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Sexual health literacy among Slovenian secondary school students: A descriptive study

Spolna zdravstvena pismenost slovenskih srednješolcev: opisna raziskava

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Key words: sex education; adolescents; sexual health; contraception; sexually transmitted infections

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ABSTRACT

Introduction: Sexuality education for adolescents is an important area of education. The aim of this study was to assess the knowledge of Slovenian upper secondary school students about sexuality, as well as their experiences, behaviours, and sources of information about sexuality.

Methods: An invitation to complete an online questionnaire for first-year students was sent to all secondary schools in central Slovenia. The responses of 201 participants were included in the analysis. The average age of the respondents was 15.59 years; 57% of the participants were female and 67% attended general upper secondary school. The data were statistically analysed using chi-square, Mann-Whitney U, and t-test.

Results: Respondents cited the internet (67.0%) and friends (60.4%) as the most common sources of information on sexuality. Most respondents expressed a preference for seeking information from healthcare professionals (61.2%) and least from teachers (26.5%). Sexual experiences involving vaginal penetration were found to be more frequent among students enrolled in vocational and technical education programmes than those attending general upper secondary education programmes ($\chi^2 = 7.863$, $p = 0.005$). Knowledge about sexuality was found to differ by gender ($U = 2257.500$, $p = 0.003$) and type of secondary school ($U = 1943.500$, $p = 0.001$). Knowledge about sexuality was positively associated with the frequency of discussions about various sex-related topics, with the exception of petting. It was, however, not associated with sexual activity or the use of protection.

Discussion and conclusion: More attention needs to be paid to the provision of sexuality education for secondary school students. School nurses can promote information sharing among peers, empower parents to engage in discussions on these topics with their adolescent children, and provide sexuality education in the school setting. Our study findings on the effectiveness of different forms and contents of sexuality education can serve as a basis for enhancing the existing preventive programmes.

IZVLEČEK

Uvod: Spolna vzgoja mladostnikov je v šolah pomembno področje izobraževanja. Namen raziskave je bil oceniti znanje o spolnosti, izkušnje, vedenje in vire informacij o spolnosti med slovenskimi dijaki.

Metode: Uporabljen je bil spletni vprašalnik, poslan na vse srednje šole v osrednjeslovenski regiji, s povabilom dijakom prvih letnikov. V analizo so bili vključeni odgovori 201 anketiranca. Sodelujoči so bili v povprečju stari 15,59 let, 57 % ženskega spola in 67 % jih je bilo gimnazijcev. Podatki so bili statistično analizirani s testi hi-kvadrat, Mann-Whitneyjevim U-testom in t-testom.

Rezultati: Najpogostejši viri informacij o spolnosti za dijake so splet (67,0 %) in prijatelji (60,4 %). Večina dijakov želi informacije pridobiti od zdravstvenih delavcev (61,2 %) in najmanj od učiteljev (26,5 %). Spolna izkušnja z vaginalno penetracijo je pri dijakih/-njah srednjih in poklicnih srednjih šol pogostejša v primerjavi z gimnazijci/-kami ($\chi^2 = 7,863$, $p = 0,005$). Znanje o spolnosti se razlikuje glede na spol ($U = 2257,500$, $p = 0,003$) in vrsto srednješolskega izobraževanja ($U = 1943,500$, $p = 0,001$). Znanje o spolnosti je pozitivno povezano s količino pogovora o različnih temah o spolnosti, razen o božanju. Ni pa povezano s spolno aktivnostjo in uporabo zaščite.

Diskusija in zaključek: Pomembno je, da se več pozornosti nameni spolni vzgoji srednješolcev. Medicinske sestre v šolskem okolju lahko spodbujajo medvrstniško informiranje, opolnomočajo starše za pogovor z mladostniki in izvajajo spolno vzgojo. Rezultati raziskav o učinkovitosti različnih oblik in vsebin spolne vzgoje so lahko osnova za nadgradnjo preventivnih programov.

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Introduction

As children and adolescents mature, they acquire a wealth of knowledge, skills, values and attitudes about the human body, intimate relationships and sexuality, which can be summarised under the umbrella term of sexual development (Bonjour & van der Vlugt, 2018). Sexuality is a part of one's personality, and its experience and expression are an interweaving of biological, psychological and sociocultural dimensions of life (Greenberg et al., 2014). Through sexuality education, defined as learning about the cognitive, emotional, social, interactive and physical aspects of sexuality (European Expert Group on Sexuality Education, 2016), we can progressively provide children and adolescents with accurate information, encourage them to acquire skills and form positive values, thus empowering them to understand and enjoy sexuality, have safe and fulfilling intimate relationships, and take responsibility for their own and others' sexual health and well-being (WHO Regional Office for Europe & Bundeszentrale fur gesundheitliche Aufklarung, 2010; European Expert Group on Sexuality Education, 2016). Through sexuality education, we can help students to achieve more comprehensive sexual health literacy. A sexually literate person is a one who has the knowledge and skills to take action to achieve sexual health and well-being (Herdt & Polen - Petit, 2020). They also have the ability to access and understand sexual health information related to their rights, sexuality, sex and interpersonal relationships and have the skills to critically evaluate it. They know how to respond appropriately to secure the necessary support and advocacy in relation to their sexual health and related rights (Waling et al., 2022).

The revised definition of comprehensive sexuality education identifies eight key concepts or themes: a) relationships; b) values, rights, culture and sexuality; c) understanding gender; d) violence and safety; e) skills to promote health and well-being; f) the human body and development; g) sexuality and sexual behaviour; and h) sexual and reproductive health. This updated definition of comprehensive sexuality education emphasises its contribution to achieving the Sustainable Development Goals (Herat et al., 2018).

Sexuality education is often provided in the school environment with the aim of improving adolescents' sexual health and reproductive literacy. This has a positive impact on delayed and less frequent sexual activity, a lower number of sexual partners, less frequent risky sexual behaviours and more frequent use of condoms and other contraceptives (United Nations Educational Scientific and Cultural Organization [UNESCO], 2018). This also leads to a lower incidence of teenage pregnancies and abortions and a lower incidence of sexually transmitted infections (Goesling et al., 2014; Jefferson et al., 2021; Khodakarami, 2019). A study conducted by Slovenian researchers found that students who received more comprehensive sexuality education content were more likely to use contraception than those who did not. The study emphasises the need for a systematic placement of sexuality education content in the school curricula (Žalar et al., 2013).

The school environment is a place where the values, attitudes and behaviours of young people are formed. As such, it offers favourable conditions for developing and upgrading young people's competencies in the field of sexual health and related decisions, and health education interventions in the school environment can be very effective (Denford et al., 2017; Garzon - Orjuela et al., 2021).

For over 50 years, the Swedish, Norwegian and Dutch school curricula have been recognised as having the highest quality sexuality education content in Europe (UNESCO, 2018). The content and scope of sexuality education for young people varies around the world. In some countries, such as Turkey, these topics are not addressed by teachers or parents, as the topic itself is considered sinful (Şirin Akça, 2020). In other settings (e.g. in the United States of America), sexuality education mainly encourages adolescents to practice sexual abstinence and, in certain parts of the United States, also to prevent sexually transmitted infections, with the primary focus on the prevention of human immunodeficiency virus infections (Denford et al., 2017; Santelli et al., 2017). Studies have also shown that the proportion of adolescents who receive information on sexuality from experts is declining. This lack of information is not compensated for by parents, as their involvement in communicating with adolescents about sexuality remains low (Duberstein Lindberg et al., 2016).

In Slovenia, the promotion of reproductive health and healthy sexuality takes place in the school environment and as part of preventive health services (systematic preventive health examinations) (Kiphut & Hafner, 2019). In the school environment, this part of education takes place primarily with the aim of understanding the reproductive process, the functioning of the sexual organs, and the process of fertilisation. This is part of the biology curriculum in primary education (Vilhar et al., 2011) and is covered in more detail in secondary education curricula (Vilhar et al., 2008). Various teaching materials have been developed to promote sexual health education for young people (Kiphut & Hafner, 2019). Sexual health education is also provided by nurses as part of updated preventive activities in the school setting (Pucel, 2019). These updated health education activities aim to improve adolescents' knowledge of the structure and functioning of the sexual organs by promoting critical thinking, understanding of the attitudes and values of others, and comprehensive knowledge of sexuality that goes beyond the mere physiological dimensions (Kiphut & Hafner, 2019).

