the government has historically promoted abstinence-based education. However, these online resources can provide a starting point for individuals seeking information on sexual health and relationships. Several websites have been developed with the aim of educating youths on sexual health. One such website is "Sexual Health" (www.sekssveikata.lt) which provides comprehensive information on various aspects of sexual health, including contraception, sexually transmitted infections, and relationships. Another website, "Young Family" (www.jaunaseima.lt), caters to young people and provides information on relationships, contraception, and sexual health. Additionally, "Youth Line" (www.jaunimolinija.lt) offers support and advice for young people on a range of issues, including sexuality and relationships. All of these websites have been made available in both Lithuanian and English, making them accessible to a wider audience (Norvila, 2021).

What is worth mentioning is the Erasmus+ training course was held in Kaunas, Lithuania and in Batumi, Georgia, not only Georgian and Lithuanian youths, also young people from other European countries have participated in mobility. The following targets have been set in order to achieve the main objective: to allow participating nations to exchange ideas and methods for sex education. Secondly, to increase youth awareness of STDs and the value of STD testing; and thirdly, to create practical implementation plans for integrating sexuality education into school curricula. Also to raise public awareness of the importance of sexual education and debunk sexual myths and taboos (Erasmus, 2022).

In conclusion, access to thorough sex education can be difficult to come by in many nations, and young people frequently rely on the internet to find information that may be unreliable or deceptive. However, there are people and groups working to provide reliable and accurate information via the internet, such as Karlygash Kabatova's UyatEmes.kz and various websites in Lithuania. Youth workers can also benefit from training programs like the Erasmus+ "You&Me"

program, which can give them the skills and tools they need to disseminate accurate information and encourage positive attitudes toward relationships and sexuality. To guarantee that young people have access to trustworthy information to make decisions about their sexual and reproductive health, it is crucial to keep promoting comprehensive sex education offline and online

Kazakhstan has made some progress in sex education through digitalization, while Lithuania is also starting to explore this approach. On the other hand, Georgia has a long way to go in terms of creating digital platforms for sex education. Nevertheless, the existence of similar challenges in other post-Soviet countries and the success they have had in implementing digital sex education programs can be hopeful and helpful for Georgia. One of the most remarkable challenges Georgia faces is the integration of its language into digital platforms, and its youths have limited access to information in their native language, which is not a concern in Kazakhstan and Lithuania. This is due to the availability of digital platforms that offer at least two language options, making it easier for young people to access information and engage in sex education.

3.6.1 Digital literacy

There is a chance that rising internet usage will increase inequality rather than lessen it. This is partially due to the fact that the internet differs from simple media and consumer goods, where a technology diffuses from the early adopters to the mainstream market with a more-or-less stable product. It is also because traditional types of social exclusion, such as those caused by socioeconomic level, geography, deprivation, etc., are significantly correlated with digital exclusion (Livingstone & Halsper, 2007). Digital technologies continue to proliferate quickly while offering a wide range of advantages, including increased productivity among the workforce, better service delivery, and increased access to education. However, the benefits of digital innovation are still unevenly distributed around the world (UNICEF, 2018). Information about sex and sexuality can be found on the internet, which is a vast and convenient source of knowledge. However, not all of this data is trustworthy or correct. In order to evaluate sources, distinguish between reliable and unreliable information, and access accurate and age-appropriate resources, one must possess digital literacy skills. People are better able to deal with online risk

experiences and, as a result, to lessen any bad effects associated with such risk experiences if they have the skills and knowledge required to securely and effectively use digital technology to their advantage (Vissenberg, 2022).

Digital strength, resilience, and responsiveness are supported by a number of factors, which are identified and assessed by the DSGI 2021. As result, digital literacy in Georgia points 4.7 out of 10 which places it 72nd in the global ranking. Kazakhstan shows 5.6 out of 10 with 43 place and Lithuania 5.8 out of 10, global ranking 38 (DSGI, 2021). Digital literacy is just one extremely important factor that can influence sex education in the context of digital platforms. It's crucial to make sure that digital sex education is fact-based, inclusive, and available in order to address these issues. This can be accomplished by using a variety of formats, including videos, infographics, and interactive tools, as well as by giving out clear, accurate information that is suitable for their culture and language. To ensure that people with limited digital literacy skills can access dependable information and support regarding sexual health and sexuality, it is also crucial to make available resources and supporting materials.

3.7 Conclusion of cross-cultural analysis

Sex education in post-Soviet nations was significantly influenced by the Soviet Union. The Soviet Union had a very conservative approach to sex education, and talking about sexuality was generally frowned upon. Instead, the government emphasized the importance of fidelity in marriage and sexual abstinence. Many post-Soviet countries experienced a period of rapid change and social upheaval after the fall of the Soviet Union. During this time, sexual education was not a top priority, and many of the traditional views on sexuality that were prevalent during the Soviet era persisted. Additionally, sex education was frequently disregarded or overlooked due to a lack of funding and educational resources. However, the most important influence was the topic itself which was deemed too contentious or delicate to be openly discussed in schools.

The absence of a standardized sex education curriculum at schools is concerning, especially in light of the nation's post-Soviet history of political and economic adversity as well as its troubled educational system. To advance public health, lower the prevalence of STDs and unintended

pregnancies, and promote public health, this issue must be addressed and sex education in Georgia, Kazakhstan, and Lithuania must be improved. Additionally, the lack of inclusion of all gender identities and sexual orientations in countries' sex education curriculum may have a detrimental effect on the mental health and general wellbeing of LGBTQ+ students. These students experience stigma and discrimination as a result of a lack of comprehensive and inclusive sex education. Additionally, sexual assault and consent are not addressed in countries sex education policies, leaving children and teenagers open to sexual assault. Young people may find it challenging to ask questions or look for information about sexual health as a result, which may cause them to feel alone and confused.

Lack of sex education also contributes to the spread of sexually transmitted infections (STIs), which are infections that can also be spread through sexual contact. People are more likely to engage in risky sexual behavior and contract STIs if they are not given the proper education about safe sex practices and the dangers of unprotected sex. At the same time, high rates are frequently attributed to the absence of comprehensive sex education.

According to United Nations data, teenage pregnancies are prevalent in all three nations. Teenage pregnancies are prevalent in Georgia at a rate of 35.2 per 1,000 live births, in Lithuania at 16.3, and in Kazakhstan at 22.1. One of the reasons for these significant numbers can be a lack of reproductive health knowledge. Young people lack the necessary education to comprehend the changes that occur to their bodies during puberty or the significance of routine health checkups.

