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The Participation of Members of Lithuanian School Communities in the Process of Health Promotion Among Students in Grades 9 and 10

SUMMARY OF DOCTORAL DISSERTATION

Medical and Health Sciences,
Public Health (M 004)

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This dissertation was written between 2016 and 2020 at Vilnius University.

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1. INTRODUCTION

1.1. The research problem and the relevance of the work

Adolescence is a critical period in a person's life, as significant physical and psychological changes occur in a relatively short period of time [1]. Additionally, lifestyle habits that form during adolescence may have positive or negative impacts on a person's future health [2, 3].

Scientific research shows that the lifestyle of Lithuanian adolescents is not beneficial for their future health. Lifestyle habits formed in adolescence are difficult to change later in life, therefore it is essential to take measures to help develop healthy lifestyle habits in adolescents to build a solid foundation for future health and well-being [4]. One such possible measure is the process of health promotion among adolescents, which provides greater opportunities to be mindful and to improve their health [5].

The Ottawa Charter notes that people strengthen and maintain their health in the environments in which they study, work, have fun, and love [5]. School constitutes a significant part of the daily life of adolescents. Over one third of their time is spent at school, which makes it a highly suitable environment for the process for health promotion. For many adolescents, school is the center of their social life, where they engage in educational and social activities that shape their cognitive, socio-emotional, and physical development [6; 7].

The health promotion process at school can be defined as involving any activity that is aimed at improving and/or protecting the health of all members of the school's community (teachers; students and their parents, caretakers, or guardians; other school employees) [8; 9].

Although health promotion and, in turn, health education should be inseparable from the activities of every Lithuanian school in accordance with the legal regulations, health promotion is highly emphasized in health promoting schools (HPSs) [9 – 12].

The main component of the health promotion process is participation [13]. Studies have showed that students participating in the health promotion process at school: are more motivated and self-confident; acquire more skills, knowledge, and competences; have a better attitude towards their health; and improve their health literacy and lifestyle habits and, in turn, their health [14 – 16]. The participation of students as well as the other members of the school community is of paramount importance to the process of health promotion. Parental engagement in the process of health promotion at school has a significantly positive impact on the student's subjective assessment of their own health, their feelings of happiness, self-respect, life satisfaction, motivation to learn, and their academic achievements, as well as playing a role in the prevention of harmful habits [17 – 19]. A good student–teacher relationship is significantly associated with increased happiness, life satisfaction, and better attitude towards the student's own health [17; 20].

The participation of focus groups is an extremely important factor in ensuring the effectiveness of health promotion [13; 21; 22]. It is evident that the best results can only be expected from student health promotion by ensuring the full participation of all members of the school community – including: teachers; students and their parents, guardians, or caregivers; and other school employees. Therefore, this field of public health warrants further inquiry.

1.2. The aim and objectives of the study

The aim of this study is to assess the participation of the members of Lithuanian school communities in the process of health promotion at school among students in grades 9 and 10.

The main objectives of the study are:

1. To assess the attitude of the members of school communities towards the process of health promotion at school among 9th and 10th grade students.

2. To determine the level of participation and the self-assessment of participation among the members of school communities in the process of health promotion at school among 9th and 10th grade students.

3. To assess the cooperation between the members of school communities in the process of health promotion at school among 9th and 10th grade students.

4. To assess the expectations of the members of school communities in the process of health promotion at school among 9th and 10th grade students, as well the reasons that prevent them from participating in this process.

5. To determine the need for information regarding the promotion of student health among members of school communities.

Additional objectives include:

1. To determine the association between membership of the Lithuanian HPS communities and the prevalence of smoking, alcohol consumption, and drug use.

2. To assess the attitudes of the members of Lithuanian school communities towards HPSs.

1.3. The novelty of the study and its practical implications

This is the first study that has been conducted in Lithuania with the aim of assessing various aspects of the participation of all members of the school community – as opposed to individual groups – in the process of promoting the health of students at school. The data in this study are representative of Lithuanian schools, and provide information regarding the extent to which members of the school community participate in the health promotion process, as well as demonstrating which socio-demographic groups of community members are significantly more actively involved. The data also revealed which groups of community members must be encouraged to increase their involvement in the process of health promotion at

school. Data concerning the attitudes of community members towards the process of health promotion at school allows for the presentation of recommendations towards a more active dissemination of information regarding health promotion. Study data concerning the need for information on health promotion demonstrate which health promotion topics are most desired among respondents, and offer a direction for the school employees who provide the relevant information. This study also revealed the reasons behind the lack of participation from some members of the school communities in the health promotion process. This information will assist in planning targeted intervention measures aimed at encouraging the participation of community members.

