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Students' Usefulness Perception of the Knowledge Acquired in the School Sexuality Education Course

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Abstract

Background: Comprehensive, science-based sexuality education (SE) is an integral part of health education. In the Polish education system, SE is mainly implemented as part of the subject 'Family Life Education'. However, its content, the conducting form and assessment by students arouse controversy and are numerous social and scientific discussions subject.

Purpose: The study aimed to explore the subjective assessment of the knowledge usefulness acquired during school SE in the opinion of adolescents.

Method: A survey among students aged 13–17 from schools in one region of western Poland was conducted using an online method in spring 2024 (N=9411). In a subgroup

of 5210 students declaring participation in SE classes, the determinants of their positive assessment were studied with the use of univariate and multivariate methods.

Findings: Among students who attended school SE, 37.5% stated that the knowledge they acquired was useful. In the multifactorial model of logistic regression, also the relationship was confirmed between the classes assessment of usefulness with the discussed subjects. What was particularly emphasized was the sexual orientation and STIs issues, where the highest OR factors were obtained. The results also point to a significant diversification of the usefulness assessment of the knowledge acquired during lessons depending on the gender, education stage, place of residence and declared wealth of the family.

Conclusion: Positive assessment of school SE is mainly correlated with the proper teacher preparation and the appropriate selection of topics. Meanwhile, demographic and social factors determine students' demand for specific issues related to sexuality.

Keywords: sexuality education, sources of sexuality education, health education, students, youth.

Introduction

Sexuality education is an integral component of health and psychosocial education of youth. The component is aimed at supporting development of competences necessary for making conscious, responsible and safe decisions within the scope of one's own sexuality. In the literature of the subject, it is emphasized that effective sexuality education contributes not only to reduction of risky sexual behaviors but also to forming positive attitudes towards reproductive health, gender equality and interpersonal relations (WHO, 2010).

Comparison of the WHO sexuality education standards with the situation in Poland proves a significant discrepancy between the recommendations of experts and realities of the school practice. In the international recommendations, sexuality is defined as a natural element of human development, and sexuality education should be reliable, based on scientific evidence, adapted to the age, and should favour a positive attitude towards body, identity and relations. Activating methods are recommended, e.g., discussions, teamwork, case studies and critical thinking. Sexuality education should be commenced as early as in kindergarten, and the content should be adapted to the level of the child's development, e.g., learning the names of body parts, personal bounda-

ries, emotions. The goal of sexuality education is to develop competences that enable young people to make conscious, responsible decisions pertaining to their sexuality (Dec-Pietrowska & Walendzik-Ostrowska, 2020).

In Poland, sexuality is often presented as an embarrassing or problematic topic. Polish sexuality education as a subject in schools until 2025 had its own name: Family Life Education (FLE). The curriculum of this subject in many cases avoided topics related to sexual orientation, masturbation or contraception and, in place of those, the curriculum is focused on conservative values and family in traditional terms. The classes were led in traditional methods (e.g., lecture or talk), teachers often lacked formal qualifications within the scope of sexuality education. There was no interactivity or space for asking questions. The subject was introduced as late as in grade four of primary school when many children are already in the puberty process. Some parents decided to opt their children out of the FLE classes so the children did not have any contact with sexuality education. The data from the Ministry of Education show that in the school year 2021/22, 29% of students of all schools and merely 15.9% of students of secondary schools attended FLE classes (Journal of Laws of 2022, Item 1575). Family Life Education (FLE) was replaced by Health Education starting on September 1, 2025. Considering the previous and current approaches to teaching sexuality education, now referred to as health education, it is important to monitor not only attendance at lessons but also their effectiveness.

The aim of this paper is an analysis of perception of school sexuality education classes as evaluated by the surveyed young people aged 13–17 who study in a western region of Poland. The emphasis was put on the factors that favour positive assessment of usefulness of these classes and on specific for both genders circumstances resulting in positive assessment.

Material and methods

The survey was carried out in Poland in April 2024. Invitations with the relevant documentation were sent to all primary and secondary schools from the Lubuskie Voivodship. The study was carried out during lessons via the Internet with the use of *Webankieta* application.

The study procedure and data collection was reviewed by the Research Ethics Committee at the University of Zielona Góra, Poland (Decision No. RCM-CM-KBUZ.031.39.2023, 17.11.2023).