Overall, the post-Soviet era has had a complex and wide-ranging impact on sex education in the nations that have broken away from the Soviet Union. A variety of factors, such as cultural norms, politics, and funding, have shaped the implementation and success of sex education programs in these nations. The process of implementing sex education and freely talk about it should be the result of changing societal behavior which can be difficult and protracted. Also, the length of time needed to make a significant change can differ greatly depending on the type of behavior being changed, the environment in which it takes place, and the strategies being employed. Even though behaviors, such as deeply ingrained social attitudes or beliefs may be more challenging to change, still there are solutions that need to be planned accordingly and adopt by technologies.

4. Digitalization of sex education

4.1 Digital education

The Fourth Industrial Revolution and the Internet of Things are fundamental disruptive forces that have altered how people approach and think about digital processes and activities. The importance of integrating cutting-edge technology into all procedures, goods, and services is emphasized by digitalization. The promised benefits of digitalization for society, however, have not yet been fully reaped. At the individual, organizational, and social levels, academia can be essential in developing the necessary knowledge and skills (Parviainen, 2022). The effects of digitization are being felt across all areas and industries. As more people communicate using hybrid communication technologies that are accessible from anywhere rather than just in the physical environments of their homes and workplaces, it will also encourage teleworking and the use of technological products. Digitalization allows for high levels of interaction and cooperation (Almeida, 2020).

The emphasis in education is shifting to usability and technology learning. Through e-learning platforms, teachers and students can virtually connect with one another. Innovations in information and communication technology have helped higher education move from a traditional to a smart learning model. Utilizing cutting-edge technology, especially smart devices and internet technologies, smart learning makes use of social and technological advancements to enable successful tailored learning (Rosak-Szyrocka, 2022). Even though digital technology integration in educational settings has a long history, there are obstacles and challenges, however, there is still hope for the advantages and benefits of digitizing education. The integration of digital technologies into various devices, such as computers, laptops, smartphones, and tablets, is not new phenomena. In a lab or group setting, learners were traditionally provided with computers, but modern technologies that enable smaller, more mobile devices push the integration of not just supplied devices, but also private and learner-owned devices (Schmidt, 2020).

The effectiveness of the educational system has a significant impact on the quality of human potential and people's ability to respond to environmental and social challenges. Modern technologies, whose introduction helps to modernize and develop education as well as improve the quality of training future specialists and bring education closer to science, are becoming more and more significant in the process of improving national education (Strokov, 2020). Children today have a greater need for digital devices than ever before in all educational activities. This has evolved into a brand-new way of life that cannot be separated. The psychology of a child is also significantly impacted by this. An informative and educational digital assistance model is greatly needed to meet these challenges and demands, especially when it comes to sex knowledge (Purnomo, 2019).

Although the advantages of digitization for society are encouraging, much work needs to be done before its full potential can be realized. Digital technology is changing the way that education is delivered, with a move toward smart learning models that make use of cutting-edge technology to provide individualized learning opportunities. The effectiveness of digital technologies has a significant impact on the quality of human potential and people's ability to respond to environmental and social challenges, even though there are challenges and obstacles to their integration into education. Overall, digital technology has merged seamlessly into the educational process.

4.2 Potential results of digital transformation

As digital technology becomes more widely accessible, there is an increased chance that digital sex education will provide fresh and cutting-edge approaches to teaching sex, sexuality and sexual health. Digital sex education is the dissemination of sexual education material through the use of digital technology, such as online platforms, mobile applications, and virtual reality. Digital sex education has the potential to reach a larger audience, especially those who might not have access to in-person sex education sessions or who might feel awkward discussing sexual matters in front of others.

By letting users explore sexual themes at their own pace and in a judgment-free atmosphere, digital sex education can also offer a more dynamic and interesting learning experience. It can also offer more individualized and customized learning experiences that take into account things like age, gender, sexual orientation, and cultural background. Additionally, it can offer current and accurate information about sexual health, such as contraception, STDs, and consent. Digital sex education has the potential to provide many benefits, including:

- **Increased accessibility-** For those who might not have access to conventional resources, digital sex education has the potential to expand access to sex education. Digital sex education can be accessed from any location with an internet connection thanks to the use of technology, such as online platforms and mobile applications, which increases access to knowledge on sex and sexual health. Digital sex education can offer a more convenient and adaptable learning experience. Users can learn at their own pace and in a setting that is convenient for them at any time and from anywhere. This adaptability may raise people's likelihood of interacting with and using sex education material in their daily lives.

There is a lot of potential for digital sex education to improve access to sex education. Digital sex education can reach people who might not have access to traditional resources, such as those who reside in distant places, marginalized populations, and people with busy schedules, by facilitating better access to knowledge about sex and sexual health. This expanded accessibility may result in better outcomes for people' and communities' sexual health and levels of sex literacy.

- **Personalized learning-** Platforms for digital sex education have the ability to offer individualized learning opportunities based on unique interests, requirements, and learning preferences. Digital sex education platforms can tailor their content and delivery

strategies to each user's particular needs by utilizing digital technologies such as algorithms and machine learning.

Individualized learning opportunities can consider the particular requirements of various populations. For instance, a digital platform for sex education might offer material that is catered to people of all ages, genders, sexual orientations, and cultural backgrounds. This can make sure that each user receives sex education that is pertinent and suitable, which can enhance the possibility that the user will employ the knowledge they have learned in their daily lives.

Platforms can also offer individualized instruction based on learning preferences. While some people might choose to read or listen to information, others could favor interactive or visual content. Digital sex education platforms can increase the effectiveness of instruction by providing content in several formats and letting users select the format that best suits their learning style.

- **Greater privacy-** A potential advantage of digital sex education is that people will have more privacy. A level of anonymity that may not be available in conventional classroom settings can be provided through digital sex education platforms, enabling people to learn about sexual themes without feeling awkward or humiliated. Some students may feel uneasy or even intimidated when discussing sex subjects with a teacher or in a group situation. This could be brought on by personal ideals, cultural or religious beliefs, or previous trauma or abuse experiences. Digital sex education can give students a more private and accepting area to discuss sexual themes and ask questions without worrying about prejudice or stigma.

Digital sex education can offer anonymity, which can further increase learners' privacy. Without disclosing their identities, students can interact with other students and access sexual education materials. Additionally, students seeking information on delicate subjects like contraception, STIs, or sexual assault may benefit from the anonymity that

internet sex education may offer. Because they may access this knowledge without worrying about criticism or embarrassment, learners may be less reluctant to ask for assistance or support.

- **Improved engagement-** Through the use of multimedia, interactive tools, and gamification, digital sex education has the potential to greatly increase engagement by making learning more enjoyable and accessible for students of all ages. The use of multimedia, such as animations, images, and movies, can make it easier for students to comprehend difficult sexual health concepts. Videos can also make learning more engaging because they allow students to pause, fast-forward, and rewind the video as necessary. Additionally, images and animations can make complicated ideas simpler and make learning more visually appealing and interesting.

