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Public response to the proposed 'Health Education' subject in schools in Poland – attitudes, curriculum familiarity, and information sources

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Abstract

Introduction and Objective. Public attitudes may affect implementation of school-based health promotion. In Poland, the proposed new subject 'Health Education' has been widely debated. The aim of the study is to assesses public response to this reform, including perceived health-related knowledge, curriculum evaluation and familiarity, reported information sources, and implementation preferences.

Materials and Method. A cross-sectional survey was conducted in 2025 among 1,094 adults from three Polish regions. A 32-item questionnaire assessed self-reported health-related knowledge, attitudes toward the reform, curriculum evaluation and familiarity, information sources, and implementation preferences. Descriptive statistics, Pearson's chi-square test, and Cramér's V were used.

Results. Most respondents assessed their health-related knowledge positively, whereas evaluations concerning children and adolescents were less favourable. Overall, 51.9% supported changes in health education. Familiarity with the proposed curriculum was limited, with 57.3% reporting no or only superficial familiarity. Despite this, attitudes toward the proposed curriculum remained clearly divided, while 33.7% expressed no opinion. The most frequently preferred option was introducing the subject as optional.

Conclusions. Although respondents generally recognized the need for changes in health education, attitudes toward the proposed curriculum remained divided despite limited familiarity with its content. Since most respondents indicated indirect or non-official information sources, declared opinions should be interpreted with caution, as the credibility, completeness, and fidelity of these sources to the official curriculum could not be verified.

Key words

health education, public attitudes, health literacy, school curriculum reform, preventive health behaviours

INTRODUCTION

Rapid social and technological changes increasingly influence educational systems and expectations regarding school curricula [1, 2]. Educational content considered sufficient several years ago may become outdated in rapidly changing social and media environments. As a result, schools are increasingly expected not only to provide knowledge, but also to prepare students to critically evaluate information from multiple sources.

Health-related behaviours develop under the influence of family environment, school education, peer groups, and media communication [3, 4]. Schools may play a particularly important role because they provide structured and widely accessible education for children and adolescents. At the same time, the growing role of digital media and online communication has substantially changed the way young people obtain health-related information [5]. Although easier access to information creates new educational opportunities, it is also associated with increased exposure to misinformation and simplified or unreliable online content [6, 7].

Concerns regarding adolescent mental health and health-related behaviours have also increased in recent years. Recent reports indicate rising levels of emotional problems, anxiety symptoms, and risky online behaviours among adolescents [8–10]. Epidemiological observations from Poland additionally suggest changes in suicide attempt rates among young people, corresponding with trends observed internationally [9, 11].

In response to these challenges, schools are increasingly regarded as important settings for health promotion

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and preventive education. Evidence from school-based programmes suggests that educational interventions may improve selected health behaviours and increase health awareness among students [12, 13]. The concept of Health Promoting Schools additionally emphasizes the integration of health-related education into everyday school functioning and organization [14].

Public discussion concerning the planned introduction of the new school subject 'Health Education' in Poland revealed substantial differences in attitudes toward the role of schools in health promotion and the scope of educational content. Similar difficulties accompanying curriculum reforms have also been described in other countries [15]. Public opinions regarding educational reforms may also be shaped by media discussion, trust in information sources, and individual beliefs [16, 17]. At the same time, previous European studies indicate that health literacy levels remain uneven across populations [18, 19], whereas digital media increasingly shape adolescent attitudes and health-related behaviours [20, 21].

Despite growing public discussion surrounding the proposed curriculum, factors associated with social attitudes toward health education reform in Poland remain insufficiently understood. In particular, limited data are available regarding the role of familiarity with the curriculum, sources of information, and possible non-substantive influences affecting public opinion.

Although school-based health education and curriculum reform have been widely discussed, less is known about how the general public evaluates a specific health education curriculum introduced during intense public debate. Public acceptance of such reforms may depend not only on curriculum content, but also on teacher preparation, institutional support, stakeholder communication, media exposure, and public trust. Therefore, the present study assessed public attitudes toward the proposed subject of 'Health Education' with particular attention to curriculum familiarity, information sources, and preferred implementation strategies.

OBJECTIVE

The aim of the study is to assess the attitudes of urban and rural residents toward initiatives undertaken by the Ministry of National Education concerning the reform of health education content at primary and secondary school levels, including the newly proposed school subject 'Health Education'. The study additionally sought to identify possible sources of resistance, skepticism, or uncertainty regarding the proposed changes.