Being a member of a HPS community was included as one of the factors that possibly influence the level of engagement in the process of health promotion among students. Taking this into account, the results of this study allow for a firm conclusion to be drawn regarding the effectiveness of HPS activities and for recommendations to be provided for the further development of the Lithuanian HPS network. The results of this study concerning the association between membership in HPS communities in Lithuania and the prevalence of harmful habits could facilitate further studies to assess the influence of studying or working in a HPS on various aspects of the lifestyles of the members of school communities.

2. STUDY MATERIAL AND METHODS

2.1. The type of study, target population, and sample size

A cross-sectional study was performed, for which the target population was the members of HPS and non-HPS communities. The main sample consisted of 9th and 10th grade students, and three additional samples consisted of the parents (including guardians or caregivers) of students, teachers, and other school employees.

It was calculated that the study should involve 46 HPSs and 50 non-HPSs. The required number of schools in each of the two groups was selected using the random number generator of the OpenEpi statistical analysis program.

The Vilnius Regional Bioethics Committee issued a permit for a biomedical study (No. 158200-17-953-458). Approval to perform the study was granted by the Ministry of Education, Science and Sport, and by the Ministry of Health of the Republic of Lithuania.

2.4. The instrument of the study

The instrument(s) of this study were the original anonymous questionnaires distributed among the members of school communities. The questionnaires were prepared using questions found in the guide for HPS performance indicators published by the State Environmental Health Center [23].

A test study was performed in March 2018 to assess the reliability of the questionnaires. A Kappa coefficient (categorical variables) or a weighted Kappa coefficient (ordinal variables) was calculated in the assessment process. Questions with a coefficient value of less than 0.40 were amended by altering their phrasing.

2.5. The performance of the study

Requests to provide the means to perform the study were delivered to the heads of schools, and each consenting school was provided with questionnaires for one 9th and one 10th grade class. In addition, one parent (guardian or caretaker) of each student in the selected grades was provided with a separate questionnaire, as well as an informed consent form and a request to give their child permission to fill out their own questionnaires. Questionnaires were also distributed among the teachers of the selected 9th and 10th grade students, as well as other school employees. The questionnaires were handed out to the students of the selected 9th and 10th grades who attended school on

the day of the survey. Each student was given a questionnaire to take home to one of their parents (guardians or caretakers). Questionnaires were then also distributed among associated teachers and other school employees. The algorithm used for the study is presented in Figure 1.