Quizzes, evaluations, and surveys, among other interactive tools, can boost engagement by enticing students to actively engage in the learning process. Learners can apply what they have learned and get immediate feedback on their progress by using interactive tools. Important ideas can be reaffirmed in this way, which can aid with information retention.

Another effective tool for digital sex education is gamification. Gamification is the process of integrating game-like components into the learning process, such as points, badges, and leaderboards. Gamification can help to boost engagement and motivation to learn by making it a more fun and competitive experience. The platform might employ a game-like user interface to instruct users on appropriate sexual behavior, rewarding users for passing tests and giving them feedback on their performance.

- **Reduced stigma-** The stigma associated with sex and sexual health may be lessened as a result of digital sex education. Digital platforms for sex education can offer accurate

information and encourage open communication, which can aid in removing barriers and lowering the shame and stigma attached to sexual health.

Discussions about sex and sexual health are still taboo in many cultures, which prevents open dialogue and access to reliable information. This may cause people to feel embarrassed or humiliated about asking for help or talking to others about their sexual health. Through the provision of a secure and judgment-free environment where students can explore sexual issues and pose questions, digital sex education can aid in lowering this stigma. Additionally, digital sex education can offer factual information on sexual health-related subjects, which can assist in dispelling misunderstandings and stereotypes about sexual health. Students can make educated decisions about their sexual health and decrease their likelihood of engaging in dangerous behaviors by being given the knowledge that is supported by evidence.

By offering information and services to those who might be facing prejudice or discrimination because of their sexual orientation or gender identity, digital sex education can assist to lessen stigma. It may make people feel appreciated and supported by offering a welcoming and inclusive learning environment.

- **Greater inclusivity-** Digital sex education can include content that is more inclusive of diverse identities and experiences, including LGBTQ+ individuals, people with disabilities, and people from different cultural backgrounds. By offering knowledge and resources that are inclusive of many identities and experiences, digital sex education can aid in closing this gap. This can make sure that people from all walks of life have access to reliable information and materials to promote their sexual health and well-being. Additionally, digital sex education can offer resources and information that are easier for people with impairments to access. To ensure that students with hearing or visual impairments may access material, digital sex education platforms, for instance, can offer closed captioning, transcripts, and audio descriptions.

Digital sex education can also feature material that is more inclusive and sensitive to cultural differences. This can make it easier to guarantee that students from various cultural backgrounds feel appreciated and represented. Digital sex education, for instance, might offer details on sexual hygiene customs unique to particular racial or religious communities. This can facilitate understanding and acceptance of various cultural traditions while reducing stigma.

In conclusion, digital sex education can improve engagement, increase accessibility, offer more personalized learning opportunities, offer greater privacy, and lower stigma. By giving those who might not have otherwise had access to it sexual health information, digital sex education can reach a wider audience. In order to ensure relevance and appropriateness for various populations, it can customize content and delivery strategies to meet the specific needs and preferences of learners. It can offer a more private and accepting setting where one can talk about sexual topics and pose queries without being concerned about social stigma. Using multimedia, interactive tools, and gamification can make learning more fun and interesting. Finally, digital sex education can help dispel misconceptions and stereotypes while also reducing shame and stigma related to sex and sexual health.

4.3 Risks of digital transformation

Implementing sex education, however, can be difficult due to a number of social, cultural, and political concerns. These difficulties may include overcoming opposition to conversations about sex and sexual health as well as negotiating various cultural norms and beliefs. It can also be challenging to make sure that sex education programs are inclusive, thorough, and evidence-based. Implementing digital sex education comes with its own share of difficulties, including:

- **Digital literacy-** In order for people to effectively access and use digital sex education resources, they must possess digital literacy skills, such as the capacity to navigate digital platforms, assess the reliability of online sources, and safeguard personal information. People may find it difficult to find reliable information or may be more susceptible to

online fraud or false information if they lack digital literacy skills. Also, educators and facilitators who are in charge of providing digital sex education must possess strong digital literacy skills. Teachers must be proficient in using digital tools to design interactive and engaging lessons while also protecting the privacy and safety of their students.

Young people with low digital literacy may run into a number of issues like false information, a lack of engagement, risks associated with online safety, and privacy concerns. Without the ability to distinguish between trustworthy and questionable sources of information, young people may find it difficult to avoid being exposed to inaccurate or deceptive information about sex. Low digital literacy can also cause young people to stop participating in digital sex education, allowing them to miss out on crucial data and resources. Also, people with low digital literacy skills may not be aware of how to protect their personal information online or recognize inappropriate online behavior. This puts them at risk of being sexually exploited and groomed online, which could have long-lasting negative effects on their well-being and safety.

- **Cultural background-** Creating digital sex education culturally sensitive and appropriate is challenging. It is hard to predict that young people from all cultural backgrounds interact with the content and learn accurate information about sex and sexual health. Digital sex education may not be relevant or relatable to young people from certain cultural backgrounds, which is one of the risks of creating a digital environment for sex education. This may lead to a lack of interest in the subject matter and a failure to grasp key ideas concerning sexual health and well-being.

The potential for cultural bias in digital sex education materials must also be taken into account. The materials might not be suitable for young people from other cultural backgrounds if they were created with a particular cultural perspective in mind. Due to this, harmful stereotypes and cultural biases may be reinforced, which could have detrimental effects on young people. The information presented in digital sex education may also be at odds with certain cultural beliefs and values, which can cause

misunderstandings or even hostility toward the subject matter. Due to this, young people may receive insufficient or incorrect information about sex and sexual health, which could be harmful to their health and well-being.

- **Approval by Government-** A government might reject a digital sex education program for a number of reasons. Political or ideological opposition to sex education, in general, maybe one factor. Regardless of whether it is delivered digitally or in person, some governments may choose to reject any program that includes sex education because they believe it to be controversial or inappropriate or offensive. Also, if a government finds that a digital sex education program conflicts with its cultural or religious ideals, it may reject it. Digital sex education programs may be disregarded if they conflict with the sexuality-related beliefs and values of some cultures or religions.

Governments can also impose regulations on digital sex education platforms to make sure they adhere to certain standards, including accurate information delivery, user privacy and safety protection, and inclusion and diversity promotion. Governments should also make sure that these platforms abide by pertinent laws and rules, such as those governing data privacy and the use of educational technologies.

In conclusion, implementing sex education, whether through traditional or digital means, presents many challenges. Digital literacy skills are essential for protecting personal information, avoiding online fraud, and accessing trustworthy information. The implementation of digital sex education is critically influenced by cultural background as well. Making sure that digital sex education programs are appropriate and sensitive to cultural differences as well as that young person from all cultural backgrounds engage with the content and gain accurate knowledge about sex and sexual health can be difficult. Governments are also very important in determining whether or not digital sex education programs are accepted.