Sample description

The final sample covered 9,411 students with 15.08 years ($SD=1.55$). The respondents were of grades 7 of primary schools and grades 1 and 2 of secondary schools, i.e., 30% of the population in this region. The sample was overrepresented by girls and students from the youngest age group. In the sample studied, 5,210 students (55,36%) participated in school sex education classes and were able to assess their usefulness (Mazur & Izdebski, 2025). The demographic structure of the sample is described in Table 1.

Tool

The whole questionnaire included 63 mostly closed-ended questions that were grouped into 11 thematic sections concerning health, quality of life and life style of youth, as well school sex education.

Firstly, students were asked whether they had attended FLE classes at school. All students answered questions about sources of knowledge about sexuality, and those who attended sex education classes assessed the scope and usefulness of these classes. Affluence was measured on the FAS scale (Family Affluence Scale) applied in the HBSC studies and described elsewhere (Currie et al., 2024) “title-short”: “The international Family Affluence Scale (FAS).

Statistical analysis

The assessment of usefulness of the school sexuality education classes was the primary dependent variable. The univariate analysis presents the total distribution of the answers to this question, in demographic and social groups, according to the preferred sources of knowledge and according to the topics covered in these classes. The general distributions were examined with weighted data to minimize the bias resulting from the structure of the sample obtained. A statistical analysis of contingency tables with the use of chi-square test, and with the inference based on standardized residuals. The Cramer's V was applied as an effect size measure. In the multifactorial analysis the binary logistic regression was applied where the dependent variable assumed value "1" for the positive assessment of the school classes, and "0" value for the combined negative-neutral assessment of the classes. The model was estimated using the hierarchical method, introducing the following endogenous variables: demographic and social features (model 1), sources of knowledge (model 2), subject matter of the classes (model 3). Then, gender specific models were estimated. The results of the estimation of logistic regression have been presented as odds ratio (OR) with 95% confidence interval (CI). As goodness-of-fit indicators pseudo R-squared Nagelkerke coefficients were assumed. Statistical Package for Social Sciences (SPSS) version 29 was used as the software. The significance level was assumed as $p < 0.05$.

Results

Usefulness of school education classes – univariate analyses

Among the 5210 students of schools in Lubuskie Voivodship in Poland who declared attendance to school sexuality education classes, more than one-third (37.5%) stated that the knowledge acquired during the classes was useful for them. The percentage of negative and neutral ratings was similar. (31.3% and 31.2%, respectively). The relation with gender and age (school grade) appeared

statistically significant. Boys more often than girls declared usefulness of the acquired knowledge, and they gave indecisive answers more seldom.

With age, the percentage of positive evaluations of sex education classes decreased, and the percentage of negative evaluations increased accordingly. When examining the relationship between the assessment of school sex education classes and family wealth, a tendency towards more positive assessments was found in less wealthy families ($p=0.053$).

Table 1. Assessment of usefulness of the knowledge acquired during lessons by students' gender, school grade and place of residence

	N (%)	Knowledge usefulness (%)			Chi-sq P
		YES	NO	Neither YES nor NO	
Total	5,210 (100.0)	37.5	31.3	31.2	
Gender					
Boys	2,236 (42.9)	42.8	30.3	26.9	53.56
Girls	2,974 (57.1)	33.5	32.1	34.4	<0.001
School grade					
Primary school Grade 7	2,281 (43.8)	40.8	27.1	32.1	58.32
Secondary school Grade 1	1,842 (35.4)	37.4	31.7	30.9	<0.001
Secondary school Grade 3	1,087 (20.9)	30.6	39.6	29.8	
Residence					
Big cities	985 (18.9)	34.1	35.2	30.7	22.65
Small towns	2,170 (41.7)	35.8	32.3	31.9	<0.001
Rural areas	2,055 (39.4)	40.9	28.4	30.7	
Wealth of family					
Low level	1,755 (34.2)	39.5	29.2	31.3	9.33
Average level	2,561 (50.0)	36.5	31.8	31.7	=0.053
High level	810 (15.8)	35.7	34.6	29.8	

*84 no data concerning wealth

Sources: Authors' research.

Table 2 presents the results of the analyses referring to the relation between the preferred sources of knowledge about human sexuality and the assessment of usefulness of the subject school classes. Students most often cited the In-

ternet as their source of knowledge about sexuality, followed by their parents. The proportions of positive, negative and neutral assessments were compared among the students who indicated a given source of knowledge (coded as +) and those who did not indicate it (coded as -). With reference to five sources of knowledge a statistically significant result was confirmed.