In primary and secondary schools (general, technical and vocational upper-secondary schools), the educational content related to human sexuality, although interdisciplinary, is often taught by teachers, regardless of their level of expertise or attitude towards these topics (WHO Regional Office for Europe & Bundeszentrale für gesundheitliche Aufklärung, 2013). The success of sexuality education in schools can be influenced by gender concordance between teachers and students, teaching in gender-separated groups, using terminology adapted to the maturity of students, appropriate environment, sufficient time, teacher training and the willingness of teachers to talk about taboo topics (e.g. sexual orientation), as well as by the delivery itself: setting rules of behaviour and giving students the opportunity to ask questions (Rose et al., 2019). In the United States, up to 21% of girls and 35% of boys received no information about contraception before becoming sexually active, neither from their parents nor from professionals. Studies even report a decline in the proportion of teenagers who did receive such information (Duberstein Lindberg et al., 2016). While approximately 20.3% of 15-year-olds in Slovenia are sexually active, their sexual activity has declined over the past fifteen years. Most sexual activity has been reported by boys. Most of them report using reliable contraception (73.7%) or a condom (71%) during their last sexual intercourse (Jeriček Klanšček et al., 2019), which is higher than both the European and Canadian average (61%) (Inchley et al., 2020). The 2018 study "Health Behaviour of School-aged Children" also found that 23% of 15-year-olds of both sexes in Slovenia did not use protection during their first sexual intercourse, which is 2 percentage points lower compared to other European countries and Canada (Inchley et al., 2020).

Aims and objectives

The aim of this study was to assess the knowledge of first-year students from central Slovenia about sexuality and their experiences with sexuality, and to identify their sources of information about sexuality. It also investigated adolescents' preferred sources of information about sexuality. The following four hypotheses were formulated:

H1: First-year female students have better knowledge of sexuality than male students.

H2: First-year students in general secondary education programmes have better knowledge of sexuality than students in technical and vocational secondary education programmes education programmes.

H3: First-year students who have discussed sexuality-related topics more extensively have better knowledge of sexuality.

H4: First-year students who have discussed sexuality-related topics more extensively choose safer sexual behaviours.

Methods

We used a quantitative, non-experimental and descriptive method. The data were collected using an online questionnaire.

Description of the research instrument

The questionnaire consisted of 27 questions, of which 22 were closed questions and five were open-ended questions. When designing the questionnaire, we included the content that adolescents receive in the context of sexuality education and biology (Kiphut & Hafner, 2019; Pucelj, 2019; Vilhar, 2008, 2011) according to previous research (Jeriček Klanšček et al., 2019) and our literature review. The questionnaire was divided into a section on demographic data (age, gender, educational level) and four content sections. The first content section focused on sources of information on sexuality, where respondents were asked to provide answers on a four-point scale (from no information to extensive information). They were also asked to provide information about the frequency and location of viewing pornographic content online, as well as the content and frequency of conversations about various sexuality-related topics. The second part contained seven questions in the form of a quiz designed to assess students' knowledge of sexuality: ovulation, menstruation, effectiveness of contraceptives, consequences of sexually transmitted infections, and types of risky sexual relations. Each correct answer was scored one point. Incorrect answers were not factored into the final score. The final score (a maximum of 17 points) indicated the students' knowledge about sexuality. The third part of the questionnaire contained questions related to respondents' sexual experiences: measures taken in the event of a sexually transmitted infection, their experience with sexual intercourse, and the use of protection. The last part of the questionnaire referred to their preferred sources of information and newly acquired knowledge about sexuality.

The questionnaire was sent to ten students for pilot testing. On the basis of the feedback received, the questionnaire was subsequently amended. It was improved in that the questions and statements were formulated more clearly to make them easier for the respondents to understand.

Description of the sample

The target population for the study included first-grade secondary school students in central Slovenia between the ages of 15 and 18 who were regularly enrolled in any secondary education programme in the 2020/21 school year. On 15 June 2021, the total number of students born between 2003 and 2006 and enrolled full-time in the first grade of any secondary

education programme in central Slovenia was 6,119 (Ministrstvo za izobraževanje, znanost in šport, 2023). The analysis included data from 201 accurately completed questionnaires. The respondents were between 15 and 17 years of age ($\bar{x}$ = 15.7). Most of them were female (n = 109.5%) and enrolled in general secondary education programmes (n = 134.7%) (Table 1).

Table 1: *Respondents' demographic characteristics*

Variable		***n***	***%***
Age	15 years	74	37
	16 years	115	57
	17 years	12	6
Gender	female	109	54
	male	84	42
	other	8	4
Educational programme	short vocational	3	1
	vocational	14	7
	technical	50	25
	general	134	67

Legend: n – number; % – percentage

Description of research procedure and data analysis

The request for participation in the study with an invitation for students and the link to the online questionnaire was sent to all publicly available email addresses of secondary schools in central Slovenia. The management of each school that agreed to their students' participation in the study gave their consent by sending the invitation and link to the questionnaire to their first-year students. Only students older than 15 years were recruited for the survey, as it was possibile to obtain their independent consent to participate in the survey. The online questionnaire was open from 6 June 2021 to 6 July 2021. For the development, design and technical creation of the online questionnaire and the survey, we used the 1KA (2021) open source application.

The data were analysed using the SPSS® Statistic software package, version 25 (SPSS Inc., Chicago, IL, USA). The basic statistical parameters, such as mean, median, standard deviation and percentages, were calculated for individual variables. To compare the means of two independent groups in relation to proportional variables, we used the t-test for two independent variables for normally distributed data and the Mann-Whitney U-test for non-normally distributed data. The Kolmogorov-Smirnov test was used to check the normality of the sample. The chi-square test was used to statistically analyse nominal or ordinal variables (proportions). We used Cramer's α coefficient to test the strength of association between individual variables, value of $0.05 \leq \alpha \leq 0.3$ indicated a weak association, a value of $0.3 \leq \alpha \leq 0.6$ a moderate association, and a value of $0,6 \leq \alpha \leq 1$ a strong association (Telford et al., 2019). The limit of statistical significance was set at $p = 0.05$.

Results

Respondents cited the internet as the most frequent source of information on the topic of sexuality, with 67.0% (n = 122) of respondents obtaining considerable or extensive information online. Friends were also cited as a frequent source of information: 60.4% (n = 110) of respondents stated that they had obtained extensive or considerable information in this way. Parents and other family members were cited as a moderately frequent source of information on sexuality. Respondents indicated that they received the least information (little to none) from teachers (71.9%, n = 122) and health professionals (70.3%, n = 128).

Half of all respondents (49.4%, n = 89) stated that they never or almost never viewed pornographic content online, while 28.3% (n = 51) answered that they did so frequently (a few times a week) or regularly (almost) every day. As many as 170 respondents stated that they rarely or never talked to anyone about sexual relations. Among those who reported discussing sex, the most commonly mentioned topic of conversation was vaginal penetration (n = 130, 76.5%), followed by petting (n = 123, 72.4%), oral sex (n = 11, 66.5%), digital forms of sexual activity (n = 104, 61.2%), and anal sex (n = 89, 57.7%).

When asked if they had spoken to anyone about how sexuality works for LGBTIQ+ people (lesbian, gay, bisexual, transsexual, intersex, queer and others), 56.8% (n = 96) of respondents answered that they had not. Students in general education programmes (74.0%) discussed this topic most frequently.

Respondents who reported having already had sexual experiences were asked what they would do if they suspected that they contracted a sexually transmitted infection (Figure 1). A total of 149 respondents (74.1%) answered this question. Most respondents stated that they would consult a general physician (n = 93, 62.4%) or a gynaecologist (n = 80, 53.7%) about a possible sexually transmitted infection. Less than half would discuss this with their sexual partner(s) (n = 73, 49.0%) or get tested (n = 63, 42.3%). Some would seek information online (n = 41, 27.5%) or visit the emergency room (n = 24, 16.1%), while six would do nothing. Two respondents stated they would commit suicide, two responded that they would talk to their parents, and one stated that they would act immediately but gave no specific clarification.

A total of 149 respondents answered the questions about their experiences with sexual intercourse with vaginal penetration. Of these, 22.8% (n = 34) stated that they were sexually active, while 11 respondents