MATERIALS AND METHODS

Study design and participants. A cross-sectional survey was conducted between June – December 2025. The study included 1,094 adults from the Lublin, Mazovia, and Podkarpackie provinces in Poland. Detailed socio-demographic characteristics of the study population are presented in Table 1.

The sample comprised 435 men (39.6%), 638 women (58.2%), and 21 participants (1.9%) who did not disclose their gender. Participants were aged between 18 – 91 years (mean: 38.5; median: 36). A total of 382 respondents (34.8%) were parents or legal guardians of school-age children.

Table 1. Socio-demographic characteristics of the study group

Variable	Parameter	Value
Gender	Male, n (%)	435 (39.6)
	Female, n (%)	638 (58.2)
	No response, n (%)	21 (1.9)
Age [years]	N	1094
	x (SD)	38.5 (16.0)
	Me	36
	Range	18–91
Parent/legal guardian of school-aged child	Yes, n (%)	382 (34.8)
	No, n (%)	712 (65.2)
Education	Higher education (including Bachelor degree), n (%)	426 (38.9)
	Secondary education (including vocational secondary), n (%)	407 (37.2)
	Basic vocational education, n (%)	172 (15.7)
	Primary education, n (%)	89 (8.1)
Place of residence	>100,000 inhabitants, n (%)	478 (43.7)
	50,000–100,000 inhabitants, n (%)	176 (16.1)
	10,000–50,000 inhabitants, n (%)	140 (12.8)
	<10,000 inhabitants, n (%)	93 (8.5)
	Rural areas, n (%)	207 (19.0)

x – mean; SD – standard deviation; Me – median.

Table 2. Perceived health-related knowledge.

Category	Self n (%)	Adolescents n (%)	Children n (%)
Very good	425 (38.8)	136 (12.4)	108 (9.9)
Good	456 (41.7)	371 (33.9)	316 (28.9)
Moderate / quite good	159 (14.5)	336 (30.7)	336 (30.7)
Sufficient	47 (4.3)	188 (17.2)	229 (20.9)
Poor	7 (0.7)	63 (5.8)	105 (9.6)
No response	0 (0.0)	0 (0.0)	0 (0.0)

Data collection. Participants were recruited by trained students of the John Paul II Catholic University of Lublin using non-random convenience sampling in public places. Potential respondents were invited to complete an anonymous questionnaire after receiving brief information about the study aim, voluntary participation, and anonymity. Before participation, the students verified basic eligibility criteria: age ≥18 years and residence in one of the three provinces covered by the study. The exclusion criteria were age <18 years, lack of consent, residence outside the study area, duplicate questionnaires, and incomplete questionnaires, or questionnaires with inconsistent responses that prevented statistical analysis. No formal sample size or power calculation was performed as the study was not designed as a representative population survey.

Data were collected using an author-designed, 32-item questionnaire consisting of closed-ended questions, including single-choice and multiple-choice items. The questionnaire was developed by the authors according to the study objective, the proposed 'Health Education' curriculum, and the public

Table 3. Attitudes toward health education reform

Category	n (%)
Definitely yes	222 (20.3)
Probably yes	346 (31.6)
Probably no	220 (20.1)
Definitely no	81 (7.4)
No opinion	216 (19.7)
No response	9 (0.9)
Total support	568 (51.9)
Total opposition	301 (27.5)

Table 4. Evaluation of the 'Health Education' curriculum

Category	n (%)
Very good	78 (7.1)
Good	205 (18.7)
Moderate	152 (13.9)
Satisfactory	122 (11.2)
Poor	169 (15.4)
No opinion	368 (33.7)

Table 5. Reasons for less favourable evaluation of the curriculum

Reason	n (%)
Teachers not qualified	311 (28.4)
Time-consuming / unnecessary	179 (16.3)
Psychologically sensitive content	157 (14.3)
Concerns regarding scientific or medical validity	131 (12.0)
Partial incompatibility with family morals	111 (10.1)
Duplicates biology content	101 (9.2)
Full incompatibility with family morals	44 (4.0)
No response	60 (5.5)

Multiple responses were allowed.