5. Methodology: Power of information about sex

This chapter offers insightful information on how sex-related information circulates and can be used to guide public health initiatives, online interventions, and decisions about public policy pertaining to sexual health education and promotion. The purpose of this study is to better understand how people in the digital age access, share, and evaluate information about sex and sexual health. The survey was created to gather information on a variety of factors, including demographic data, online behaviors, sources of sex-related information, attitudes toward sexual health, and beliefs regarding the veracity and credibility of sex-related online information. A wide range of people was reached with the survey through a variety of online distribution methods, such as email lists, social media sites, and online discussion forums. The following chapter provides the survey's findings, including descriptive statistics and inferential analyses that reveal patterns, trends, and connections between the relevant variables.

5.1 Survey Description

The research study on the digitalization of sex education adhered to ethical guidelines and principles to ensure participant confidentiality, informed consent, and protection from any potential harm. Prior to data collection, the pertinent ethical review board examined and approved the study protocol. The study's aim and methodology were thoroughly explained to participants, and it was made clear that participation was entirely voluntary. All participants provided informed consent, and their identities were kept secret during the analyze. Confidentiality measures were implemented to safeguard the privacy of participants and their responses.

A survey was created and used to gather data for the study. Access to the survey required a specific link and was made possible through a safe online platform. Online recruitment methods used to find participants included social networking sites, forums for learning, and organizations for related interests. Potential survey respondents were sent the survey link via targeted marketing and online groups. Because the survey was self-administered, participants may

complete it whenever and whenever they liked. Existing research on digitalization and sex education served as an inspiration for the survey questionnaire's creation. The survey was created based on a comprehensive review of academic papers, reports, and other relevant sources. A collection of key questions was developed to gather participants' perspectives, attitudes, and experiences with sex education.

The questionnaire was made to collect both quantitative and qualitative information, enabling a thorough analyse. Both quantitative and qualitative analyses were performed on the survey data that had been obtained. To find patterns, trends, and correlations between the variables for the quantitative analysis, statistical approaches such descriptive statistics, correlation analysis, and inferential tests were used. The quantitative analysis sought to produce statistical proof to back up the study's conclusions and offer numerical insights into participants' reactions. In addition to the quantitative analysis, thematic analysis was used to examine the qualitative data derived from comments and open-ended questions. The answers were classified, categorized, and clustered. In order to evaluate participants' experiences and attitudes about sex education more nuancedly, this qualitative study aims to provide a deeper knowledge of participants' viewpoints.

There were four sections to the survey, each with a different number of questions. The first section had 6 questions focused on the demographic information of the respondent.s Country, age, education level, gender identity, sexual orientation, and religion were all inquired about in the demographic questions. Understanding the diversity of participants and how elements like culture, age, education, and religion may affect their attitudes toward sex education is aided by this information. The second section was the personal information section which consisted of 8 questions. There were covered topics like the participant's age of sex curiosity, sources of sex information, frequency of talking about sex-related topics, and level of confidence in their sex education. These inquiries shed light on the participants' methods for learning about sex and their level of comfort when conversing about it. The third section of the survey consisted of 7 questions and the personal opinion questions inquired about appropriate age ranges for talking about sexual and reproductive health, who ought to talk to young people about sex education, and how respondents assessed the readiness of their nation's educational system to incorporate sex education. These inquiries provide viewpoints on the significance of sex education, who

should be in charge of imparting it, and how the state of a nation's educational system may influence the rollout of sex education initiatives. Three more open-ended questions made up the fourth section, which focused on one's own experience on what participants wished they had learned about sex in school, how useful they found resources for sex education outside of the classroom, and what modifications they would like to see made to sex education initiatives in their nation to better serve their needs. These inquiries shed light on the flaws and restrictions of the present sex education initiatives and make recommendations for how to make them more participant-centered. Overall, the survey's questions were crucial for understanding participants' sex education-related experiences, opinions, and attitudes as well as potential cultural and national differences. With the aid of this knowledge, more inclusive, pertinent, and open to all sex education initiatives can be created.

5.2 Survey Results

The survey was carried out to gather information about the dynamics of how information about sex spreads. This study provided useful information on the current landscape of information sharing in this important area by attempting to understand the sources, channels, and factors influencing the dissemination of sex education information. The survey's findings provide insight into the distribution of sex education knowledge and help better understand how to communicate with and inform people about this crucial issue.

The study provides a glimpse of the demographics of people between the ages of 19 and 32, with a particular focus on Georgia, Lithuania, and Kazakhstan. The participants had a variety of gender identities, sexual orientations, and religious affiliations, as well as educational levels ranging from bachelor's to doctoral degrees. This diversity draws attention to the complexity and depth of the surveyed group and offers insightful information about their viewpoints and experiences.

The survey included a varied representation of gender identities. 64.9% of respondents who identified as women said they made up the majority, while men made up 32.4% of the participants. It's important to note that some individuals opted to withhold their gender identity

or preferred not to respond. A varied sample of people between the ages of 19 and 32 participated in the survey. 32.4% of participants were from Georgia, with 35.1% coming from Lithuania and 32.4% from Kazakhstan close behind. When looking at the participants' educational backgrounds, the majority, or 45.9%, held a bachelor's degree, while 29.7% earned a master's degree. 16% of the participants had no degree, attended some college, or had a variety of educational backgrounds. 5.4% reported having only completed high school, while 2.7% said they had a PhD.

The survey's findings regarding sexual orientation showed that 75.7% of respondents identified as straight or heterosexual. In addition, 8.1% reported being bisexual, 1.4% were pansexual, and 1.4% were asexual. It is significant to realize that some respondents either elected not to answer the question or did not identify their sexual orientation. The survey included a wide spectrum of religious beliefs. Christian Orthodox was the religion with which the most respondents 36.5% identified. 31.1% said they were of no religion, while 17.6% said they were Muslim and 13.5% said they were Catholic. The remaining responses represented a wide range of other, less obvious religious connections.

5.2.1 Unveiling sexual knowledge: Navigating the world of sex education

A wide range of adults from Georgia, Kazakhstan, and Lithuania over the age of 16 were asked to participate in the survey, and those who did were asked to answer anonymously. The survey's data was analyzed to find trends and patterns in the respondents' sexual health-related knowledge, attitudes, experiences, and expectations. Several intriguing findings can be drawn from the data gathered from the survey question about when people first developed an interest in learning about sex. The majority of participants (51.4%) stated that they first became interested in sex between the ages of 12 and 15. This suggests that people often begin to become interested in this subject during the early stages of adolescence. Additionally, a sizable portion of respondents 25.7% said that their curiosity began before the age of 12, demonstrating that sexual curiosity can start even earlier in life. Contrarily, a lower percentage of respondents, specifically 18.9%, claimed that their interest in sex began when they were between the ages of 16 and 18. This implies that a sizeable percentage of people wait until they are well into their adolescence

before expressing a strong interest in learning about sexual issues. Finally, only 4.1% of respondents said they started to be interested in sex after turning 18.