To sum up, the use of the Internet and books, guides or magazines involves a worse assessment of usefulness of knowledge about sexuality acquired at school whereas parents and friends as a source of such knowledge promote a better assessment of school classes.

Table 2. Assessment of usefulness of school classes by the sources of knowledge about health, puberty and, sexuality preferred by students (N=5,210)

Source of knowledge		N (%) YES	Usefulness of the knowledge acquired at school classes (%)			Chi-kw (p)
			NO	Neither YES nor NO		
Internet	+	3859 (74.1)	35.3	33.7	31.0	45.45
	-	1351 (25.9)	43.6	24.6	31.8	(<0.001)
Friends	+	1788 (34.3)	37.0	32.9	30.1	3.29
	-	3422 (65.7)	37.7	30.5	31.8	(0.193)
Sexuality education teacher (FLE teacher)	+	1107 (21.2)	57.8	13.6	28.6	297.27
	-	4103 (78.8)	32.0	36.1	31.9	(<0.001)
Another teacher, school counselor	+	201 (3.9)	47.8	15.4	36.8	24.90
	-	5009 (96.1)	37.0	32.0	31.0	(<0.001)
Parents	+	1822 (35.0)	41.7	25.1	33.2	51.91
	-	3388 (65.0)	35.2	34.7	30.1	(<0.001)
Physician	+	636 (12.2)	40.1	27.7	32.2	4.66
	-	4574 (87.8)	37.1	31.8	31.1	(<0.097)
Books, guides, magazines	+	763 (14.6)	32.5	37.2	30.3	16.05
	-	4447 (85.4)	38.3	30.3	31.4	(<0.001)
Siblings	+	356 (6.8)	34.5	35.7	29.8	3.43
	-	4854 (93.2)	37.7	31.0	31.3	(0.180)

Sources: Authors' research.

At the next phase of the analyses, the relation between the topics of the school classes and the assessment of the acquired knowledge was examined in a similar manner (Tab. 3). Most often, the lessons concerned puberty (83.7%), hygiene and health (64.1%), love and feelings (63.6%). In 11 cases taking to

Table 3. Assessment of usefulness of school classes according to topics of school sexuality education classes indicated by students (N=5210)

Topics of classes		% YES	Usefulness of knowledge from school classes (%)			Chi-kw (p)
			NO	Neither YES nor NO		
Puberty	+	4,359 (83.7)	40.0	26.5	33.5	294.93 (<0.001)
	-	851 (16.3)	24.5	56.3	19.2	
Love and feelings	+	3,316 (63.6)	41.6	26.6	31.8	107.89 (<0.001)
	-	1,894 (36.4)	30.3	39.7	30.0	
Relationships and bonds	+	2,821 (54.1)	42.8	25.9	31.3	104.78 (<0.001)
	-	2,389 (45.9)	31.2	37.7	31.1	
Sexual orientation	+	1,394 (26.8)	53.9	18.1	28.0	251.82 (<0.001)
	-	3,816 (73.2)	31.4	36.2	32.4	
Sexual initiation	+	1,177 (22.6)	52.5	19.4	28.1	165.79 (<0.001)
	-	4,033 (77.4)	33.1	34.8	32.1	
Hygiene and health	+	3,338 (64.1)	41.9	25.7	32.4	149.22 (<0.001)
	-	1,872 (35.9)	29.5	41.5	29.0	
Contraception	+	1,718 (33.0)	49.7	20.5	29.8	199.13 (<0.001)
	-	3,492 (67.0)	31.5	36.7	31.8	
STIs	+	2206 (42.3)	48.2	20.3	31.5	267.91 (<0.001)
	-	3004 (57.7)	29.6	39.4	31.0	
Risky sexual behaviors	+	1186 (22.8)	53.7	18.1	28.2	198.07 (<0.001)
	-	4024 (77.2)	32.7	35.2	32.1	
Pornography	+	1292 (24.8)	49.3	23.5	27.2	106.57 (<0.001)
	-	3918 (75.2)	33.6	33.9	32.5	
Online violence	+	1611 (30.9)	49.3	20.0	30.7	182.82 (<0.001)
	-	3599 (69.1)	32.2	36.4	31.4	
Other topics	+	594 (11.4)	31.1	42.6	26.3	39.58 (<0.001)
	-	4616 (88.6)	38.3	29.9	31.8	

* "+" and "-" mean indication or absence of indication of the topic, respectively.