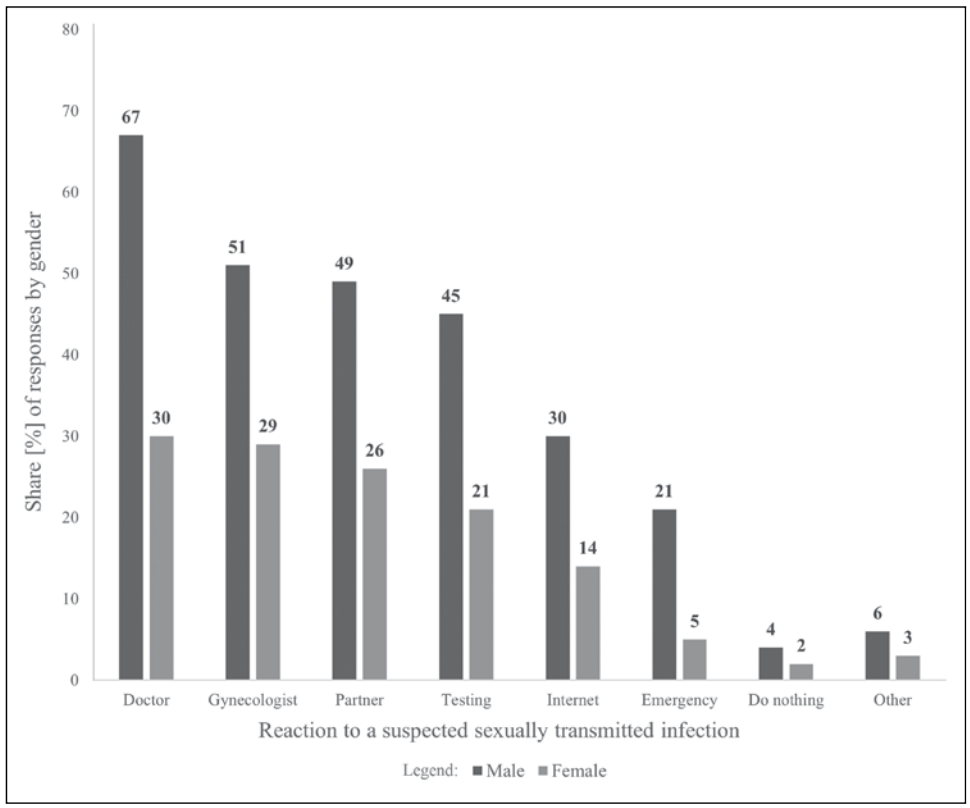


Figure 1: *Response to suspected sexually transmitted infection*

did not wish to answer this question. Overall, 38% of respondents from technical and vocational programmes and 17% from general education programmes stated that they were sexually active. Students from general education programmes reported having statistically significantly less sexual intercourse with vaginal penetration than students from other secondary education programmes (χ^2 = 7.863, *df* = 1, *p* = 0.005). The sexually active respondents were also asked about their use of protection: 34 of them answered this question. The majority (*n* = 21, 61.8%) stated that they used protection (mostly condoms, *n* = 18), and one respondent did not wish to respond.

A total of 148 respondents answered the questions about their experiences with other forms of sexual activity (anal, oral, touching, petting). Almost a third (*n* = 47, 31.8%) of the respondents confirmed that they had experienced these forms of sexual activity, while 15 did not wish to give an answer. 50.7% (*n* = 75) of respondents had masturbated, mainly boys (*n* = 49, 65.3%), while 18.9% (*n* = 28) did not wish to give an answer.

We also asked all respondents about their preferences regarding the sources of information about sexuality and its safe practice. The majority (*n* = 90, 61.2%) of respondents would like to receive information from health professionals, fewer than half from friends (*n* = 67, 45.6%), about a third from their parents (*n* = 46, 31.3%), slightly fewer from online sources (*n* = 41, 27.9%), and just over a quarter from their teachers (*n* = 39, 26.5%). In terms of other sources, four respondents indicated that they did not wish to receive information from any sources, while two other meaningful responses cited their partner and half-sister as the preferred sources of information.

Respondents indicated that they would prefer to receive information about safe sex at school from external lecturers (*n* = 88, 60.3%), a third of respondents expressed no preference (*n* = 51, 34.9%), and only a few (*n* = 7, 4.8%) would prefer to receive this information from their teachers.

Respondents' knowledge about sexuality differed by gender: female students scored an average of 8.64 points (*s* = 3.079, *Me* = 9.00), while male students scored an average of 7.28 points (*s* = 3.143, *Me* = 8.00) out of a possible total of 17 points. In order to compare the two data sets, we used the Mann-Whitney U-test due to the non-normal distribution of the data. Based on the results obtained, we can conclude that female students are statistically significantly more knowledgeable about sexuality than male students (*U* = 2257.500, *p* = 0.003).

Knowledge about sexuality differs according to the type of secondary education: students in general education programmes scored an average of 8.61 points (*s* = 2.764, *Me* = 9.00), while students in other secondary education programmes scored 6.80 points (*s* = 3.546, *Me* = 6.50).

Table 2: *Amount of conversation and knowledge about sexuality*

Conversation topic	*Amount of conversation*	*Points*	*s*	*Me*	*U*	*p*
vaginal penetration	limited	8.44	2.992	9.00	1764.000	0.013
	none	6.76	3.250	8.00		
anal sex	limited	8.76	2.579	9.00	2389.500	0.003
	none	7.09	3.547	8.00		
oral sex	limited	8.61	2.739	9.00	2264.000	0.010
	none	6.96	3.559	8.00		
petting	limited	8.21	3.039	9.00	2529.000	0.582
	none	7.64	3.345	8.00		
digital forms of sexual activities	limited	8.61	2.689	9.00	2445.000	0.010
	none	7.19	3.558	8.00		

Legend: s – standard deviation; Me – median; U – Mann-Whitney U-test; p – statistical significance

To compare these two data sets, we used the Mann-Whitney U-test due to the non-normal distribution of the data. Based on the results, we can conclude that students in general secondary education programmes have statistically significantly better knowledge about sexuality than students from other secondary education programmes ($U = 1943.500$, $p = 0.001$).

Students who had discussed individual topics related to sexuality more extensively in the past showed a better knowledge of sexuality. As none of the students chose the answer "extensive" to this question on the amount of conversation, we converted this variable into a dichotomous variable. Given the non-normal distribution of the data, we used the Mann-Whitney U-test, the results of which are shown in Table 2. The Cronbach's α coefficient of reliability for this question was 0.836, which indicated good reliability (Telford et al., 2019).

Students who had more conversation about sexual topics, with the exception of petting, scored statistically significantly higher on the quiz on sexuality. In determining the differences between students' experiences with vaginal penetration and other forms of sexual activity, we used the Mann-Whitney U-test for both data sets with non-normal data distribution. As the data for the variable that examined the use of protection was normally distributed, we used the independent samples t-test. The number of points scored on the quiz on sexuality showed no statistically significant differences in responses about students' experiences with penetrative intercourse ($U = 1641.500$, $p = 0.529$), the use of protection ($t_{(31)} = 0.827$, $p = 0.415$) and experiences with others forms of sexual activity ($U = 1942.500$, $p = 0.710$).

Discussion

Through our survey, we determined the level of sexual health literacy of first-year secondary school students in central Slovenia. Respondents most frequently seek information about sexuality online. Similar conclusions have also been reached by other researchers (Gonzalez-Ortega et al., 2015). However, it should be emphasised that online information can be problematic as it can give unprofessional, inaccurate, outdated or misleading information. Moreover, online publications are often sponsored by various vendors (Madden et al., 2016) rather than independent experts. Nevertheless, the widespread use of the internet also has its advantages. It is therefore imperative that we promote a safe and critical approach to this source of information. Through the use of digital technologies, we can encourage young people to improve their sexual health. Digital services need to be personalised and designed so that they encourage proactivity (Wong et al., 2021), as adolescents, albeit digital natives, do not all have the same level of digital literacy. The quality of the information provided is very important and therefore secure digital communication must be ensured (Patterson et al., 2019). As part of professional activities in this area, it is important to promote quality websites with information on sexuality, such as *#to sem jaz* (Nacionalni inštitut za javno zdravje, 2022), as well as other digital health services in this field, and to support their development in line with the needs of young people.

We found that friends are an important source of information about sexuality, which is consistent with the results of a survey conducted in China (Fang et al., 2022). Several other studies have found that secondary school teachers can present an important source of information for adolescents regarding sexuality (Fang et al., 2022; Liškova et al., 2019; Ramirez - Villalobos et al., 2021). However, the results of our study are not consistent with these findings, as in the Slovenian school environment, teachers do not provide sexuality education and are not recognised as an important source of information on this topic. To ensure better sexuality education for adolescents, it would be useful to consider training teachers in this area or providing students with other sources of information, such as nurses involved in the educational process.

We found that female students have better knowledge about sexuality than male students, which confirms our first hypothesis and is consistent with the results of other studies (Fang et al., 2022). However, other studies show no gender differences in

this context (Phongluxa et al., 2020), which could be culturally conditioned. Male students are also sexually active earlier than female students, which is why more and earlier attention should be paid to the provision of information and sexuality education for the male teenagers. Promoting adolescent sexual health is also more successful when conducted in gender-separated groups (Rose et al., 2019). In Slovenia, health education workshops on sexuality are also conducted as part of preventive health check-ups of adolescents. If, following the example of other environments, more sexual health promotion were to be carried out in the school environment, it would be sensible to adapt its content and organisation.

Our findings suggest that first-year students enrolled in general secondary education programmes have a better understanding of sexuality compared to students in vocational and technical programmes, which confirms our second hypothesis. We also found that students in general education programmes discuss sexuality more extensively and acquire more information and knowledge, which may contribute to their better sexual literacy. It is important to mention that in Slovenian general secondary education programmes, there is a higher proportion of female students than in vocational and technical programmes, where there are more male students (Statistical Office of the Republic of Slovenia, 2022). As the predisposing factors influencing overall health literacy include gender, age, and education (Lee et al., 2017), this may have influenced the results of our study. Health education interventions in this area should also be adapted to the type of education adolescents are enrolled in.