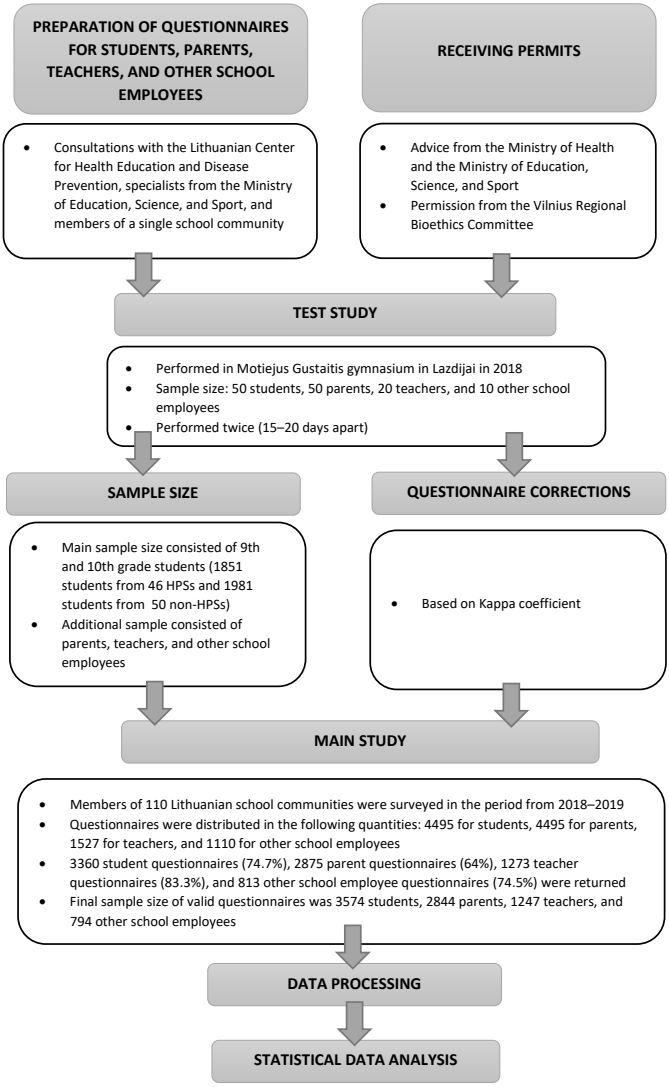

Figure 1. The algorithm used in the study

2.7. Data processing and statistical analysis

Stata and Win Pepi statistical software were used for data analysis, and categorical variables were defined as absolute values and percentages. Prevalence estimates were calculated at 95% confidence intervals (CI). Crude odds ratios (OR (b)) were calculated, and logistic regression models were used to determine the influence of various factors that characterize the members of school communities and schools themselves on a number of phenomena. These included: the attitudes of the members of school communities towards the process of health promotion among students; their opportunities to express their opinions regarding health promotion issues; their inclinations to more actively participate in the health promotion process at school; efforts towards cooperation; student interest in information regarding health promotion; students' search for such information; students' opinions on the information acquired; students' inclination to acquire more information; and, finally, determining the association between membership of the Lithuanian HPS communities and smoking, alcohol consumption, and drug use among members of these communities. The final models included only the factors that, following a bivariate analysis, had a *p*-value of 0.2 or less, and variables with no occurrence of multicollinearity (variables with a correlation coefficient of 0.5 or higher were considered collinear and, therefore, were not included in the models). These models were then evaluated using regression diagnostics, from which the adjusted OR (OR (p)) was calculated at 95% CI.

Pearson's χ^2 test was used to determine differences in the distribution of respondents across various sociodemographic groups according to the following factors: the different expectations of the school community members regarding participation in the process of health promotion, and their varying need for information on health promotion; respondents who cooperated with different school employees; and the members of school communities who were hindered from actively participating in and cooperating with the health

promotion process for various reasons. In cases of fewer than 5 expected frequencies per cell, Fisher's exact test was used. Both tests were also used to determine differences in the distribution of respondents who smoked and consumed alcohol at various rates, who smoked different numbers of cigarettes, and who had different attitudes towards a HPS. The Mann–Whitney and Kruskal–Wallis tests were used to analyze the distributions of the ranking variables: the activities of community members in the school health promotion process; self-assessment of their participation; and their level of agreement with the statement that HPS students pursue a healthier lifestyle than non-HPS students. The difference was considered statistically significant at $p \leq 0.05$.

3. RESULTS OF THE STUDY

3.1. The characteristics of the respondents

A total of 3574 students were interviewed for the purposes of this study, of which 53.1% were female and 46.9% male. The distribution of respondents across school grades was similar. Nearly half of all students were 16 years of age (47.9%), lived in an urban setting (44.5%), and had been studying in their current school for 2 years or less (46.3%). Over half of all respondents were enrolled in gymnasiums (71.0%), urban schools (53.9%), or educational institutions outside of the HPS network (62.9%), and indicated that their average grade was in the 6–8 range (from a maximum 10) in the most recent semester (62.9%).

The majority of respondents from the parent group were women (86.9%), employed parents (83.0%), and parents of gymnasium students (71.3%). More than half of the parents were 40–50 years of age (57.0), and indicated that their children were enrolled in a rural school (56.9%). Considering the distribution of respondents according

to the HPS status of their children's school, 63% of parents had their children enrolled in a HPS while the rest were studying in a non-HPS.

As in the parent group, the majority of the teachers who participated in the survey were female (86.4%). Over half of all teachers were 40–55 years of age (52.4%), urban residents (55.7%), and employed in rural schools (53.2%), gymnasiums (60.1%), and non-HPSs (58.9%). Additionally, it was determined that 41.5% of the respondents were teacher–methodologists or teacher–experts, and a similar proportion were teaching humanities.

A total of 794 other school employees participated in the study, of which 11.7% were male. Nearly half of the respondents in this group were 40–55 years of age (49.4%) and worked in rural schools (50.5%). More than half resided in urban areas (53.8%), and were employed in gymnasiums and non-HPSs. It became evident that public health specialists, speech therapists, social educators, and psychologists constituted the smallest proportion of the respondents in this group (26.2%). The members of all school community groups were widely distributed according to other characterizing factors.