Table 6. Familiarity with the curriculum

Category	n (%)
No	407 (37.2)
Yes – detailed	124 (11.3)
Yes – general	316 (28.9)
Heard of it	220 (20.1)
No response	27 (2.5)

debate surrounding its introduction. It covered socio-demographic data, self-assessed health-related knowledge, attitudes toward the curriculum, curriculum familiarity, information sources, and preferred implementation strategies. The questionnaire was reviewed by the research team for content relevance, clarity, and face validity. A pilot study among 40 respondents was conducted to verify the clarity and comprehensibility of the questions before the main data collection.

Study variables. The main variables included self-assessed health-related knowledge, attitudes toward health education reform and the 'Health Education' curriculum, reasons for

Table 7. Sources of information about the curriculum

Source	n (%)
Public media	137 (20.8)
Social media	124 (18.8)
Ministry websites	115 (17.4)
Internet forums	61 (9.2)
Friends	50 (7.6)
Family	44 (6.7)
Professional journals	23 (3.5)
Newspapers	20 (3.0)
Private media	17 (2.6)
Other	12 (1.8)
Non-professional magazines	10 (1.5)
No response	47 (7.1)

Respondents selected one primary source of information

Table 8. Recommendations regarding curriculum implementation according to familiarity with the curriculum

Recommendation	Familiar n (%)	Not familiar n (%)	Total n (%)
Withdraw completely	100 (15.2)	61 (15.0)	161 (15.1)
Partial modification	125 (18.9)	58 (14.3)	183 (17.1)
Optional subject	228 (34.5)	107 (26.3)	335 (31.4)
No opinion / undecided	207 (31.4)	181 (44.5)	388 (36.4)

$\chi^2 = 20.6$; df = 3; $p < 0.001$; Cramér's V = 0.14
Respondents with missing responses regarding curriculum familiarity or implementation recommendation were excluded from this analysis.

acceptance or rejection of the curriculum, familiarity with the curriculum, and sources of information.

Grouping variable. Respondents were classified according to their familiarity with the 'Health Education' curriculum into two groups: familiar (including respondents who declared detailed, general, or superficial familiarity; n = 660) and not familiar (n = 407). Respondents with missing responses regarding familiarity with the curriculum were excluded from subgroup analyses.

Statistical analysis. Descriptive statistics (n, %) were used to summarize the data. Associations between categorical variables were assessed using Pearson's chi-square test. Effect size was estimated using Cramér's V. A p-value < 0.05 was considered statistically significant. Analyses concerning recommendations for curriculum implementation excluded non-responses (final analytical sample: n = 1,067) (Tab. 1–8).

Ethics. The study was approved by the Bioethics Committee of the John Paul II Catholic University in Lublin on 30 March 2025 (Approval No. 4/2025). Written informed consent was obtained from all participants. The study was conducted in accordance with the Declaration of Helsinki.

RESULTS

The analysis included self-assessed health-related knowledge, perceptions of health knowledge across age groups, attitudes toward health education reform, familiarity with the curriculum, information sources, and recommendations

concerning implementation of the proposed 'Health Education' subject (Tab. 2–8).

Perceived health-related knowledge. Most respondents evaluated their own health-related knowledge positively (Tab. 2). The largest proportion described their knowledge as 'good' (41.7%), while 38.8% selected the 'very good' category. Only 0.7% assessed their knowledge as 'poor'.

Assessments of adolescents' and children's health-related knowledge were less favourable. Adolescent respondents most often described their knowledge as 'good' (33.9%) or 'moderate' / 'quite good' (30.7%). Evaluations of children's health-related knowledge were generally lower, with more frequent 'sufficient' and 'poor' responses (Tab. 2).

Overall, respondents assessed their own knowledge more favourably than the knowledge of younger age groups. **(?)**

Attitudes toward health education reform. More than half of respondents expressed support for general reforms in health education (Tab. 3). The most common answer was 'probably yes' (31.6%). Overall support reached 51.9%, whereas 27.5% expressed opposition. Nearly one-fifth (19.7%) reported no opinion.

Opinions regarding the specific 'Health Education' curriculum were more divided (Tab. 4). The largest group (33.7%) declared no opinion about the curriculum. Positive evaluations ('very good' and 'good') accounted for 25.8% of responses, whereas less favourable evaluations ('satisfactory' and 'poor') represented 26.6%. Additionally, 13.9% of respondents selected the 'moderate' category.