Our study found that the respondents who had discussed sexuality-related topics more extensively had better knowledge in this area, which partially confirms our third hypothesis. We found that the amount of conversation about each topic related to sexuality was statistically significantly different in terms of knowledge, with the exception of the topic of petting.

We also confirmed our fourth hypothesis, as respondents who discussed sexuality more extensively also opted for safer sexual behaviours and used protection during intercourse with vaginal penetration more frequently, which is also consistent with the results of another Slovenian study (Jeriček Klanšček et al., 2019). Conversation can be used as an effective way of providing information and knowledge that enables adolescents to improve their sexual literacy and make safer decisions related to their sexual behaviours. Talking to parents about this topic has a very positive impact and also prevents psychological problems such as suicide (St. George et al., 2022). As parents play a crucial role in the formation of values and behaviours of adolescents that affect sexual health, they need to be provided the necessary support (Ashcraft & Murray, 2017). This has already been proven by a Slovenian study among primary school pupils (Pivač & Kalender Smajlović, 2018). It would also be necessary to explore the area of adolescents' preferred interlocutors on the topic of sexuality and to empower them for this role.

Based on the responses received, we conclude that the proportion of sexually active adolescents might be higher than that reported by Jeriček Klanšček et al. (2019) found. At this point, it should be emphasised that it is necessary to explore adolescents' understanding of sexual intercourse, as protection against sexually transmitted infections is necessary not only during vaginal intercourse, but also during other forms of sexual activity.

Respondents expressed the wish to receive information on sexuality from health professionals in the school environment. In Slovenian schools, nurses are already engaged in sexuality education and revised preventive health programmes. Their effectiveness and the educational content delivered should be monitored and adapted according to the identified needs of adolescents. They should also be meaningfully integrated into educational programmes to improve the quality of sexuality education for adolescents. Moreover, research has also emphasised the need for monitoring the effectiveness of each form and topic of sexuality education (Feldman Farb & Margolis, 2016). Nurses working in communities or schools can be successful providers of sexuality education (Pavelová et al., 2021). They can promote peer-to-peer information and learning, which can have a positive effect on young people whose familiarity with the topic allows for more efficient discussions, greater ease and more detailed and important questions that they are afraid to ask adults (Benton et al., 2020).

Our study has certain limitations. The student survey was carried out towards the end of the school year when most of the learning process was conducted remotely. This may have had a negative impact on students' motivation to complete the questionnaire and may have resulted in a lower response rate. Some of the answers to the open-ended questions were meaningless, which could indicate that some of the answers were insincere and that the topic of sexuality is still taboo among adolescents. The use of online surveys also has limitations in terms of providing a controlled environment and ensuring reliability of the collected data. Due to the small sample of respondents, our results cannot be generalised to the entire Slovenian population of first-year upper secondary school students.

Based on our findings, we recognise the need to investigate the sexual (health) literacy among Slovenian adolescents in more detail. This can provide an important starting point for revising and adapting the content of health education in the field of sexuality. To achieve better results, the advantages of available digital technologies should be utilised. If we take into account the rapid digitalisation of the world and the omnipresence of young

people in the virtual environment, we must emphasise the need to constantly adapt the methods of providing information and sexuality education in general. By involving nurses in the interdisciplinary development of digital educational tools and taking into account the constant changes in the digital environment, we can better meet young people's needs and expectations related to sexuality education.

Conclusion

The results of our study highlight the main challenges in the field of adolescent sexual health promotion, which require the adoption of specific measures in collaboration with nurses, midwives and teachers. According to our respondents, nurses working in the school environment are an important and desirable source of information. First-year secondary school students have some knowledge about sexuality, but they do not always opt for safe sexual behaviours. As they expressed an interest in acquiring more information and knowledge about sexuality, it is necessary to upgrade the educational content in existing primary and secondary education programmes with content on sexual health and deliver it in thought-provoking and individually adapted ways. Secondary school students believe that school nurses are an important and desirable source of information on safer sex for students, also through individual counselling. Teaching in gender-separated groups has been reported as successful in the context of sexuality education. It would therefore be sensible to investigate its efficiency in the Slovenian environment as well.

In order to improve students' sexual literacy, it would also be advisable to utilise available digital educational technologies. Since technology and the internet are close to young people and are also their main sources of information on sexuality, professionals should invest more efforts into information provision and health education through digital media in combination with face-to-face teaching activities, for which educators need to acquire the necessary skills.

Comprehensive sexuality education for adolescents needs to be researched and developed in interdisciplinary teams. To this end, nurses working in these fields should acquire the necessary digital competences and actively participate in the design of digital tools and content tailored to the needs of students.

Slovenian translation/Prevod v slovenščino

Uvod

Otroci in mladostniki v procesu odraščanja pridobivajo znanja, spretnosti, vrednote in stališča, povezane s človeškim telesom, vključno z intimnimi odnosi in spolnostjo, kar lahko imenujemo spolni razvoj (Bonjour & van der Vlugt, 2018). Spolnost je del človekove osebnosti, njeno doživljanje in izražanje pa sta preplet bioloških, psiholoških in sociokulturnih dimenzij življenja (Greenberg et al., 2014). S spolno vzgojo, ki je opredeljena kot učenje o kognitivnih, čustvenih, socialnih, interaktivnih in fizičnih vidikih spolnosti (European Expert Group on Sexuality Education, 2016), lahko otrokom in mladostnikom postopoma posredujemo prave informacije, jih spodbujamo k pridobivanju spretnosti in oblikovanju pozitivnih vrednot, s čimer jih opolnomočimo, da razumejo in uživajo v spolnosti, imajo varne in izpolnjujoče se intimne odnose ter prevzemajo odgovornost za spolno zdravje in dobro počutje sebe in drugih (WHO Regional Office for Europe & Bundeszentrale fur gesundheitliche Aufklarung, 2010; European Expert Group on Sexuality Education, 2016). S spolno vzgojo lahko dosežemo boljšo spolno zdravstveno pismenost. Spolno zdravstveno pismena je tista oseba, ki ima znanje in sposobnosti za dejanja, s katerimi dosega spolno zdravje in dobro počutje (Herdt & Polen - Petit, 2020). Prav tako ima sposobnost dostopanja in razumevanja informacij o spolnem zdravju ter ima spretnosti za njihovo kritično oceno, pozna pravice, spolnost, seksualnost, seks in medsebojne odnose. Zna ustrezno reagirati, da si zagotovi podporo in zagovorništvo o spolnem zdravju in pravicah, povezanih s tem (Waling et al., 2022).

Nadgrajena opredelitev celostne spolne vzgoje opredeljuje osem ključnih konceptov oziroma tem: a) odnosi; b) vrednote, pravice, kultura in seksualnost; c) razumevanje spola; d) nasilje in varnost; e) spretnosti za krepitev zdravja in dobrega počutja; f) človeško telo in razvoj; g) seksualnost in seksualno vedenje in h) seksualno in reproduktivno zdravje. Prenovljena opredelitev celostne spolne vzgoje daje poudarek na njenem prispevku k uresničevanju ciljev trajnostnega razvoja (Herat et al., 2018).

Spolna vzgoja se pogosto izvaja v šolskem okolju, zato da izboljša spolne zdravstveno in tudi reproduktivno pismenost mladostnikov. To pozitivno učinkuje na poznejši začetek in manj pogoste spolne odnose, manjše število spolnih partnerjev, manj pogosta tveganja spolnega vedenja ter pogostejšo uporabo kondomov in ostale kontracepcije (United Nations Educational Scientific and Cultural Organization [UNESCO], 2018). To vpliva tudi na manjšo pogostost najstniških nosečnosti in splavov ter manjšo incidenco spolno prenosljivih okužb (Goesling et al., 2014; Jefferson et al., 2021; Khodakarami, 2019). Slovenski raziskovalci so ugotovili, da so dijaki, ki so poslušali več vsebin spolne vzgoje, bolj pogosto uporabljali kontracepcijo, kot tisti, ki jim te vsebine niso bile podane. Poudarili so potrebo po sistemski umeščenosti vsebin spolne vzgoje v učne načrte (Žalar et al., 2013).

Šolsko okolje je prostor, v katerem se izoblikujejo tudi vrednote, odnosi in vedenja mladostnikov, zato tudi nudi dobre pogoje za (nad)gradnjo kompetenc

mladostnikov na področju spolnega zdravja in s tem povezanih odločitev, saj so intervencije zdravstvene vzgoje v šolskem okolju na tem področju lahko zelo učinkovite (Denford et al., 2017; Garzon - Orjuela et al., 2021).