3.2. The attitudes of the members of Lithuanian school communities towards the process of health promotion at school among 9th and 10th grade students

According to the study data, one quarter of the students (26.6%, 95% CI: 25.2; 28.1) were interested in information about the health promotion process at school, but a higher number were only slightly interested (54.1%, 95% CI: 52.5; 55.8). An analysis of the possible reasons behind students taking an interest in the process of health promotion revealed that female students were statistically significantly 59% more likely to be interested in health promotion than male students. Students from rural schools had a 21% higher likelihood of being interested in information about health promotion compared to their peers in urban schools.

Over half of parents (58.0%, 95 % CI: 56.2; 59.8) were interested in information regarding the process of health promotion at school, whilst 36.7% of parents (95% CI: 35.0; 38.5) were only slightly interested. It was determined that women had a 73% higher likelihood of being interested in such information than men, while parents with a higher level of education were 28% more likely to take an interest in the process of health promotion at their child's school compared to respondents with either a basic or secondary education. Parents of adolescents aged 14–15 years were statistically significantly 1.35 times more likely to take an interest in health promotion than the parents of older adolescents (17–18 years of age).

It was determined that 65.8% (95% CI: 63.1; 68.3) of teachers were interested in information regarding the process of health promotion at school, whilst one third of respondents (33.0%, 95% CI: 30.5; 35.7) indicated that they were only slightly interested. Teachers of non-humanities subjects had a 1.71 times greater statistically significant likelihood of taking an interest in such information compared to their colleagues in the humanities. Furthermore, it was determined that working in a HPS provided a 29% greater statistically significant likelihood of being interested in health promotion, compared to working in a non-HPS.

Over half of the other school employees surveyed (61.6%, 95% CI: 58.2; 64.9) were interested in information regarding the process of health promotion at school, whilst one third of the respondents (33.1%, 95% PI: 29.9; 36.5) indicated they were only slightly interested. It was found that school administrators, public health specialists, speech therapists, social educators, and psychologists had a significantly higher likelihood of taking an interest in the relevant information than cleaners, drivers, or other employees in similar positions. Respondents with higher education backgrounds and part-time positions had a significantly greater likelihood of taking an interest in the process of health promotion among students than full-time employees without higher education.

3.3. The participation and self-assessment of the members of Lithuanian school communities in the process of health promotion at school among 9th and 10th grade students

The analysis of student and parent participation found that only 10.1% of students and just 2.3% of parents were either actively or very actively involved in the process of health promotion. In terms of participation among various student groups, more active participation was found among female students than males, among older students than younger students, among residents of towns than those residing in villages or cities, among students achieving higher grades than students with lower grades, and among students who had been at the school longer than among those who had been at the school for less than 9 years. An association between participation and type of school was identified: students attending lower-secondary schools, schools in villages and towns, and HPSs were significantly more active compared to non-HPS students, those attending gymnasiums, and schools in cities and major cities. Among parents, males were more active participants than females, along with town residents compared to village and city residents. It was found that, as with student respondents, parental involvement in the process of health promotion was linked to school factors: parents whose children attended lower-secondary schools, educational institutions in villages and cities, and HPSs were significantly more active than parents of students in gymnasiums, schools in cities and major cities, and schools outside the HPS network (Table 1).

Only 27.2% of teachers and 30.1% of other school employees were either actively or very actively involved in the process of health promotion. In terms of the distribution across different groups of teachers, the most active participants were middle aged, taught subjects other than science or humanities, resided in towns, and were employed at school the longest. The activity levels of teachers were significantly associated with their school. Analyzing the differences in the participation of other school employees in the process of student

health promotion, it was found that employees with higher educations were significantly more active than those without, as were part-time employees compared to full-time employees and HPS employees compared to non-HPS employees (Table 1).

Furthermore, it was determined that the most active participants in the process of student health promotion at school were urban residents, respondents under the age of 40, public health specialists, speech therapists, social educators, and psychologists (Table 1).