Analyzing the information provided on the sources people use to learn about sex in contemporary society reveals some interesting trends. Multiple sources could have been chosen by survey participants, so the percentages could add up to more than 100%. 93.2% of those surveyed admitted to using the internet as a resource for sex-related information. This discovery emphasizes the important role the internet plays in making a variety of resources and information on this subject accessible. For those looking for information and education about sex, the Internet is a popular choice due to its accessibility and anonymity. 59.5% said they get information about sex from their friends alongside internet sources. This suggests that social networks and peer groups have a big impact on how well people understand and are informed about sexual issues. Friends can be a source of casual conversations, shared information, and personal experiences that help shape one's conception of sex. 8.1% of respondents named their family as a source of sex-related information. This may be due to a number of things, such as cultural norms, communication difficulties, or discomfort with bringing up such subjects in front of the family.

According to this data, internet sources appear to be dominating, and engaging insights into people's preferences and habits can be gained by looking at the data on the websites they visit most frequently to access online sex-related content. 90.5% of respondents claimed to use Google as their main search engine when looking for information on sex. This finding emphasizes the important role search engines play in making it easier to access a variety of materials, articles, websites, and discussion forums on sexual topics. 64.9% of respondents admitted to using social media to access sex-related information. This suggests that people are not only looking for information through specialized search engines but are also using social media platforms to learn about and engage in conversations about sexual issues. Social media platforms offer opportunities for exchanging experiences, getting access to educational material, and taking part in sex-related conversations, making them valuable and authentic informational resources for many people. At the same time 29.7%, also mentioned using YouTube as a platform to access sex-related information. People can access a variety of content relating to sexual education, relationship advice, and personal experiences, also it can provide a more dynamic and engaging way to learn about sex.

The analysis of the data shows that as people start to learn about and explore their own sexuality in early adolescence, sexual curiosity frequently develops. Also, sex-related interest can develop at an early age, highlighting the significance of offering age-appropriate sex education to address kids' queries and worries. However, there appears to be a decline in interest as adolescents enter later adolescence, indicating that factors like societal norms or shifting priorities may contribute to shaping one's focus on sexual issues. The study also reveals the important role played by the internet in disseminating sex-related information. The internet has replaced books and other printed sources as the go-to source for people looking for information on sexual issues because of its wide accessibility and anonymity. Therefore, by navigating the world of sex education, individuals can gain the necessary knowledge and understanding to make informed decisions, foster healthy relationships, and promote sexual well-being.

5.2.2 Unlocking the Dialogue: Embracing Perspectives about communication

Based on this data, in the past six months conversation involving talking about sex-related topics took place more than 20 times. This suggests that sex-related conversations occur on a frequent basis. Additionally, between 10 and 20 times, sex-related topics were discussed in 16.2% of the conversations. This suggests that such topics are talked about on a regular basis. On the other hand, sex-related subjects were covered between 5 and 10 times in 13.5% of the conversations, while 1 to 5 times were covered in 8.1%. Finally, sex-related subjects were not brought up at all 6.8% of the time. This suggests that sex-related topics were avoided in a small number of conversations based on certain reasons. Since the high percentages in the "more than 20 times" and "10-20 times" discussion categories suggest that there may be a need for information or direction on sex-related issues. These discussions may be motivated by a desire for information, a need for counsel, or an interest in exploring personal experiences. Also, the data shows that sex-related topics were brought up at least once in a sizable percentage (91.6%) of the conversations. This suggests that the participants were talking about different sex-related topics, whether they related to relationships, sexual health, education, or other related subjects.

All data below is indicated out of 5. The data shows that different groups are more or less open to discussing sex-related issues. The majority of respondents do not generally have very open conversations with parents and other caregivers, as evidenced by the average openness rating for them of 1.9. Similar to this, family members who are the same age receive an average rating of 1.7, indicating a lack of candid conversations in this group. Other than parents, older family members have the lowest average rating 1.2, indicating a lack of openness in conversation. The average rating for nurses and school counselors is 2.5, indicating that people are somewhat more comfortable discussing these subjects with them. With an average rating of 2.4, youth movement educators exhibit a moderate level of openness. The average rating of 3.3 for therapists and doctors, who have a relatively higher level of comfort in discussing these topics with these professionals, indicates the highest level of openness. The lowest average rating, 1.1, belongs to community religious leaders, indicating a generally low level of conversational openness with them. These findings emphasize the value of fostering accepting and nonjudgmental environments and advocating for comprehensive sex education that involves a wide range of dependable people and experts to facilitate honest and enlightening discussions about sex and related subjects.

Also, data examined emotions they associate with talking about sex-related subjects. An average rating of 3.1 and 3.1 respectively indicates a moderate association with the emotions of courage and excitement. This suggests that some people find these conversations stimulating and view participating in them as a brave act. Although some discomfort or self-consciousness may be present, there is a slight association with feelings of happiness (average rating of 2.6) and embarrassment (average rating of 2.1), suggesting that these conversations can also be viewed as positive or enjoyable. However, there is only a weak correlation between these discussions and feelings of guilt (average rating of 1.6) and shame (average rating of 1.7), suggesting that most people do not feel strongly negative emotions during these conversations. Overall, the data suggests that people are more open to discussing sex-related issues and believe they are crucial for personal development, education, and well-being. They do so with a variety of emotions, but primarily with positive or neutral ones.

In conclusion, the data indicate a rising openness in the conversation about sex-related issues. Individuals are more at ease discussing these topics with school counselors, nurses, youth movement educators, therapists, and doctors than they are with parents, caregivers, and older family members. The associations with emotions vary, with low levels of shame and guilt, mild levels of happiness and embarrassment, and moderate levels of excitement and courage. As people become aware of these discussions' significance for their own personal growth and well-being, it becomes increasingly important to create nonjudgmental spaces for them.