V Evropi imajo najbolj kakovostno sodobno spolno vzgojo, ki je implementirana v učne načrte, na Švedskem, Norveškem in Nizozemskem že več kot 50 let (UNESCO, 2018). Vsebina in obseg spolne vzgoje mladostnikov se po svetu razlikuje. V nekaterih državah, kot je na primer Turčija, te vsebine niso obravnavane tako od učiteljev kot staršev, saj tema velja celo za grešno (Şirin Akça, 2020). V drugih okoljih (npr. Združene države Amerike) se mladostnike v okviru spolne vzgoje predvsem spodbuja k spolni vzdržnosti, v določenih delih Združenih držav Amerike tudi v preprečevanje spolno prenosljivih okužb, predvsem je poudarek na preprečevanju okužb z virusom humane imunske pomanjkljivosti (Denford et al., 2017; Santelli et al., 2017). Ugotovili so tudi, da se zmanjšuje delež mladostnikov, ki informacije s področja spolnosti dobijo od strokovnjakov. Tega primanjkljaja informacij pa ne nadomestijo starši, saj njihova vključenost v komunikacijo z najstniki o spolnosti ostaja nizka (Duberstein Lindberg et al., 2016).

V Sloveniji spodbujanje reproduktivnega zdravja in zdrave spolnosti poteka v šolskem okolju in v okviru zdravstvene obravnave (zdravstveni sistematski pregledi) (Kiphut & Hafner, 2019). V šolskem okolju poteka izobraževanje predvsem s ciljem poznavanja procesa razmnoževanja, delovanja spolnih organov, procesa oploditve. To je vključeno v učni načrt predmeta biologija že v osnovni šoli (Vilhar et al., 2011) in bolj poglobljeno v času srednješolskega izobraževanja, predvsem v gimnaziji (Vilhar et al., 2008). Za spodbujanje vzgoje za zdravje na področju spolnosti mladostnikov so bila razvita različna gradiva (Kiphut & Hafner, 2019). Zdravstvenovzgojne vsebine s področja spolnosti podajajo tudi medicinske sestre v okviru nadgrajenih preventivnih dejavnosti v šolskem okolju (Pucelj, 2019). Cilj teh prenovljenih zdravstvenovzgojnih dejavnosti je, da mladostniki nadgradijo poznavanje zgradbe in delovanja spolnih organov z lastnim razmišljanjem, razumevanjem stališč in vrednot drugih ter celostnega poznavanja spolnosti ne samo s fiziološkega vidika (Kiphut & Hafner, 2019).

Vsebine izobraževanj dijakov o spolnosti so interdisciplinarne, vendar jih v osnovnih in srednjih šolah pogosto podajajo učitelji, ne glede na to, koliko so na tem področju kompetentni ali kakšen imajo odnos do teh tem (WHO Regional Office for Europe & Bundeszentrale für gesundheitliche Aufklärung, 2013). Na uspešnost implementacije spolne vzgoje v šolah lahko vpliva spolna usklajenost učiteljev in dijakov, izvajanje v skupinah, ločenih po spolu, z uporabo terminologije prilagojene zrelosti dijakov, ustrezno okolje, dovolj časa, usposobljenost učiteljev in njihova pripravljenost za pogovor o tabu temah (npr. o spolni usmerjenosti) ter sama izvedba: pravila vedenja in možnost postavljanja vprašanj (Rose et al., 2019). V Združenih državah Amerike kar 21 % deklet in 35 % dečkov ni prejelo nobene informacije o kontracepciji pred začetkom spolne aktivnosti – niti od staršev niti od strokovnjakov, poročajo celo o upadu deleža najstnikov, ki so prejeli informacije (Duberstein Lindberg et al., 2016). V Sloveniji je spolno aktivnih okoli 20,3 % 15-letnikov, njihova spolna aktivnost se je v zadnjih petnajstih letih znižala. Predvsem so bili spolno aktivni fantje. Večina jih je pri zadnjem spolnem odnosu uporabila zanesljivo zaščito pred nosečnostjo (73,7 %) oziroma kondom (71 %) (Jeriček Klanšček et al., 2019), kar je višje tako od evropskega kot kanadskega povprečja (61 %) (Inchley et al., 2020). V raziskavi »Z zdravjem povezano vedenje mladostnikov« v letu 2018 so prav tako ugotovili, da kar 23 % 15-letnikov obeh spolov v Sloveniji pri prvem spolnem odnosu ni imelo nobene zaščite, kar je za 2-odstotni točki nižje v primerjavi z drugimi državami Evrope in Kanade (Inchley et al., 2020).

Namen in cilji

Namen raziskave je bil oceniti znanje dijakov prvih letnikov v osrednji Sloveniji o spolnosti, izkušnje s spolnostjo in ugotoviti njihove vire informacij o spolnosti. Raziskovali smo tudi preferenčne vire informacij o spolnosti po mnenju mladostnikov. Oblikovali smo štiri hipoteze:

H1: Dijakinje prvih letnikov imajo boljše znanje o spolnosti v primerjavi z dijaki.

H2: Gimnazijci/-ke prvih letnikov imajo boljše znanje o spolnosti, kot dijaki/-nje poklicnega in strokovnega izobraževanja.

H3: Dijaki/-nje prvih letnikov, ki so se več pogovarjali/-e o temah v povezavi s spolnostjo, kažejo boljše znanje o spolnosti.

H4: Dijaki/-nje prvih letnikov, ki so se v preteklosti več pogovarjali/-e o temah v povezavi s spolnostjo, izbirajo bolj varno spolno vedenje.

Metode

Uporabili smo kvantitativno, neeksperimentalno in deskriptivno metodo, podatke smo zbirali s spletnim vprašalnikom.

Opis instrumenta

Vprašalnik sestavlja 27 vprašanj, od tega jih je 12 zaprtega in pet odprtega tipa. Pri oblikovanju vprašalnika smo vključili vsebine, ki naj bi jih mladostniki dobili v okviru spolne vzgoje in pri predmetu biologija (Kiphut & Hafner, 2019; Pucelj,

2019; Vilhar, 2008, 2011), ter rezultate predhodnih raziskav (Jeriček Klanšček et al., 2019) in pregleda literature. Vprašalnik je razdeljen na demografijo (starost, spol, stopnja izobraževanja) in štiri vsebinske dele. Prvi vsebinski del se osredini na vire informacij o spolnosti, pri čemer so anketiranci odgovore podali na štiristopenjski lestvici (od nič do zelo veliko informacij). Podali so tudi odgovore o pogostosti in lokacijah ogledovanja pornografskih vsebin na spletu ter o vsebini in pogostosti pogovorov o različnih temah o spolnosti. Drugi del vsebuje sedem vprašanj v obliki kviza za oceno znanja o spolnosti: ovulacija, menstruacija, učinkovitost kontracepcije, posledice spolno prenosljivih okužb in vrste tvganih spolnih odnosov. Vsak pravilen odgovor je bil ocenjen z eno točko, nepravilni odgovori se niso upoštevali. Končni seštevek doseženih točk (maksimalno 17 točk) je pokazal znanje dijakov o spolnosti. Tretji del vprašalnika vsebuje vprašanja, ki se navezujejo na izkušnje anketirancev s spolnostjo: odziv v primeru spolno prenosljive okužbe, ali so že imeli spolne odnose in o uporabi zaščite. Zadnji del vprašalnika se nanaša na preference o viru informacij in novih znanjih o spolnosti.

Vprašalnik smo poslali v pilotno testiranje desetim srednješolcem in smo ga dopolnili na osnovi pridobljenih povratnih informacij. Nadgradnja vprašalnika je bila v smeri izboljšanja razumljivosti vprašanj za anketirance.

Opis vzorca

Obravnavana populacija raziskovanja so bili dijaki prvih letnikov srednjih šol v osrednjeslovenski regiji, stari od 15 let do 18 let in so bili v šolskem letu 2020/21 redno vpisani v katerikoli srednješolski izobraževalni program. Število dijakov, rojenih v letih 2003–2006, ki so na dan 15. 6. 2021 bili redno vpisani v 1. letnik v katerikoli srednješolski izobraževalni program v osrednjeslovenski regiji, je bilo 6119 (Ministrstvo za vzgojo in izobraževanje, 2023). V analizo smo vključili podatke iz 201-ga ustrezno izpolnjenega vprašalnika. Anketiranci so bili stari med petnajst let in sedemnajst let ($\bar{x}$ = 15,7), prevladovale so ženske (n = 109,5 %) in gimnazijci (n = 134, 7 %) (Tabela 1).

Tabela 1: *Demografske značilnosti anketirancev*

Spremenljivka		***n***	***%***
Starost	15 let	74	37
	16 let	115	57
	17 let	12	6
Spol	ženski	109	54
	moški	84	42
	drugo	8	4
Izobraževalni program	nižji poklicni	3	1
	srednji poklicni	14	7
	srednji strokovni/ tehniški	50	25
	gimnazija	134	67

Legenda: n – število; % – odstotek

Opis poteka raziskave in obdelave podatkov

Prošnjo za sodelovanje z vabilom za dijake in povezavo do spletnega vprašalnika smo poslali na vse javno dostopne elektronske naslove srednjih šol v osrednjeslovenski regiji. Vodstvo posamezne šole, ki se je strinjalo s sodelovanjem dijakov v raziskavi, je soglasje podalo s tem, da je posredovalo vabilo in povezavo do vprašalnika dijakom prvih letnikov. V anketiranje smo vključili samo tiste dijake, ki so bili starejši od 15 let zaradi možnosti samostojne privolitve v anketiranje. Spletni vprašalnik je bil odprt od 6. 6. 2021 do 6. 7. 2021. Za razvoj, oblikovanje, tehnično izdelavo spletnega vprašalnika in izvedbo anketiranja je bila uporabljena odprtokodna aplikacija 1KA (2021).