Sources: Authors' research.

a given topic favors a better assessment of usefulness of the school classes. The proportion of negative assessments increased only in case of introducing “other topics”, which was indicated by 11.4% of the respondents.

In order to check which of the topics particularly favors positive perception of the subject school classes, the Cramer's V measure of association between nominal variables (Fig. 1). The effect sizes ranged from 0.142 (relationships and bonds) to 0.238 (puberty). It is worth emphasizing here that introducing many more seldom discussed topics (e.g., sexual orientation) may be conducive to positive assessments of the school classes.

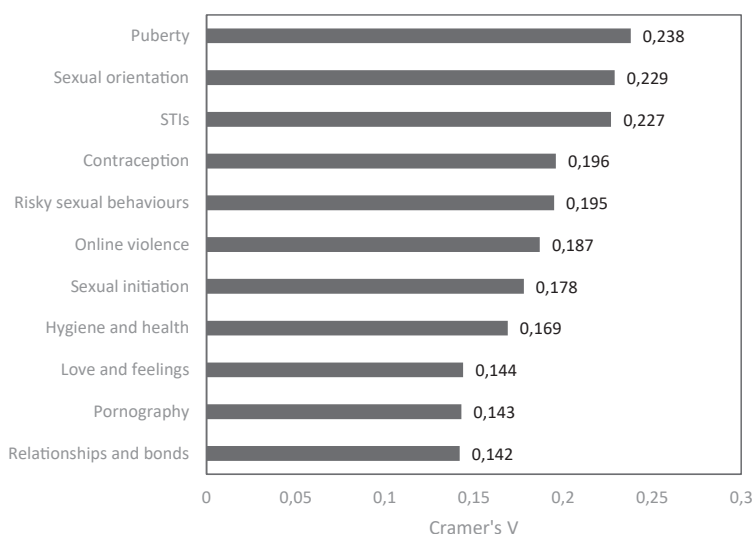


Figure 1. Relationship between topics discussed during school sexuality education classes and assessment of usefulness of the acquired knowledge

Sources: Authors' research.

Usefulness of school education classes – multivariate analyses

The last stage of the analyses was identification of the independent factors that may favor a positive assessment of the knowledge acquired during school sexuality education classes. Three logistic regression models were estimated and the results of are presented in Table 4.

Table 4. Factors that affect a chance for a positive assessment of school sexuality education classes according to multivariate logistic regression model

Independent variable	Model 1			Model 2			Model 3		
	p	OR	95% CI(OR)	P	OR	95% CI(OR)	P	OR	95% CI(OR)
Gender	<0.001	1.46	1.30-1.64	<0.001	1.41	1.25-1.58	<0.001	1.41	1.24-1.59
Grade	<0.001			0.030			-	-	-
K9	0.033	0.87	0.77-0.99	0.279	1.08	0.94-1.23	-	-	-
K11	<0.001	0.65	0.55-0.76	0.077	0.86	0.73-1.02	-	-	-
Residence	<0.001			0.006			-	-	-
Small towns	0.146	1.13	0.96-1.32	0.307	1.09	0.92-1.28	-	-	-
Rural area	<0.001	1.36	1.16-1.60	0.004	1.28	1.08-1.51	-	-	-
Wealth acc. to FAS	0.031			0.017			0.008		
Low level	0.036	1.21	1.01-1.44	0.068	1.18	0.99-1.41	0.019	1.25	1.04-1.50
Average level	0.673	1.04	0.88-1.22	0.845	0.98	0.83-1.17	0.738	1.03	0.86-1.23
Sources of knowledge									
Internet				-	-	-	<0.001	0.77	0.67-0.89
FLE teacher				<0.001	2.76	2.38-3.19	<0.001	2.46	2.12-2.85
Other teacher				0.042	1.36	1.01-1.83	-	-	-
Parents				<0.001	1.43	1.26-1.61	<0.001	1.35	1.19-1.53
Topics of classes									
Puberty							0.002	1.33	1.11-1.60
Sexual orientation							<0.001	1.53	1.31-1.79
Sexual initiation							0.033	1.20	1.01-1.41
Contraception							<0.001	1.32	1.14-1.53
STIs							<0.001	1.49	1.29-1.71
Online and real violence							0.003	1.24	1.07-1.43
Model constant	<0.001	0.45		<0.001	0.30		<0.001	0.20	
R-sq Nagelkerke		0.026			0.084			0.154	

* Reference group: girls; K7; big cities; well-off families; codes of sources of knowledge and topics of the classes "1" if indicated and "0" if not indicated; "-" means that the variable is not significant in a given model; empty cells mean the variable was not included in the model.