Reasons for less favorable evaluation. Respondents who evaluated the curriculum less favourably most frequently referred to organizational concerns (Tab. 5). Insufficient teacher preparation was the most commonly reported issue (28.4%). Other concerns included excessive time burden or perceived lack of necessity of the subject (16.3%) and psychologically sensitive content (14.3%). Less common reasons included concerns regarding scientific or medical validity, incompatibility with family values, and overlap with biology teaching content (Tab. 5).

Familiarity, information sources, and recommendations. Familiarity with the curriculum was generally limited (Tab. 6). More than one-third of respondents (37.2%) declared no familiarity with the curriculum, whereas only 11.3% reported detailed familiarity.

Information about the proposed curriculum was obtained mainly from public media, social media, and ministry websites (Tab. 7). Public and social media together accounted for 39.6% of responses.

Respondents most often supported introducing the "Health Education" subject as optional (31.4%) (Tab. 8). Withdrawal of the curriculum was recommended by 15.1% of respondents, whereas 17.1% supported partial modification. A considerable proportion (36.4%) remained undecided.

Among respondents familiar with the curriculum, support for introducing the subject as optional was more common than among participants unfamiliar with it (34.5% vs. 26.3%), whereas undecided responses were more frequent in the unfamiliar group (44.5% vs. 31.4%). This association between curriculum familiarity and preferred implementation strategy was statistically significant ($\chi^2 = 20.6$; df = 3; $p < 0.001$; Cramér's V = 0.14).

Additional exploratory analyses did not show practically or interpretatively meaningful differences in general attitudes toward the proposed 'Health Education' curriculum according to age, gender, education level, place of residence, or being a parent/legal guardian of a school-age child. More detailed subgroup analyses focused on reasons for criticism of the proposed curriculum were developed as a separate manuscript based on the second part of the study.

DISCUSSION

Most participants evaluated their own health-related knowledge positively, whereas assessments concerning children and adolescents were less favourable. These differences likely reflect social perceptions regarding younger age groups and concerns about contemporary health-related behaviours among adolescents. Previous studies similarly indicate growing public concern regarding adolescent mental health, risky online behaviours, and exposure to unreliable health-related information in digital environments [8–10, 20, 21].

The present results are also consistent with earlier Polish and European reports showing that limited health literacy remains common in adult populations [1, 2, 18, 19].

Although the present study focused primarily on health-related knowledge rather than comprehensive health literacy, the results are consistent with broader difficulties in understanding and applying health information in everyday life. Despite increasing access to health-related content, the ability to critically evaluate information remains uneven across society, particularly in digital media environments where reliable educational materials coexist with misinformation and simplified narratives.

General support for health education reform was relatively high; however, opinions became more divided when respondents evaluated the specific 'Health Education' curriculum. This suggests that approval of general educational goals does not automatically translate into acceptance of detailed organizational solutions. Similar observations have been reported in studies concerning educational reforms in other countries [15].

The most frequently reported barriers included insufficient teacher preparation, concerns regarding excessive curriculum burden, and doubts related to psychologically sensitive topics. These responses suggest that public concerns focused mainly on practical aspects of implementation rather than on the general concept of health education itself. Similar barriers have been identified previously in analyses of school-based health promotion programmes [14, 22].

An important finding in the current study was the relatively low level of familiarity with the proposed curriculum. Many respondents declared either no familiarity or only superficial familiarity with its content. At the same time, information concerning the reform was obtained mainly from public and social media. This suggests that opinions about the curriculum were often shaped indirectly through media discussions and public debate, rather than through direct analysis of official educational materials [5–7, 16, 17, 23].

Officially published curriculum materials provide direct access to the full text of the proposed curriculum. In the present study, only 17.4% of respondents indicated ministry

websites as their primary source of information, whereas 72.0% indicated indirect or non-official sources (Tab. 7), including public media, social media, internet forums, friends, family, newspapers, private media, other sources, and non-professional magazines; this percentage excludes professional journals (3.5%) and non-responses (7.1%). These sources may transmit selected elements of the curriculum, interpretations, commentaries, or simplified messages whose credibility, completeness, accuracy, and fidelity to the official curriculum could not be verified in the present study. Therefore, declared attitudes should be interpreted with caution, particularly in view of the high proportion of respondents who declared no opinion about the curriculum or remained undecided regarding its implementation.