Podatke smo analizirali s programom SPSS Statistic, verzija 25. (SPSS Inc., Chicago, IL, ZDA). Za posamezne spremenljivke smo izračunali osnovne statistične parametre, kot so povprečna vrednost, mediana, standardni odklon in odstotkovne deleže. Za preučevanje razlik v povprečjih dveh neodvisnih skupin glede na razmernostno spremenljivko je bil v primeru normalno porazdeljenih podatkov uporabljen t-test za dve neodvisni spremenljivki ali Mann-Whitneyjev U-test v primeru nenormalno porazdeljenih podatkov. Za preverjanje normalnosti porazdelitve podatkov smo uporabili Kolmogorov-Smirnov test. Test hi-kvadrat smo uporabili pri statistični analizi nominalnih oziroma ordinalnih spremenljivk (deležev). Za moč povezanosti med posameznimi spremenljivkami smo uporabili Cramerjev α koeficient, ki je v vrednosti $0{,}05 \leq \alpha \leq 0{,}3$ poročal o šibki povezanosti, v vrednosti $0{,}3 \leq \alpha \leq 0{,}6$ o srednje močni povezanosti in v primeru $0{,}6 \leq \alpha \leq 1$ o močni povezanosti (Telford et al., 2019). Meja statistične značilnosti je postavljena pri p = 0,05.

Rezultati

Za najpogostejši vir informacij o spolnosti so anketiranci na štiristopenjski lestvici ocenili splet, prek katerega je zelo veliko oziroma veliko informacij dobilo 67,0 % (n = 122) anketirancev. Pogost vir informacij predstavljajo tudi prijatelji, saj je pri njih zelo veliko ali veliko informacij dobilo 60,4 % (n = 110) anketirancev. Srednje pogosti vir informacij o spolnosti so starši in drugi družinski člani. Anketiranci so navedli, da so najmanj informacij (malo ali nič) dobili od učiteljev (71,9 %, n = 122) in zdravstvenih delavcev (70,3 %, n = 128).

Polovica anketirancev (49,4 %, n = 89) je odgovorila, da si nikoli ali skoraj nikoli ne ogledujejo pornografskih vsebin na spletu, medtem ko je 28,3 % (n = 51)

odgovorilo, da to počnejo pogosto (nekajkrat tedensko) ali redno (skoraj) vsak dan. Kar 170 anketirancev je odgovorilo, da se o spolnih odnosih s komerkoli pogovarjajo nič ali malo. Pri tistih, ki se pogovarjajo o spolnosti, je najpogostejša tema pogovora vaginalna penetracija (n = 130, 76,5 %), sledi božanje (angl. *petting*), (n = 123, 72,4 %), oralni seks (n = 11, 66,5 %), digitalne oblike (n = 104, 61,2 %) in najmanj analen seks (n = 89, 57,7 %).

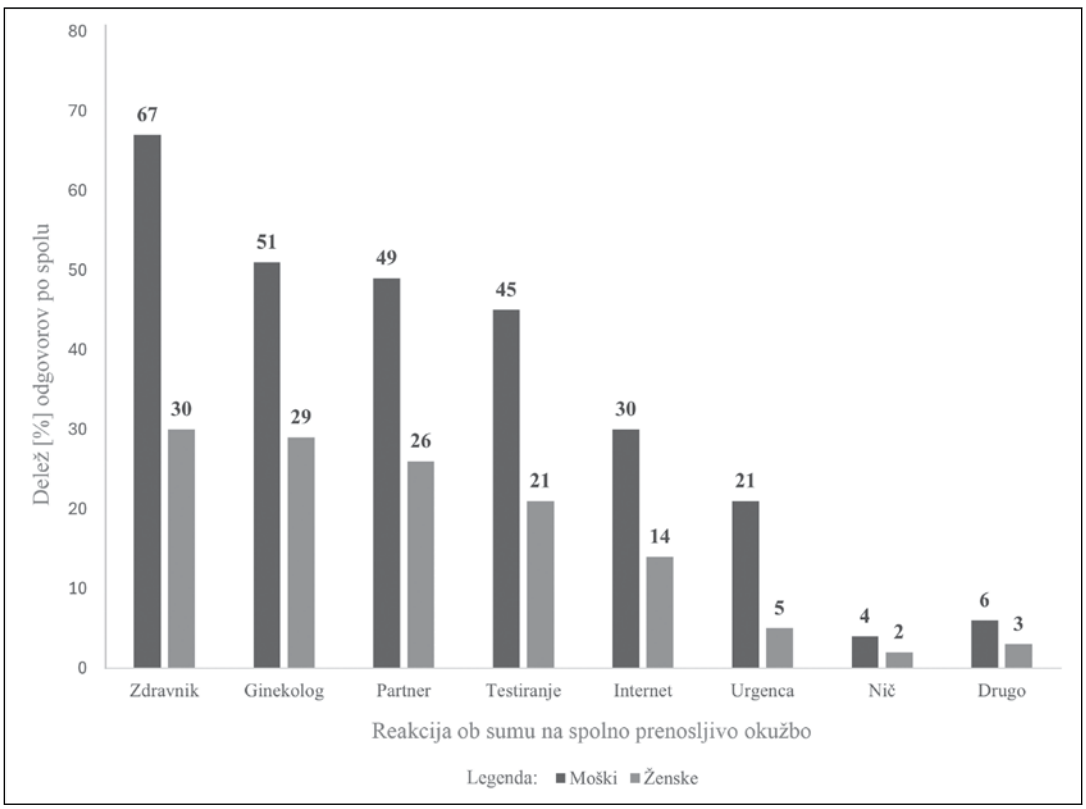
Na vprašanje, ali se s kom pogovarjajo o tem, kako poteka spolnost pri osebah LGBTIQ+ (lezbijke, geji, biseksualci, transseksualci, interspolne osebe, queer osebe in drugi), je kar 56,8 % (n = 96) anketirancev odgovorilo, da se o tem ne pogovarjajo. najpogosteje so se o tej temi pogovarjali gimnazijci (74,0 %).

Anketirance, ki so imeli izkušnje s spolnostjo, smo vprašali, kaj vse bi storili v primeru suma, da so zboleli za spolno prenosljivo okužbo (Slika 1). Odgovorilo je 149 anketirancev (74,1 %). Največ anketirancev je odgovorilo, da bi se o mogoči spolno prenosljivi okužbi posvetovali z osebnim zdravnikom (n = 93, 62,4 %) ali ginekologom (n = 80, 53,7 %). Manj kot pol bi se jih pogovorilo s svojim/-i spolnim/-i partnerjem/partnerji (n = 73, 49,0 %) ali se testiralo (n = 63, 42,3 %). Nekateri bi iskali informacije na spletu (n = 41, 27,5 %) ali obiskali urgenco (n = 24, 16,1 %), šest jih ne bi storilo nič. Kot drugo pa sta po dva navedla, da bi storila samomor in sledil je pogovor s starši ter eden je navedel hitro ukrepanje brez specifične opredelitve.

O izkušnjah s spolnim odnosom z vaginalno penetracijo je odgovorilo 149 anketirancev. Spolno aktivnih je bilo 22,8 % (n = 34) anketirancev, enajst anketirancev na to ni odgovorilo. Spolno aktivnost je potrdilo 38 % anketirancev s tehničnih in poklicnih šol ter 17 % z gimnazije. Gimnazijci/-ke imajo statistično značilno manj spolnih odnosov z vaginalno penetracijo v primerjavi z dijaki/-njami ostalih srednjih šol (χ^2 = 7,863, df = 1, p = 0,005). Spolno aktivne anketirance smo vprašali tudi o uporabi zaščite, odgovorilo jih je 34. Največ (n = 21, 61,8 %) jih je navedlo, da so uporabili zaščito (večina kondom, n = 18), eden na to ni želel odgovoriti.

O izkušnjah z drugimi oblikami spolnih odnosov (analni, oralni, dotikanje, božanje) je odgovorilo 148 anketirancev. Skoraj tretjina (n = 47, 31,8 %) je potrdila to vrsto spolne aktivnosti, 15 jih ni želelo odgovoriti. Samozadovoljuje se 50,7 % (n = 75) anketirancev, predvsem fantov (n = 49, 65,3 %), 18,9 % (n = 28) jih ni odgovorilo.