5.2.3 Exploring cultural perspectives: Highlighting varied attitudes towards sex education across nations

The majority of respondents, 64.9%, said that it is best to start talking to young people about sexual and reproductive health when they are between the ages of 12 and 15 years old. This suggests that a sizable portion of people thinks that the start of early adolescence is the right time to start these conversations. A sizable majority of respondents (20.3%) agreed that discussions about sexual and reproductive health should start before the age of 12. This demonstrates an understanding that discussing these issues earlier in life can help young people get accurate information and develop a positive understanding of sexual health. The age group of 16 to 18 years received the fewest responses, with 14.9% of respondents believing that this age group is appropriate for discussions on sexual and reproductive health. This indicates that fewer respondents think that postponing these conversations until late adolescence is the best course of action. Overall, the data show that there is broad agreement that conversations about sexual and reproductive health should start in early adolescence, specifically between the ages of 12 and 15. This is consistent with the notion that adolescents in this age range might be beginning to experience the physical and emotional changes related to puberty, making it possible an ideal time to give them accurate information and guidance. It is important to keep in mind that people's opinions on the ideal age range for talking to young people about sexual and reproductive health might be influenced by their own personal experiences or observations. Their perspectives might be influenced by their own upbringing, societal pressures, or cultural norms.

The data shows that respondents prioritize discussing sexual and reproductive health with young people, 67.6% of respondents chose parents and caregivers, which is a sizable percentage. This

shows that the majority of respondents consider parents and other adult caregivers to be essential in facilitating sexual and reproductive health conversations with young people. It emphasizes the value of parental involvement in providing direction and support in these areas. With 86.5% of the vote, school nurses and counselors were a popular choice. This suggests that a sizable portion of respondents thinks that professionals working in the educational setting, like counselors and nurses, should also be involved in talking to young people about sexual and reproductive health. It highlights the part that educational institutions play in giving students accurate information, direction, and support. 64.9% of respondents chose youth movement educators as their option. This suggests that a sizeable percentage of respondents think educators working for youth movements, such as clubs or organizations devoted to youth development, should be involved in educating young people about sexual and reproductive health. This demonstrates the importance of involving kids in supportive and educational settings outside of the traditional classroom. With 5.4%, the community religious leaders' choice received the least support. This suggests that fewer respondents think that local religious leaders ought to engage young people in sexual and reproductive health discussions. This might be because people prefer other sources of direction and support due to different cultural or religious perspectives on these subjects. Overall, the data show that respondents value parents and other adult caregivers, school nurses and counselors, and youth movement educators as key individuals to engage young people in sexual and reproductive health conversations. These results highlight the necessity of cooperation among a range of stakeholders, including parents, educational institutions, and youth-focused organizations, in order to provide young people with comprehensive and encouraging sexual education.

The average rating of 3.9 out of 5 indicates that most people would talk to their child about sex and reproduction-related issues if they had one. This suggests a fair amount of openness and willingness to participate in these conversations. The average score of 5 out of 5 reflects a high level of comfort among respondents regarding whether their child should be taught about sex- and reproduction-related topics at school. This implies resounding support for thorough sex education programs in schools. Comparatively, there is a difference in how comfortable people are talking about sex-related subjects at home (average score of 3.9) and how comfortable they are with sex education in schools (average score of 5). This shows that people in general have trust in and respect for the role that schools play in giving their kids a thorough and trustworthy

sex education. Instead of relying solely on parental discussions, they might feel more comfortable with their child learning about these subjects from educated professionals in an educational setting. This may be explained by the idea that formal education can offer a systematic and all-encompassing approach to sex education, covering different facets and ensuring accurate information is provided.

5.2.4 Preparing for Progress: Assessing Countries' readiness to implementation of sex education

According to the data which measures the subjective opinion about the openness of people in specific countries when it comes to implementing sex education at school, Georgia received a score of 2.2 out of 5, Kazakhstan received a score of 1.3 out of 5, and Lithuania received a score of 2.4 out of 5. Starting with Georgia, it is clear that there is a low level of public acceptance of sex education in schools. There are similarities between Georgia's and Lithuania's results, which indicate that sex education in schools still needs to be implemented despite some level of societal openness. Any cultural taboos or conservative viewpoints that might obstruct the implementation of sex education in schools must be addressed, and people must be made aware of its significance. However, the score of 1.3 out of 5 for Kazakhstan is very concerning. It implies that there is a serious lack of candor when it comes to talking about sex education in schools. This might be a result of the society's conservatism or a lack of understanding of the value of sex education.

When it comes to the opinion about the readiness of the country's school system to implement sex education, each of the three nations faces particular difficulties. Georgia's educational system appears woefully unprepared to address the subject of sex education with a mere 2 out of 5 points. Lithuania received a score of 2.5 out of 5, which indicates that it is making some progress toward being ready for sex education but still has a long way to go. A combination of cultural conservatism and a lack of program funding may be to blame for this. However, Kazakhstan received only a 1.4 out of 5 rating. This poor rating may be partially explained by current social situation in country which is not in favor of sex education.. Additionally, it might be challenging

for schools to put comprehensive programs in place due to a lack of infrastructure and human resources.

A national sex education program in schools is supported strongly by the participants of survey from Georgia, Kazakhstan, and Lithuania, according to the data. This is a fantastic chance for these nations to educate young people about sex in a thorough and age-appropriate manner. Georgia has demonstrated a remarkable level of support for sex education with a rating of 4.5 out of 5. This demonstrates that the participants from Georgia are aware of the value of educating children about sexual health. This should serve as motivation for the government to move forward with the introduction of a thorough sex education program in schools. Similarly to that, Kazakhstan's rating of 4.8 out of 5. This is a fantastic score that demonstrates how Kazakhstani citizens view the value of sex education. With a score of 4.6 out of 5, participants from Lithuania has demonstrated that its people are overwhelmingly in favor of their government implementing a national sex education program in schools.

The data demonstrates that there are different levels of public readiness, acceptance, and support for sex education in schools in Georgia, Kazakhstan, and Lithuania. While Kazakhstan struggles with less societal readiness and acceptance, Georgia and Lithuania show some signs of societal openness and support for implementing sex education. The current state of sex education in these nations is shaped by cultural factors, financial constraints, and conservative viewpoints. To advance comprehensive sexual health education in schools, it is critical to address cultural taboos, allocate resources, and raise awareness of the value of sex education.

5.2.5 Pursuing Comprehensive Sex Education: Insights from Personal Experiences and Opinions

The research that follows is based on unstructured responses to a query about respondents' individual sex education experiences and viewpoints. Participants were invited to share their personal experiences with sex education materials outside of the traditional educational system as well as their opinions on the improvements they would want to see made to sex education

programs in their countries. The information reflects a range of viewpoints and illuminates the value, constraints, and needed advancements in sex education.