Sources: Authors' research.

All four social-demographic factors appeared significant in the first model. However, the model explains only to a small extent the odds of getting a positive assessment of school classes. According to the sequence of introducing consecutive variables into the model, a chance for a positive assessment increases among boys as compared to girls, in Grade 7 of primary school as compared to Grade 3 of secondary school, in families of lower wealth level as compared to a high level of wealth, and among residents of rural areas as compared to big cities.

The second model showed a significant relation of the assessment of usefulness of the knowledge acquired at school with three sources of such knowledge, namely sexuality education teacher, another teacher or school counselor and parents. The relation with age and wealth of the family weakened whereas an apparent difference to the benefit of young people residing in rural areas maintained. Three main endogenous variables first introduced to model 2 were perceiving sexuality education teacher as a source of knowledge, male gender and indication of parents as a source of knowledge about topic related to sexuality. Model 2 with seven independent variables has a better goodness-of-fit than model 1.

For the third model only two social-demographic factors were accepted, i.e., male gender and low level of wealth. This is the more interesting a result that it means that the weakly outlined relationship presented before distinctly strengthens in multivariate analyses. In the model 3 the association of acquiring knowledge from other teachers or school counselors was eliminated. More interestingly, it has been shown that identifying the Internet as a source of knowledge is associated with a deterioration in the assessment of the usefulness of school sex education classes. Model 3 has twice as good fit as model 2 since it also revealed a significant relationship with topics of school classes. Introducing six from eleven specified topics by teachers increases the odds of a positive assessment of school classes – the topic of sexual education and sexually transmitted diseases to the greatest extent. Perception of the sexuality education teacher as a source of knowledge was introduced to the model first, then introducing topics of sexual orientation and sexually transmitted diseases,

and subsequently parents as a source of knowledge and male gender. In general, eleven independent endogenous variables were identified in model 3.

Table 5. Factors involving chances for positive assessment of school sexuality education classes by boys and girls according to multifactorial model of logistic regression

Independent variables	Boys			Girls		
	P	OR	95% CI(OR)	P	OR	95% CI(OR)
School grade (age)	0.022					
K9	0.017	0.78	0.63-0.96	-	-	-
K11	0.027	0.76	0.59-0.97			
Family's wealth level	0.004					
Low	0.001	1.56	1.19-2.06	-	-	-
Average	0.085	1.26	0.97-1.63	-	-	-
Sources of knowledge						
Internet				<0.001	0.64	0.53-0.77
FLE teacher	<0.001	1.72	1.40-2.11	<0.001	3.28	2.65-4.06
Other teacher, school counselor	0.037	1.56	1.03-2.37	-	-	-
Parents	<0.001	1.40	1.16-1.70	0.006	1.27	1.07-1.52
Topics of classes						
Puberty	-	-	-	0.002	1.57	1.18-2.08
Sexual orientation	0.017	1.31	1.05-1.63	<0.001	1.87	1.52-2.31
Contraception	-	-	-	<0.001	1.57	1.28-1.91
Sexual initiation	0.012	1.35	1.07-1.70	-	-	-
Hygiene and health	0.044	1.23	1.01-1.49	-	-	-
STIs	0.001	1.42	1.15-1.74	<0.001	1.65	1.36-1.99
Online and real violence	-	-	-	0.003	1.34	1.10-1.63
Model constant	<0.001	0.32		0.000	0.17	
R-sq Nagelkerke		0.091			0.216	

* Reference group: girls; K7; well-off families; codes of sources of knowledge and topics of the classes "1" if indicated and "0" if not indicated; "-" means that the variable is not significant in a given model; empty cells mean the variable was not included in the model.

Sources: Authors' research.

Table 5 shows the results of estimation of gender-specific models. The model estimated for girls has much better fit. Only among boys a significant but weak association was maintained between perception of usefulness of the knowledge acquired during lessons with age and a stronger association with the wealth of the family, to the benefit of poor families. Sexuality education teachers and parents were the common significant sources of knowledge. On the other hand, only among girls the use of the Internet as a source of knowledge worsened the assessment of school classes, and among boys the information acquired from other teachers or school counselors was an extra factor that improved the assessment.