Beyond the specific issue of the 'Health Education' curriculum, these findings indicate a broader challenge for public communication. Socially important educational and health-related reforms may be evaluated by adults on the basis of indirect or non-official information sources whose credibility, reliability, completeness, accuracy, and fidelity to official documents are difficult to verify. This may contribute to uncertainty, polarization, or strongly expressed opinions formed without direct familiarity with primary materials.

From a broader public health perspective, schools remain important environments for promoting health-related knowledge and preventive behaviours. However, the effectiveness of educational interventions may depend on teacher preparation, educational resources, and differences in health literacy across the population [12–14, 18, 22].

Despite numerous educational initiatives, limited health literacy continues to represent an important public health problem affecting both individuals and communities [24, 25]. These observations suggest that improving public acceptance of health education reforms may require not only curriculum development, but also transparent communication and easier access to reliable information concerning proposed educational changes.

Limitations of the study. Several limitations of the study should be acknowledged. First, the study used non-random convenience sampling and included respondents from selected regions of Poland, which may limit generalizability to the national population. Second, the questionnaire was author-designed and pilot-tested for clarity, but it was not a previously validated standardized instrument. Third, the analysis was based on self-reported responses, which may be affected by reporting bias and subjective interpretation of questions. Fourth, the cross-sectional design does not allow conclusions regarding causal relationships between familiarity with the curriculum and attitudes toward the reform. Fifth, familiarity with the curriculum was assessed declaratively and was not verified objectively. Finally, the study did not allow verification of the credibility, completeness, accuracy, or neutrality of indirect information sources used by respondents. Full multivariable modelling was not presented due to scope and length limitations, while detailed socio-demographic and health-knowledge-related analyses were developed as a separate manuscript based on the second part of the study.

Despite these limitations, the relatively large study group and inclusion of participants from both urban and rural areas provide valuable insight into public perceptions of current health education reforms in Poland.

CONCLUSIONS

1. Although respondents generally recognized the need for changes in health education, attitudes toward the proposed 'Health Education' curriculum remained considerably more critical and divided.
2. Limited familiarity with officially published curriculum materials, and the fact that most respondents indicated indirect or non-official information sources, suggest that attitudes toward the proposed subject may have been influenced not only by direct assessment of the full official curriculum text. Declared opinions should therefore be interpreted with caution, as the credibility, completeness, accuracy, and fidelity of these information sources to the official curriculum could not be verified in the present study.
3. The results suggest that additional social and media-related factors may have influenced public perceptions of the proposed reform and should be investigated in further studies.

REFERENCES

1. Gouëdard P, Pont B, Hyttinen S, et al. Curriculum reform: a literature review to support effective implementation. OECD Education Working Papers No. 239. Paris: OECD Publishing; 2020. https://doi.org/10.1787/efe8a48c-en
2. Nutbeam D, Lloyd JE. Understanding and responding to health literacy as a social determinant of health. Annu Rev Public Health. 2021;42:159–173. https://doi.org/10.1146/annurev-publhealth-090419-102529
3. World Health Organization. Health literacy development for the prevention and control of noncommunicable diseases. Geneva: WHO; 2022. https://www.who.int/publications/i/item/9789240055353 (access: 2026.05.13).
4. Viner RM, Ozer EM, Denny S, et al. Adolescence and the social determinants of health. Lancet. 2012;379(9826):1641–1652. https://doi.org/10.1016/S0140-6736(12)60149-4
5. World Health Organization, UNESCO. Making every school a health-promoting school: global standards and indicators. Geneva: WHO; 2021. https://iris.who.int/handle/10665/341907 (access: 2026.05.13).
6. World Health Organization. Infodemic management in COVID-19 and beyond. Geneva: WHO; 2020. https://www.who.int/publications/i/item/9789240010314 (access: 2026.05.13).
7. Zarocostas J. How to fight an infodemic. Lancet. 2020;395(10225):676. https://doi.org/10.1016/S0140-6736(20)30461-X
8. Swire-Thompson B, Lazer D. Public health and online misinformation: challenges and recommendations. Annu Rev Public Health. 2020;41:433–451. https://doi.org/10.1146/annurev-publhealth-040119-094127
9. Boer M, Stevens GWJM, Finkenauer C, et al. Social media use intensity, social media use problems, and mental health among adolescents: investigating directionality and mediating processes. Comput Human Behav. 2021;116:106645. https://doi.org/10.1016/j.chb.2020.106645
10. UNICEF. The State of the World's Children 2021: On My Mind – Promoting, Protecting and Caring for Children's Mental Health. New York: UNICEF; 2021. https://www.unicef.org/reports/state-worlds-children-2021 (access: 2026.05.13).
11. Odgers CL, Jensen MR. Annual Research Review: adolescent mental health in the digital age. J Child Psychol Psychiatry. 2020;61(3):336–348. https://doi.org/10.1111/jcpp.13190
12. Komenda Główna Policji. Zamachy samobójcze od 2020 roku [Suicide attempts since 2020]. Warszawa: KGP; 2024. https://statystyka.policja.pl/st/wybrane-statystyki/zamachy-samobojcze (access: 2026.05.13).
13. World Health Organization, UNESCO. Global standards and indicators for health-promoting schools and systems. Geneva: WHO; 2021. https://www.who.int/docs/default-source/health-promoting-schools/global-standards-for-health-promoting-schools-who-unesco.pdf (access: 2026.05.13).
14. Okan O, Messer M, Levin-Zamir D, et al. Health literacy as a social vaccine in the COVID-19 pandemic. Health Promot Int. 2023;38(4). https://doi.org/10.1093/heapro/daab197