On the question, if there was anything they wished they had been taught at school about sex many people voiced dismay that their schools didn't offer thorough sex education. They believed that important subjects including anatomy, the menstrual cycle, consent, sexual identities, safety, and sexual violence had been left out or underemphasized. There was a great desire for information on protection, illnesses, pregnancy-related difficulties, and where to get support in relation to sexual health-related issues. Respondents emphasized the need of understanding consent, realizing that having sex is a personal decision and that no one should be coerced into it. They also emphasized the importance of educating people about sexual encounters, communication, and relationships. Many respondents believed that because their schools did not include menstruation and reproductive biology, they were ignorant of these crucial subjects which affected on their sexual life later. There was also a demand for inclusive education that emphasizes the value of comprehending and accepting various sexual orientations and identities, as well as LGBTQ+ experiences and issues. Overall, the replies highlight the need for thorough sex education programs in schools that offer precise, age-appropriate information and encourage an atmosphere for open discussions on all facets of sexual health and wellbeing.

On the question of in what ways have they found sex education resources outside of formal education to be helpful or unhelpful, participants discussed a variety of resources for sex education that are not part of official education. Many people have found the internet to be a useful resource, especially when used in conjunction with reputable and trustworthy platforms. These resources also assisted people in overcoming feelings of shame and accepting the notion that having sex is a private decision that is not subject to criticism. Some respondents, however, complained that it was difficult to discover reliable information and navigate the sea of available material. It was challenging to separate accurate information from subjective viewpoints and the number of questionable sources. However, they praised the accessibility and simplicity of using online resources to find information, praising the value of open debates in youth centers and short, hilarious YouTube videos in particular. The research emphasizes the benefits of external sex education tools when obtained from dependable sources and emphasizes the necessity for

critical examination of information in order to ensure accuracy and informed decision-making, even though caution is advised when using internet resources.

What changes would participants like to see in sex education programs in their country to better meet their needs, the participants reveal a great desire for advancements in sex education initiatives across international boundaries. They said that sex education should be introduced in schools where it is not already practiced. They emphasized the value of getting structured and trustworthy knowledge from experts rather than depending on perhaps faulty sources you can find online. With recommendations for workshops, seminars, and locations where parents may learn about the subject as well, open dialogues and safe settings for sex conversation were stressed. The importance of inclusive education that tackles issues like victim-blaming, consent, communication, and LGBT+ themes was recognized. There have been calls for the participation of medical professionals, such as doctors, to guarantee that correct and recent information is presented. It was suggested to incorporate sex subjects into the literature to normalize discussions and lessen the shame and guilt connected with sex education. In order to give children a foundational understanding of their reproductive systems, safe sex practices, and the prevention of diseases and unplanned pregnancies, many participants emphasized the importance of beginning sex education at an appropriate age, typically around 14. In order to ensure that healthcare providers are knowledgeable and do not promote stigma or preconceptions about sex, there was also a focus on community education. In general, participants look for truthful, inclusive, and thorough sex education programs that promote candid conversations, lessen stigma, and cater to the unique requirements of people in their particular countries.

5.3 Survey findings

According to the research's findings, there are various links that can be seen between communication and comfort levels when talking about sex-related topics and education, gender, sexual orientation, and religion. One interesting correlation is that those with less education tend to communicate and engage more in conversations related to sex, especially among their friends' groups. This implies that less formal education may result in a greater reliance on interpersonal

communication for knowledge-sharing and information acquisition. On the other side, the research suggests that people with higher levels of education tend to feel more courageous when talking about sex-related issues. This might be explained by their greater level of knowledge and comprehension, which might help explain their increased confidence in having these talks. Additionally, it was discovered that people with greater levels of education often feel more at ease talking about sex-related subjects with their kids. This suggests that schooling influences attitudes and openness to talking about delicate topics in the setting of the family.

In the study, gender inequalities were also noted. Women frequently show higher level of courage when speaking about sex-related issues and are more supportive of the establishment of sex education in schools. In contrast, males generally communicate less openly across all of the categories mentioned in survey with the exception of encounters with their friends, when they communicate almost as openly as women do. The impact of sexual orientation on comfort and communication is also explored in the study. When discussing sex, heterosexual people frequently feel more embarrassed than people of different sexual orientations do. Additionally, gay and lesbian people frequently communicate with therapists with greater openness, demonstrating a greater level of confidence in addressing personal concerns in a therapeutic setting, rather heterosexual respondents.

The research also shows how religion influences people's attitudes regarding talking about sex-related issues. With the exception of religious leaders, people who do not identify with any religion are more likely to communicate with all the categories indicated in survey. Respondent who said they are catholics appear to feel more embarrassed and ashamed while talking about sex than other religious groups' representatives, whereas non-religious people show more excitement during such conversations. The research points to the importance of education, gender, sexual orientation, and religious convictions in determining communication styles and degrees of comfort when talking about sex. These findings provide light on the intricate interplay between social variables and personal beliefs and sexual communication behaviors.

The fact that many respondents thought their schools lacked thorough instruction, particularly on menstruation and reproductive biology, was an important finding. Their later sexual lives

suffered as a result of this knowledge gap. Education that respects and supports all sexual orientations, identities, and LGBTQ+ experiences and issues was clearly needed. Participants underlined that having sex is a personal choice that shouldn't be criticized and valued services that assisted them in overcoming shame. However, despite the abundance of materials accessible, respondents still mentioned difficulties in locating trustworthy information. They found it challenging to distinguish between objective facts and opinions from dubious sources. Despite this, they complimented the accessibility and ease of using online resources, praising open discussions in youth centers and interesting, amusing YouTube videos in particular.

The participants expressed a significant need for breakthroughs in sex education activities. They had the opinion that schools that do not currently offer sex education need to start doing so. They underlined the value of getting structured and accurate information from professionals rather than depending on maybe dubious web sources. Open discussions and secure environments for sex discussion were emphasized as essential components of successful sex education. There have also been calls for the participation of medical experts, such as doctors, to guarantee the presentation of correct and recent information. It was suggested that sex education subjects be incorporated into literature as a way to normalize conversations and lessen the shame and guilt attached to them.

6. Discussion

This paper's discussion part seeks to offer an analysis and interpretation of the survey's findings about people's views toward sex education and the adjustments that should be made to sex education programs. The survey responses brought to light a number of sex education-related issues, such as the best age to start conversations about sex, the key players who facilitate these discussions, the gaps in conventional school-based sex education, the function of outside resources, and the desired changes in sex education programs.

Every post-Soviet nation has its own distinct social, cultural, and historical environment, which might affect the results and dynamics of sex education, however research on sex education and

related subjects in post-Soviet nations has revealed some parallels to each other and also with the earlier findings. Sex-related information is disseminated through a variety of channels, and the digital environment is a key factor in this. The results of the study show that people have trouble discovering reliable information which emphasizes the significance of digitally transforming sex education to make sure correct and trustworthy material is easily available. A vast audience can be reached and people can be engaged in interactive and engaging ways using online platforms including websites, social media, and educational videos, which can also promote factual knowledge and disprove falsehoods. Especially, internet usage and digital literacy have significantly increased in post-Soviet nations in recent years. Social media, websites, and online forums are just a few examples of the digital platforms that are now widely used for communication and information about sex. A bigger audience may be reached and the needs of people in these nations can be met by adapting sex education for the digital world.