It is worth emphasizing that the sexuality education teacher as a source of knowledge for both genders appeared the most important factor introduced into the models at the first step. However, the influence of this factor on perception of usefulness of the school classes by girls was nearly twice as strong as it was among boys (OR coefficients were 3.28 and 1.72 respectively).

The topics of sexual orientation and STIs were qualified for the models of both genders immediately after the sexuality education teacher as a source of knowledge but in the reverse order as the STIs topics were the second factor among boys and the third important one among girls.

On the other hand, in the light of the findings, discussions with parents about topics related to sexuality may to a greater extent strengthen the positive assessment of the school classes among boys than among girls. It is proved by the higher OR coefficient, and the fact that parents as a source of knowledge were qualified for the model estimated for boys at the fourth step whereas it was the eighth (last) step among girls. In the case of other common factors, the OR coefficients are higher for girls.

Discussion

Considerations about the effectiveness and reception of sexuality education among young people require taking into account the diversified factors that may affect perception of this value. The analysis of the findings of the authors' research allows better understanding of how the youth assess usefulness of

the knowledge acquired during lessons, and from which sources they usually obtain information about sexuality. This perspective is a key one for designing effective curricula adapted to the students' needs.

Demographic factors

The results of our research point to significant diversification of the assessment of usefulness of the knowledge acquired during lessons depending on the gender, education stage, place of residence and declared level of family's wealth. Boys more often considered the acquired knowledge as useful (42.8%) than girls (33.5%), which indicates a difference in the manner of reception of the educational content, and its adaptation to the needs and expectations of specific gender. One of the surveys proved that female students prefer individual contact during discussions whereas male students expect more structured actions implemented within a community (Yillah et al., 2025).

The educational stage too affected the assessment of usefulness of the knowledge. Grade 7 students of primary schools more often indicated usefulness of the material (40.8%) than their older mates from Grades 3 of secondary schools (30.6%). It likely arises from the increasing criticism of students as they get older or from the absence of the appropriate adaptation of the curriculum to the cognitive development and needs of young people from higher grades. Older students who are already more experienced or have access to alternative sources of knowledge may assess school curricula as too general, infantile or inadequate for their real questions or dilemmas. Effectiveness of sexuality education depends to a great extent on adapting the content and form to the age and development level of students. The source literature emphasizes also the significance of considering the social and culture context, which favors a better involvement of young people and their feeling that the knowledge they acquire is adequate for their needs (UNESCO et al., 2018; Goldfarb & Lieberman, 2021).

Significant differences were also found for the context of the place of residence. Students from rural areas most frequently assessed the knowledge as useful (40.9%) whereas it was considered as least useful by students from

big cities (34.1%). In the research, it is indicated that students from smaller towns and from rural areas more seldom have access to alternative sources of information, which may increase the subjective value of the content offered at school.

Sources of knowledge

Another aspect present in our research was the analysis of the preferred sources of knowledge about sexuality. The Internet was definitely the dominant source of information, indicated by 74% of the respondents, which confirms its central role as the basic channel of acquiring knowledge by young generation (Wisniewski et al., 2017). It should be emphasized that young people value seeking online sexuality content above all due to an easy access to it, wide range of the content, anonymity and discreetness (Döring, 2021).

Other popular sources of knowledge included parents (34.9%) and peers (34.3%). This may prove that formal sexuality education at school does not deliver knowledge but also favors opening discussions at home. Undoubtedly, parents play a key role in their children's attitude towards sexual health (Coakley et al., 2017), and young people declare desire for such discussions (Pariera & Brody, 2018).

The logistic regression analysis proved that parents as a source of knowledge favor a positive assessment of sex education classes both among boys and girls. However, this relationship was stronger for boys, which may suggest that discussions with parents have a stronger influence on boys' positive perception of sex education. A certain change appears here as previous research on the Polish sample showed that boys are those with whom parents talk more seldom about this matter (Izdebski et al., 2022).

In the group of students who attend the lessons, a high proportion of those who indicate the sexuality education teacher as a source of knowledge is a particularly interesting result. This suggests that when sexuality education is available, young people perceive the teacher as a valuable source of knowledge, which may reinforce trust in the content offered during school classes. In the literature, it is emphasized that the quality of relationship between students and

the teacher as well as educational competences and attitude of the teacher are of special importance for sexuality education effectiveness (Costello et al., 2022).