15. World Health Organization. Health Promoting Schools framework: implementation guide. Geneva: WHO; 2021. https://www.who.int/publications/i/item/9789240025073 (access: 2026.05.13).
16. Ministerstwo Edukacji Narodowej. Nowe ramowe plany nauczania – z edukacją obywatelską i edukacją zdrowotną. Warszawa: Ministerstwo Edukacji Narodowej; 2025. https://www.gov.pl/web/edukacja/nowe-ramowe-plany-nauczania---z-edukacja-obywatelska-i-edukacja-zdrowotna (access: 2026.05.28). See also: Minister Edukacji. Rozporządzenie Ministra Edukacji z dnia 12 marca 2025 r. zmieniające rozporządzenie w sprawie ramowych planów nauczania dla publicznych szkół. Dz U. 2025; poz. 363.
17. van der Linden S. Misinformation: susceptibility, spread, and interventions to immunize the public. Nat Med. 2022;28:460–467. https://doi.org/10.1038/s41591–022–01713–6.
18. Freeman JL, Caldwell PHY, Scott KM. How adolescents trust health information on social media: a systematic review. Acad Pediatr. 2023;23(4):703–719. https://doi.org/10.1016/j.acap.2022.12.012.
19. Sørensen K, Okan O, Levin-Zamir D, et al. Health literacy in the context of health, well-being and learning outcomes among children and adolescents: a systematic scoping review. BMC Public Health. 2021;21:1886. https://doi.org/10.1186/s12889–021–11802–7.
20. Brodowska-Szewczuk J. Literature review and analysis of research conducted in Europe on health literacy. Zesz Nauk UPH Siedlce. 2023;61. https://doi.org/10.34739/zn.2023.61.13.
21. Orben A, Meier A, Dalgleish T, et al. Mechanisms linking social media use to adolescent mental health vulnerability. Nat Rev Psychol. 2024;3:407–423. https://doi.org/10.1038/s44159–024–00307-y.
22. Valkenburg PM, Meier A, Beyens I. Social media use and its impact on adolescent mental health: an umbrella review of the evidence. Curr Opin Psychol. 2022;44:58–68. https://doi.org/10.1016/j.copsyc.2021.08.017.
23. Korporowicz-Żmichowska V. Nierówności w health literacy – aspekty przestrzenne i edukacyjne. Nierówności Społeczne a Wzrost Gospodarczy. 2023;1(73):72–85. https://doi.org/10.15584/nsawg.2023.1.5.
24. Smoła P, Zwierczyk U, Duplaga M. Transactional e-health literacy and its association with e-health services use in Polish adults: a cross-sectional study. Front Digit Health. 2024;6:1458650. https://doi.org/10.3389/fdgth.2024.1458650.
25. Leksy K, Nawój-Połoczańska J, Skowrońska-Pućka A. Ocena alfabetyzmu zdrowotnego studentów na podstawie kwestionariusza Health Literacy Questionnaire (HLQ) – badania wstępne [Assessment of students' health literacy using the Health Literacy Questionnaire (HLQ): preliminary study]. Stud Eduk. 2023;69:57–76. https://doi.org/10.14746/se.2023.69.4.