Vse anketirance smo vprašali tudi o preferencah vira informacij o spolnosti in njenem varnem prakticiranju. Največ (n = 90, 61,2 %) bi jih želelo pridobivati informacije od zdravstvenih delavcev, manj kot pol od prijateljev (n = 67, 45,6 %), okvirno tretjina od staršev (n = 46, 31,3 %), nekoliko manj na spletu (n = 41, 27,9 %), le dobra četrtina od učiteljev



Slika 1: *Reagiranje ob sumu na spolno prenosljivo okužbo*

Tabela 2: *Količina pogovora in znanje o spolnosti*

Tema pogovora	*Količina pogovora*	*Točke*	*s*	*Me*	*U*	*p*
vaginalna penetracija	malo	8,44	2,992	9,00	1764,000	0,013
	nič	6,76	3,250	8,00		
analni seks	malo	8,76	2,579	9,00	2389,500	0,003
	nič	7,09	3,547	8,00		
oralni seks	malo	8,61	2,739	9,00	2264,000	0,010
	nič	6,96	3,559	8,00		
božanje	malo	8,21	3,039	9,00	2529,000	0,582
	nič	7,64	3,345	8,00		
digitalne oblike spolnosti	malo	8,61	2,689	9,00	2445,000	0,010
	nič	7,19	3,558	8,00		

Legenda: s – standardni odklon; Me – mediana; U – Mann-Whitneyjev U-test; p – statistična značilnost

(n = 39, 26,5 %). Kot druge vire so štirje anketirani navedli, da od nobenega vira, ostala dva smiselna odgovora sta bila partner in polsestra.

Informacije o varni spolnosti v okviru šole anketiranci želijo dobiti od zunanjih predavateljev (n = 88, 60,3 %), tretjini je vseeno (n = 51, 34,9 %) in le redki (n = 7, 4,8 %) od učiteljev.

Znanje o spolnosti anketirancev se razlikuje glede na spol: dijakinje so v povprečju dosegle 8,64 točk (s = 3,079, Me = 9,00), dijaki so v povprečju dosegli 7,28 točk (s = 3,143, Me = 8,00) od skupno 17 možnih točk. Zaradi nenormalne porazdeljenosti podatkov smo uporabili Mann-Whitneyjev U-test. Glede na pridobljene rezultate sklepamo, da imajo srednješolke statistično značilno boljše znanje o spolnosti kot srednješolci (U = 2257,500, p = 0,003).

Znanje o spolnosti anketiranih dijakov se razlikuje glede na vrsto srednješolskega izobraževanja: gimnazijci/-ke so v povprečju dosegli/-e 8,61 točk (s = 2,764, Me = 9,00), dijaki/-nje ostalih srednjih šol pa 6,80 točk (s = 3,546, Me = 6,50). Zaradi nenormalne porazdeljenosti podatkov smo uporabili Mann-Whitneyjev U-test. Glede na rezultate sklepamo, da imajo gimnazijci statistično značilno boljše znanje o spolnosti, kot jih imajo dijaki ostalih srednjih šol (U = 1943,500, p = 0,001).

Dijaki/-nje, ki so se v preteklosti več pogovarjali/-e o posameznih temah, ki so povezane s spolnostjo, izkazujejo boljše znanje o spolnosti. Nobeden/-a od dijakov/-inj pri tem vprašanju ni izbral/-a odgovora »veliko«, zato smo spremenljivko dihotomno preoblikovali. Glede na nenormalne porazdeljenosti podatkov smo uporabili Mann-Whitneyjev U-test, rezultate prikazuje Tabela 2. Cronbachov α koeficient zanesljivosti tega vprašanja je bil 0,836, kar pomeni dobro zanesljivost (Telford et al., 2019).

Dijaki/-nje, ki so se več pogovarjali/-e o spolnih temah, razen o božanju, so dosegli/-e statistično značilno več točk na kvizu o spolnosti. Pri ugotavljanju razlik glede na izkušnjo z vaginalno penetracijo in drugimi oblikami spolnih odnosov smo zaradi nenormalnosti porazdelitve podatkov v obeh primerih uporabili Mann-Whitneyjev U-test. Podatki pri spremenljivki, ki je preverjala uporabo zaščite, so bili normalno porazdeljeni, zato smo uporabili t-test neodvisnih vzorcev. Število doseženih točk na kvizu o spolnosti ni pokazalo statistično značilnih razlik pri odgovorih o izkušnjah spolnega odnosa s penetracijo (U = 1641,500, p = 0,529), uporabi zaščite ($t_{(31)}$ = 0,827, p = 0,415) in izkušnjah z drugimi oblikami spolnosti (U = 1942,500, p = 0,710).

Diskusija

Z raziskavo smo ugotavljali stopnjo spolne zdravstvene pismenosti dijakov prvega letnika v osrednjeslovenski regiji. Anketiranci najpogosteje iščejo informacije o spolnosti na spletu. Do podobnih ugotovitev so prišli tudi drugi raziskovalci (Gonzalez-Ortega et al., 2015). Vendar je treba poudariti, da so informacije na spletu lahko problematične, saj so lahko nestrokovne, nenatančne, zastarele in zavajajoče. Pogosto spletne objave sponzorirajo različni proizvajalci (Madden et al., 2016) in ne neodvisni strokovnjaki. Kljub temu pa ima široka raba spleta tudi svoje prednosti. Zato je nujno, da spodbujamo varno in kritično rabo tega vira informacij. Z uporabo digitalnih tehnologij lahko spodbudimo mladostnike k izboljšanju spolnega zdravja. Digitalne storitve morajo spodbujati k proaktivnosti in biti personalizirane (Wong et al., 2021), saj mladostniki, čeprav so digitalni domorodci, nimajo enake ravni digitalnih kompetenc. Prav tako je pomembna tudi kakovost posredovanih informacij in zagotovljena mora biti varna digitalna komunikacija (Patterson et al., 2019). V okviru strokovnih dejavnosti na tem področju je pomembno promovirati kakovostne spletne strani z informacijami o spolnosti, kot je npr. *#to sem jaz* (Nacionalni inštitut za javno zdravje, 2022), in tudi druge digitalne zdravstvene storitve na tem področju ter spodbujati njihov razvoj glede na potrebe mladostnikov.

Ugotovili smo, da imajo prijatelji ključno vlogo kot pomemben vir informacij o spolnosti, kar je skladno z ugotovitvami raziskave na Kitajskem (Fang et al.,

2022). Kot so ugotovili v različnih raziskavah, so srednješolski učitelji za mladostnike lahko pomemben vir informacij v zvezi s spolnostjo (Fang et al., 2022; Liškova et al., 2019; Ramirez - Villalobos et al., 2021). Vendar se s tem naše ugotovitve ne ujemajo, saj v našem okolju učitelji ne izvajajo spolne vzgoje in niso prepoznani kot pomemben vir informacij. Za boljšo spolno pismenost mladostnikov bi bilo smiselno razmisliti o izobraževanju učiteljev na tem področju ali zagotoviti druge vire informacij, kot so medicinske sestre, ki so vključene v izobraževalni proces.

Ugotovili smo, da imajo srednješolke boljše znanje o spolnosti v primerjavi s srednješolci, kar potrjuje našo prvo hipotezo in je skladno z ugotovitvami nekaterih raziskav (Fang et al., 2022). Vendar druge raziskave ne ugotavljajo razlik v znanju glede na spol (Phongluxa et al., 2020), kar bi bilo lahko kulturno pogojeno. Srednješolci so tudi prej spolno aktivni, kot so srednješolke, zato bi morali posvetiti več pozornosti zagotavljanju informacij in spolni vzgoji, ki je usmerjena k moški populaciji. Promocija spolnega zdravja mladostnikov je tudi bolj uspešna, če je ločena po spolu (Rose et al., 2019). V okviru sistematskih zdravstvenih pregledov mladostnikov v Sloveniji se izvajajo tudi zdravstvenovzgojne delavnice o spolnosti. Če bi po zgledu iz drugih okolij izvajali več promocij spolnega zdravja v šolskem okolju, bi bilo to smiselno vsebinsko in organizacijsko prilagoditi.

Glede na naše ugotovitve imajo gimnazijci/-ke prvih letnikov boljše znanje o spolnosti v primerjavi z dijaki/-njami poklicnega in strokovnega izobraževanja, kar potrjuje našo drugo hipotezo. Prav tako smo ugotovili, da se gimnazijci in gimnazijke več pogovarjajo o spolnosti in pridobivajo več informacij in znanja, kar lahko prispeva k njihovi boljši spolni pismenosti. Pomembno je, da omenimo, da je v slovenskih gimnazijah večji delež gimnazijk v primerjavi s poklicnim in strokovnim izobraževanjem, kjer je več dijakov (Statistični urad Republike Slovenije, 2022). Ker so preddispozicijski dejavniki, ki vplivajo na splošno zdravstveno pismenost, tudi spol, starost in izobrazba (Lee et al., 2017), je to lahko vplivalo na rezultate raziskave. Zdravstvenovzgojne intervencije na tem področju bi bilo treba prilagoditi tudi glede na vrsto izobraževanja mladostnikov.

V naši raziskavi smo ugotovili, da tisti anketiranci, ki so se več pogovarjali o temah v povezavi s spolnostjo, kažejo boljše znanje na tem področju, kar delno potrjuje tretjo hipotezo. Opazili smo, da se količina pogovora o posamezni temi o spolnosti statistično značilno razlikuje v povezavi s količino znanja, razen v primeru teme božanje.