Table 1. The distribution of students and their parents in different groups of respondents according to their activity in the process of health promotion among school students

Factors characterizing students	Participation, % (absolute value)					
	Non-participants (0–3 points)	**Passive** (4–7 points)	**Moderately active** (8–11 points)	**Active** (12–15 points)	**Very active** (16–20 points)	***p*-value**
	48.1 (1718)	27.6 (985)	14.3 (510)	7.4 (264)	2.7 (97)	
Gender						
Male	53,5 (897)	24.8 (416)	12.0 (201)	7.2 (121)	2.4 (41)	**<0.0001***
Female	43.3 (821)	30.0 (569)	16.3 (309)	7.5 (143)	3.0 (56)	
Type of school						
Lower-secondary	44.8 (464)	27.1 (280)	15.4 (159)	9.4 (97)	3.4 (35)	**0.001***
Gymnasium	49.4 (1254)	27.8 (705)	13.8 (351)	6.6 (167)	2.4 (62)	
Location of school						
Village, town	42.8 (704)	28.8 (474)	16.4 (270)	8.5 (140)	3.5 (58)	
City, major city	52.6 (1014)	26.5 (511)	12.4 (240)	6.4 (124)	2.0 (39)	**<0.0001***
Affiliation with HPS network						
HPS	45.2 (600)	28.3 (376)	14.7 (195)	8.9 (118)	2.9 (38)	**<0.0001***
Non-HPS	49.8 (1118)	21.7 (609)	14.0 (315)	6.5 (146)	2.6 (59)	
Factors characterizing parents	Participation, % (absolute value)					
	Non-participants (0–3 points)	**Passive** (4–7 points)	**Moderately active** (8–11 points)	**Active** (12–15 points)	**Very active** (16–20 points)	***p*-value**
	79.0 (2244)	11.7 (335)	6.8 (194)	1.3 (38)	1.0 (29)	
Gender						
Male	74.8 (297)	12.3 (49)	9.1 (36)	2.5 (10)	1.3 (5)	**0.015***
Female	79.7 (1951)	11.7 (286)	6.5 (158)	1.1 (28)	1.0 (24)	
Type of school						
Lower-secondary	76.7 (626)	11.0 (90)	9.4 (77)	1.5 (12)	1.3 (11)	**0.024****
Gymnasium	80.0 (1622)	12.1 (245)	5.8 (117)	1.3 (26)	0.9 (18)	
Location of school						
Village, town	75.5 (925)	13.4 (164)	7.8 (95)	1.9 (23)	1.5 (18)	**<0.0001***
City, major city	81.7 (1323)	10.6 (171)	6.1 (99)	0.9 (15)	0.7 (11)	
Affiliation with HPS network						
HPS	75.5 (791)	13.7 (144)	8.1 (85)	1.6 (17)	1.4 (15)	**<0.0001***
Non-HPS	81.3 (1457)	10.7 (191)	6.1 (109)	1.2 (21)	0.8 (14)	

Table 1 continued. The distribution of teachers and other school employees in various groups of respondents according to their activity in the process of health promotion among school students

Factors characterizing teachers	Participation, % (absolute value)					
	Non-participants (0–3 points)	**Passive** (4–7 points)	**Moderately active** (8–11 points)	**Active** (12–15 points)	**Very active** (16–20 points)	***p*-value**
	28.0 (349)	25.8 (322)	18.9 (236)	17.6 (220)	9.6 (120)	
Subject taught						
Humanities	30.0 (152)	29.4 (149)	17.4 (88)	16.4 (83)	6.7 (34)	**<00001****
Sciences	30.9 (115)	22.0 (82)	20.7 (77)	16.7 (62)	9.7 (36)	
Other	22.2 (82)	24.7 (91)	19.2 (71)	20.3 (75)	13.6 (50)	
Type of school						
Lower-secondary	23.3 (116)	26.5 (132)	19.5 (97)	19.7 (98)	11.0 (55)	**0.002***
Gymnasium	31.1 (233)	25.4 (190)	18.6 (139)	16.3 (122)	8.7 (65)	
Affiliation with HPS network						
HPS	20.7 (106)	26.3 (135)	22.2 (114)	19.5 (100)	11.3 (58)	**<0.0001***
Non-HPS	33.1 (243)	25.5 (187)	16.6 (122)	16.3 (120)	8.4 (62)	
Factors characterizing school employees	Participation, % (absolute value)					
	Non-participants (0–3 points)	**Passive** (4–7 points)	**Moderately active** (8–11 points)	**Active** (12–15 points)	**Very active** (16–20 points)	***p*-value**
	43.6 (346)	14.5 (115)	11.8 (94)	15.1 (120)	15.0 (119)	
Position						
Administration worker	36.3 (89)	13.9 (34)	13.5 (33)	21.2 (52)	15.1 (37)	
Public health specialist, speech therapist, social educator, etc.	19.7 (41)	11.5 (24)	18.8 (39)	18.3 (38)	31.7 (66)	**<0.0001****
Cleaner, driver, etc.	63.3 (216)	16.7 (57)	6.5 (22)	8.8 (30)	4.7 (16)	
Working hours						
Full-time	48.5 (296)	13.4 (82)	11.3 (69)	13.9 (85)	12.8 (78)	
Part-time (0.25–0.75)	27.2 (50)	17.9 (33)	13.6 (25)	19.0 (35)	22.3 (41)	**<0.0001***
Affiliation with HPS network						
HPS	37.6 (120)	13.5 (43)	14.7 (47)	16.6 (53)	17.6 (56)	**0.003***
Non-HPS	47.6 (226)	15.2 (72)	9.9 (47)	14.1 (67)	13.3 (63)	