In our research, logistic regression models estimated for boys and girls separately revealed that in both groups it was the sexuality education teacher who was indicated as the most important source of knowledge. However, it is worth mentioning that the influence of this factor was definitely stronger among girls.

Content of school education

The content of school sexuality education is another aspect discussed herein. In most cases, discussions about specific issues were related to students' more frequent indications of classes as useful ones. Among the most positively assessed lessons were those about sexual orientation, sexual initiation, risky behaviors, contraception and online violence. The results of logistic regression confirm that some topics – especially sexual orientation and sexually transmitted infections – are of special importance to students. The research shows that there is a general agreement concerning the importance of inclusion of topics from beyond biological aspects into the area of sex education so to improve its effectiveness (Sell et al., 2023). Trends show that young people often feel insufficiently prepared for real situations related to sexuality due to the absence of the appropriate number of discussions about relationships, informed consent or sexual orientation (Tanton et al., 2015).

Moreover, in the authors' survey, STIs were considered more important by boys, whereas girls indicated sexual orientation as the more important topic. Boys also emphasized issues such as sexual initiation, hygiene, and health, while girls' positive perceptions were associated with discussions on puberty, contraception, and violence (both online and offline). These findings are consistent with previous studies showing gender differences in educational expectations, with boys focusing more on physical aspects and behaviors, and girls on emotions and relationships. (Bauer et al., 2020).

Strengths and limitations

A large sample size (30% of all the students in the analyzed region) is one of the major advantages of the survey. In the light of the available information, this is the first survey of such a big sample to analyze perception of usefulness of the knowledge gained during sexuality education lessons with consideration of diversified social-demographic variables, sources of knowledge and topics of the classes. However, students could attend these types of classes at various stages of their education, which makes it difficult to draw conclusions. We obtained a significantly higher attendance rate for sex education classes than that reported by the Ministry of Education. The students surveyed probably also described their experiences from previous years. However, this does not undermine the validity of the assessment of the usefulness of these classes. Limitations of the survey include its cross-sectional nature that prevents establishing causal relationships between variables. The analyses are based on self-description, which may result in distortion of the data arising from cognitive bias, e.g., simplified strategies of the assessment or difficulties in referring to specific experiences. It should also be noted that the students themselves declared the topics to be discussed during sexuality education lessons, which may not fully reflect the real range of the offered content. The social desirability bias should also be taken into consideration here as the questionnaire included questions of sensitive nature (Krumpal, 2013). In an independent report using the same research material, it is also worth describing the sources of knowledge about sexuality among young people who do not attend school classes related to this topic. For future studies, also taking some other aspects into consideration would be recommended in order to understand better the context of perception and usefulness of the school sexuality education (classroom atmosphere, teacher readiness).

Conclusion

Appropriately prepared and taught sexuality education may bring numerous advantages. Not only is such education a tool for preventive healthcare but also

a way to form healthy and positive attitudes towards oneself and others (also with reference to human sexuality). In the face of growing health and social challenges, such as sexually transmitted infections, unplanned pregnancies, mental health problems or sexual violence, sexuality education is a necessary tool to combat such perils, and an element that may improve quality of life of the youth and, in the future, of the entire society (Dec-Pietrowska, 2025). Basing on recommendations and reports of the appropriate international agencies (e.g., WHO, UNESCO, UNDP, Council of Europe), on numerous reports on and studies of curricula effectiveness, it is worth being noted that comprehensive, complex and holistic sexuality education is most effective when based on scientific evidence, sexuality education promoting and presenting a positive image of human sexuality, education that takes into account also culture and social context (Dec-Pietrowska, 2023).

To sum up, our findings show that over 55% of the students surveyed attended sex education classes at school. The assessment of usefulness of these lessons is highly diversified among young people. Its usefulness was assessed as more useful by boys, younger youth, young people from smaller towns and those a lower social-economic status. The importance of the Internet as a basic source of knowledge about sexuality is also noticeable. However, its prevalence is associated with a more critical assessment of the school classes. Thus, it is recommended to implement flexible, diversified curricula of sex education to address the recipients' needs and to take into account organizational capabilities of educational facilities as well as the supporting school environment to this end.

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