Potrdili smo tudi četrto hipotezo, saj so se tisti anketiranci, ki so se več pogovarjali o spolnosti, pogosteje odločali za bolj varno spolno vedenje in so pogosteje uporabili zaščito pri spolnih odnosih z vaginalno penetracijo, kar je skladno z ugotovitvami tudi v drugi slovenski raziskavi (Jeriček Klanšček et al., 2019). Pogovor lahko koristi kot učinkovit način pridobivanja informacij in znanja, kar mladostnikom omogoča, da lahko izboljšajo svojo spolno pismenost in sprejemajo odločitve za bolj varno spolno vedenje. Pogovor s starši o tej temi zelo pozitivno vpliva in preprečuje tudi psihične težave, kot je samomorilnost (St. George et al., 2022). Zaradi pomembne vloge staršev pri oblikovanju mladostnikovih vrednot in vedenja, ki vplivajo na spolno zdravje, jih je treba pri tem podpreti (Ashcraft & Murray, 2017), kar je že bilo ugotovljeno v slovenski raziskavi med osnovnošolci (Pivač & Kalender Smajlović, 2018). Prav tako bi bilo področje zaželenih sogovornikov mladostnikov o spolnosti nujno raziskovati in jih opolnomočiti za njihovo vlogo.

Na osnovi pridobljenih odgovorov smo ugotovili, da je lahko spolno aktivnih več mladostnikov, kot so to ugotovili Jeriček Klanšček et al. (2019). Pri tem je treba poudariti, da je treba raziskovati, kaj razumejo mladostniki kot spolni odnos, saj je zaščita pred spolno prenosljivimi okužbami nujna tudi pri drugih oblikah spolnih odnosov, ne samo pri vaginalnih.

Anketiranci želijo pridobivati informacije v povezavi s spolnostjo od zdravstvenih delavcev v šolskem prostoru. Delovanje medicinskih sester v slovenskem šolskem okolju je na področju spolnosti že prisotno in dopolnjeno v nadgrajenih preventivnih programih. Spremljati bi bilo treba njihovo učinkovitost in vsebine ter način prilagajati glede na ugotovljene potrebe srednješolcev ter jih smiselno umestiti v učne programe, s čimer bi lahko dosegli veliko boljšo spolno vzgojenost mladostnikov. Raziskovalci poudarjajo, da je treba spremljati učinkovitost posameznih oblik in vsebin spolne vzgoje (Feldman Farb & Margolis, 2016). Medicinske sestre, ki delujejo v skupnosti ali v šolah, so uspešne izvajalke spolne vzgoje (Pavelová et al., 2021). Spodbujale bi lahko medvrstniško informiranje in učenje, ki lahko prispevata k pozitivnim učinkom na mladostnike, saj tematiko zelo dobro poznajo, hitreje se razvije poglobljena debata, so bolj sproščeni in postavljajo bolj podrobna in njim pomembna vprašanja, ki jih odraslim ne upajo zastaviti (Benton et al., 2020).

Naša raziskava ima nekaj omejitev. Anketiranje dijakov se je izvajalo proti koncu šolskega leta, v katerem se je pouk večino izvajal na daljavo, kar je verjetno vplivalo na manjšo motivacijo za izpolnjevanje vprašalnika, zato je bil verjetno posledično slabši odziv. Nekateri odgovori na odprta vprašanja so bili nesmiselni, kar lahko kaže, da so lahko bili nekateri odgovori neiskreni in je tematika spolnosti med mladostniki še vedno tabuizirana. Uporaba spletnega anketiranja ima tudi omejitve pri zagotavljanju kontroliranega okolja in s tem zagotavljanja večje zanesljivosti zbranih podatkov. Zaradi majhnega vzorca anketirancev pa naše ugotovitve ne moremo posplošiti na celotno slovensko populacijo dijakov prvega letnika.

Na podlagi naših ugotovitev prepoznavamo nujnost poglobljenih raziskav o spolni (zdravstveni)

pismenosti med slovenskimi mladostniki. To je lahko ključno izhodišče za posodabljanje in prilagajanje vsebin zdravstvene vzgoje na področju spolnosti. Za boljše rezultate bi bilo treba izkoristiti prednosti razpoložljive digitalne tehnologije. Če upoštevamo hitro digitalizacijo sveta in vseprisotnost mladostnikov v virtualnem okolju, je treba poudariti nujnost stalnega prilagajanja metod posredovanja informacij in spolne vzgoje. Z vključitvijo medicinskih sester v interdisciplinarni razvoj izobraževalnih digitalnih orodij in upoštevanjem nenehnih sprememb v digitalnem okolju bomo lahko bolje uresničili potrebe in pričakovanja mladih pri njihovi spolni vzgoji.

Zaključek

Na podlagi ugotovitev naše raziskave smo poudarili ključne izzive, ki zahtevajo ukrepe v sodelovanju različnih akterjev, predvsem medicinskih sester, babic in učiteljev na področju spodbujanja spolnega zdravja mladostnikov. Po mnenju dijakov so medicinske sestre, ki delujejo v šolskem okolju, pomemben in zaželen vir informacij. Dijaki prvih letnikov imajo nekaj znanja o spolnosti, vendar ne izbirajo vedno varnih spolnih vedenj. Izkazali so zanimanje za pridobivanje informacij in znanj o spolnosti, zato bi bilo treba nadgraditi učne vsebine v obstoječih osnovnošolskih, kot tudi srednješolskih izobraževalnih programih z vsebinami o spolnosti in jih posredovati na zanimiv in individualno prilagojen način. Medicinske sestre, ki že delujejo v šolskem okolju, so po mnenju dijakov pomemben in zaželen vir informacij o varni spolnosti dijakom, lahko tudi v obliki individualnega svetovanja. Uspešno je poučevanje po spolu ločenih skupinah in glede na spolno ujemanje, uspešnost zadnje omenjenega bi bilo smiselno proučevati tudi v slovenskem prostoru.

Za izboljšanje spolne pismenosti dijakov bi bilo smiselno uporabiti razpoložljivo digitalno (izobraževalno) tehnologijo. Ker sta mladostnikom tehnologija in splet blizu ter sta tudi kot prevladujoči vir informacij o spolnosti, bi morali strokovnjaki več prizadevanj in dejavnosti usmeriti tako v posredovanje informacij kot tudi zdravstvenovzgojno delovanje po digitalnih medijih, združeno z delovanjem v razredih v neposrednem stiku z dijaki, za kar potrebujejo izvajalci ustrezna znanja.

Celostno spolno vzgojo mladostnikov je treba raziskovati in razvijati v interdisciplinarnih timih, zato bi tiste medicinske sestre, ki delujejo na teh področjih, morale pridobiti digitalne kompetence in aktivno sodelovati pri oblikovanju digitalnih orodij in vsebin, ki so prilagojene potrebam dijakov in dijakinj.

Conflict of interest/Nasprotje interesov

The authors declare that no conflicts of interest exist./Avtorji izjavljajo, da ni nasprotja interesov.

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Ethical approval/Etika raziskovanja

During our study, we took into account the principles of the Helsinki-Tokyo Declaration (World Medical Association, 2013) and the existing Slovenian legal framework (Kodeks etike v zdravstveni negi in oskrbi Slovenije, 2014; Univerza v Ljubljani, 2014). At the beginning of schooling, schools obtain consent for the processing of students' personal data (including for surveying purposes) for a period of one year or the entire duration of schooling. Students over the age of 15 can give independent consent to participate in the survey (*Družinski zakonik*, 2017, 146. člen), which they had expressed by clicking on 'Next Page' before filling out the online questionnaire./Pri raziskovanju smo upoštevali načela Helsinško-Tokijske deklaracije (World Medical Association, 2013) in obstoječe slovenske pravne podlage (Kodeks etike v zdravstveni negi in oskrbi Slovenije, 2014; Univerza v Ljubljani, 2014). Šole ob začetku šolanja za obdobje enega leta ali celotnega trajanja šolanja pridobijo soglasje za obdelavo osebnih podatkov dijakov tudi za izvajanje anketiranja. Dijaki po dopolnjenem 15. letu starosti lahko podajo samostojno privolitev za anketiranje (*Družinski zakonik*, 2017, 146. člen), ki so jo pred izpolnjevanjem izrazili tako, da so v spletnem vprašalniku kliknili na naslednjo stran.

Author contributions/Prispevek avtorjev

MŠ – Introduction, methods, results, discussion, conclusions, review and final approval of the paper./Uvod, metode, rezultati, diskusija, zaključki in pregled prispevka ter končna odobritev.

TK – Research conceptualisation, review and final approval of the paper./Konceptualizacija raziskave, pregled prispevka in končna odobritev.

MMK – Research conceptualisation, review and final approval of the paper./Konceptualizacija raziskave, pregled prispevka in končna odobritev.

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