* Mann–Whitney test; ** Kruskal–Wallis test

In terms of the activities that community members were involved in when participating in the health promotion process, it was found that most respondents had attended events in the last 12 months (41.9% of students, 14% of parents, 47.2% of teachers, and 41.7% of other school employees). The lowest percentage of other school employees were involved in hosting events (18.9% in the last 12 months), whereas the smallest number of other community members were involved in finance or other resource-related activities (over the last 12 months, 5.2% of students were involved in fundraising efforts, 3.7% of parents organized material aid, and 12.3% of teachers were involved in resource planning).

According to the study, only 33% of students and 31.9% of parents considered their participation in the process of student health promotion at school as good or very good, whereas most students and parents had a moderate opinion of their involvement. Nearly half of teachers (47.1%) and other school employees considered their participation to be good or very good. The smallest proportion of teachers and other school employees together assessed their participation as very bad. Meanwhile, 9.1% of teachers considered their participation to be bad or very bad.

3.4. The cooperation between the members of Lithuanian school communities in the process of health promotion at school among 9th and 10th grade students

According to the study, only 16.3% (95% CI:15.0; 17.7) of students cooperated with school employees. Nearly half of the respondents (48.2%, 95% CI: 46.4; 50.1) indicated partial cooperation. It was found that parents with lower-secondary and secondary educations had a statistically significant 29% higher chance of cooperating with school employees than parents with other kinds of education. The study also revealed that parents whose children attended lower-secondary schools and schools in villages and towns were significantly more likely to cooperate with school employees than the

parents of children attending gymnasiums and schools in cities and major cities. Of all the parents that cooperated with school employees, most cooperated with the head teacher of a class (78.6%), nearly a third (31.8%) cooperated with teachers, and 1 in 5 parents (19.8%) cooperated with the school's public health specialist. The smallest proportion of parents cooperated with the school's administration (4.4%).

The results of the study revealed that the majority of teachers (94.3%, 95% CI: 92.9; 95.5) thought that cooperation between school employees was important in student health promotion, but only around half of the respondents (49.6%, 95% CI: 46.8; 52.3) indicated doing so. Respondents who had been working as teachers for more than 12 years were found to be more likely to cooperate with other school employees than respondents with a shorter term of employment at school. It should be noted that HPS teachers were as much as 3.14 times more likely to cooperate with other employees than teachers in non-HPSs. Of all the teachers who cooperated with school employees, the majority of respondents (71.7%) did so with a public health specialist, and a similar proportion (71.4%) said that they cooperated with other teachers. The smallest proportion of teachers (24.7%) cooperated with the head of school.

The study also determined that 52.1% (95 % CI: 48.7; 55.6) of other school employees cooperated with teachers, public health specialists, social educators, school administration, and other employees. Analysis of the factors related to the cooperation of other school employees with teachers and with each other found that respondents with higher educations and lower-secondary school employees had a significantly higher chance of cooperating compared to respondents with other types of education and those employed in a gymnasium. It was found that public health specialists, speech therapists, social educators, and psychologists were statistically significantly 5.21 times more likely to cooperate compared to cleaners, drivers, and other employees in similar positions.

3.5. The expectations of the members of school communities regarding the process of health promotion at school among 9th and 10th grade students, and the reasons that prevent them from actively participating in this process

According to the study, a large proportion of students (53.1%) had positive expectations regarding their participation in the health promotion process: more than half of the respondents believed that by participating they would acquire useful knowledge about health promotion; 41% indicated that participation would lead to them being more physically active; and 38.1% believed that participation would improve their health. However, 16.4% of students were convinced that their participation would have no impact at all.