The level of sex education can be considerably influenced by the social-historical context. It is possible that historical issues like limited access to formal education or conservative cultural norms have contributed to a lack of comprehensive sex education in some communities given the finding that people with lower education levels rely more on interpersonal communication. In order to provide inclusive and successful education for all, it is essential to address the social and historical settings that influence the priorities and methods of sex education. In post-Soviet nations, cultural norms and societal expectations have an impact on gender roles and views toward sexuality. These elements affects how willing and open individuals of different genders are to discuss sex-related concerns. At the same time, different cultural and religious values are prevalent. Due to religious or cultural factors, some nations have more traditional attitudes regarding sex and sexual education, which affects how comfortable and openly sex-related topics are discussed. Also, the degree of formal sex education might vary greatly in post-Soviet nations. Communication styles and comfort levels when talking about sex-related issues are influenced by the accessibility and quality of sex education.

According to the research, the internet environment is vital to the spread of sex-related knowledge, emphasizing the necessity for trustworthy and easily accessible digital resources. Bringing sex education online enables the development of interactive platforms that appeal to a

larger audience. Additionally, it solves the difficulty of understanding the deluge of internet information and guarantees the availability of reliable and correct content. A comprehensive and inclusive sex education curriculum that fills information gaps, promotes open discourse, and establishes safe spaces free from shame and guilt is essential in light of these revelations. Such initiatives ought to advance awareness, attend to a range of needs, and provide people the power to choose their sex life and sexual orientation sensibly. Society can encourage better attitudes and actions regarding sex, sexuality by promoting gender equality, distributing accurate information, and encouraging tolerance for other orientations and beliefs.

The research's conclusions and the larger context of sex education in post-Soviet nations highlight the importance of modernizing sex education while also taking into account the established foundations of formal education. The lack of thorough sex education in some communities have been influenced by the social-historical context, which included restricted access to education and traditional cultural values. For all people to receive comprehensive and successful education, it is crucial to address these historical influences.

7. Conclusion

In conclusion, a country or region's social-historical context has a significant impact on the quality of sex education offered. The approach to and acceptance of sex education are shaped by cultural norms, societal attitudes, historical variables, moral and religious values, gender roles, and historical factors. These elements may lead to biased or incomplete sex education programs that omit fundamental information and skills. Additionally, the availability and usability of information and resources related to sex education are impacted by the social-historical context. The dissemination of reliable and accurate information can be hampered by inadequate infrastructure, limited resources, language barriers, and low digital literacy. But there are opportunities in the digital era to address these issues and advance sex education.

Adapting sex education to the digital environment is necessary for several reasons. First off, many people, especially young ones, now rely primarily on the digital sources for information and communication. Incorporating sex education into the digital sphere makes it easier for

people to acquire information and have conversations about sex-related issues. However, sex education in the digital age does not mean that sex education in schools should be disregarded. The results of research point out to the advantages of combining digital and classroom-based sex education strategies. According to the research, people showed a desire for thorough sex education in schools. They underlined the value of getting structured, correct information from experts rather than only relying on web sources. This emphasizes the necessity of providing a strong foundation of information and direction in managing sexual matters in formal educational environments. The learning experience can be improved by incorporating digital platforms into classroom-based sex education while also taking into account the unique requirements and preferences of the current generation of digitally connected people. Supplementing classroom learning with online tools, interactive modules, and digital discussions can provide chances for involvement, investigation, and explanation. In addition, digital platforms can make it easier to maintain access to knowledge, tools, and resources outside of the conventional classroom. Individuals can gain from a complete strategy that combines the knowledge of educators, the formal educational structure, and the accessibility and participatory nature of digital materials by combining digital and school-based sex education. Individuals would benefit from feeling more supported, normalized, and well-equipped with the information and guidance they need to navigate their personal experiences and make educated decisions about their sexual health and wellbeing as a result of this integration.

Additionally, sex education can be personalized by adapting it to the digital environment. Individuals' specific interests, needs, and preferred methods of learning can be taken into account when developing content and delivery strategies for digital platforms. This increases the likelihood that the knowledge will be applied in the learners' daily lives by ensuring that each learner receives sex education that is appropriate and relevant. Digital platforms can also lessen stigma by disseminating accurate information, encouraging honest communication, and fostering an environment free from bias. It is critical to understand that the social-historical context is dynamic and subject to change. Countries can alter their strategies and policies to provide more inclusive and evidence-based programs as societal attitudes change, human rights advance and the value of comprehensive sex education is understood. Overall, digital sex education programs builds on the already-existing digital literacy foundation and taps into technology's promise to

provide inclusive, accessible, and enjoyable sex education to a variety of people. Countries can promote healthier attitudes, knowledge, and habits about sexuality, adding to the general well-being and empowerment of their inhabitants, by fusing the advantages of digital platforms with the fundamental ideas of comprehensive sex education.

7.1 Limitations and future research

There are a number of limitations that should be taken into consideration despite the study's potential contributions to the area of sex education in post-Soviet nations. Firstly, the study's limited sample size may restrict the extent to which the results can be extrapolated to the general population. Second, the data were gathered through self-reported methods, which could be biased by respondents. Thirdly, because the study only considered online sources of data, it may not accurately represent the full range of sex education resources accessible to people in post-Soviet nations. Last but not least, the study's cross-sectional design precluded drawing any inferences about causality or changes over time.

The discovered limitations revealed a significant knowledge gap in the available academic literature on this subject. This gap suggests a lack of thorough comprehension and academic investigation of important aspects related to the subject matter. To advance the field, guide decision-making, and give practitioners and policymakers evidence-based insights, it is crucial to close this knowledge gap.

Future research in this area can take a number of different directions. To begin with, more extensive research is required to expand and confirm the results of this study. Such studies could use longitudinal designs to track changes over time and representative samples of people from post-Soviet nations. Also, research could examine the elements such as the function of cultural and social norms deeper that affect the validity and effectiveness of online sex education resources. Furthermore, research has wide possibilities to look into how digital sex education affects sexual attitudes, behaviors, and outcomes in post-Soviet nations. The potential of digital sex education to address the particular issues and requirements of marginalized groups, such as

LGBTQ+ people and people living in remote or rural areas, could also be the subject of future research. Scholars can advance our knowledge of digital sex education and its potential to improve sexual health and well-being by addressing these and other research questions.

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