As with students, most parents indicated positive expectations regarding their participation in the process of health promotion: 63.6% believed that through their participation their children would acquire useful knowledge about health promotion; and one third stated that their children would have a healthier diet (35.1%) and become more physically active (34.5%). Although a quarter of parents (25.9%) were convinced that their involvement in the process of health promotion in their child's school would improve their child's health, only 5.1% believed that their own health would improve as a result.

The expectations of teachers were also positive, and focused on the students: 57.3% of teachers indicated that their participation would result in their students acquiring useful knowledge regarding health promotion; and 39.5% stated that the health of their students would improve. However, 8% of teachers believed that their participation would have no impact on their own health or the health of their students.

Nearly half of the other employees of the school (49.7%) believed that their participation in the health promotion process would result in students acquiring useful knowledge regarding health promotion, while one fifth (19.3%) thought they would improve their own knowledge. A considerable proportion of the respondents (26.3%)

believed that their own participation would result in improved student health.

The majority of students (60.8%) stated that their participation in the process of health promotion at school was inhibited by lack of time, over half (52.5%) indicated lack of inclination, and one quarter (24.4%) indicated lack of knowledge as the main inhibiting factor. Parents listed similar reasons behind their lack of participation, and a large number of teachers and other school employees also indicated lack of time, inclination, and knowledge as the main reasons for their passive participation. A substantial number of teachers (16.7%) also specified a lack of reading materials (Table 2).

Table 2. The reasons that prevent the members of school communities from actively participating in the health promotion process

Reasons preventing participation among students	**%**	**95% CI**	**n**
Lack of time	60.8	59.2; 62.4	2172
Lack of inclination	52.5	50.8; 54.1	1875
Lack of knowledge	24.3	22.9; 25.7	868
Opinion of students is ignored	17.9	16.7; 19.2	639
Lack of initiative and inclination from the teachers	17.0	15.8; 18.3	607
Lack of initiative and inclination from other school employees	13.6	12.5; 14.7	485
Lack of initiative and inclination from the head of school	11.6	10.6; 12.7	414
I am an active participant, nothing prevents me from participating	5.1	4.4; 5.8	181
Reasons preventing participation among parents	**%**	**95% CI**	**n**
Lack of time	78.4	76.9; 79.9	2231
Lack of knowledge	23.1	21.6; 24.7	658
Lack of inclination	22.9	21.4; 24.5	651
Lack of initiative and inclination from the teachers	11.8	10.7; 13.0	335
Lack of reading material	10.3	9.3; 11.5	294
Lack of initiative and inclination from the head of school	8.7	7.7; 9.8	248
Lack of initiative and inclination from other school employees	8.7	7.7; 9.8	247
Opinion of parents is ignored	7.7	6.7; 8.7	218
I am an active participant, nothing prevents me from participating	3.3	2.7; 4.0	94
Reasons preventing participation among teachers	**%**	**95% CI**	**n**
Lack of time	71.2	68.6; 73.7	888
Lack of knowledge	21.9	19.7; 24.3	273
Lack of inclination	21.4	19.2; 23.8	267
Lack of reading material	16.7	14.7; 18.9	208
I am an active participant, nothing prevents me from participating	14.8	12.9; 16.8	184
Lack of initiative and inclination from other school employees	13.1	11.3; 15.1	163
Opinion of teachers is ignored	4.2	3.2; 5.5	52
Lack of initiative and inclination from the head of school	3.8	2.9; 5.1	48
Reasons preventing participation among other school employees	**%**	**95 CI**	**n**
Lack of time	59.3	55.9; 62.7	471
Lack of knowledge	22.3	19.5; 25.32	177

Table 2 continued. The reasons that prevent the members of school communities from actively participating in the health promotion process

Lack of inclination	20.8	18.1; 23.7	165
Lack of initiative and inclination from other school employees	15.9	13.5; 18.6	126
I am an active participant, nothing prevents me from participating	14.0	11.7; 16.6	111
Lack of reading material	12.7	10.6; 15.2	101
Lack of initiative and inclination from the head of school	4.8	3.5; 6.5	38
Opinion of school employees is ignored	3.5	2.5; 5.1	28

3.6. The need for information regarding student health promotion for the members of Lithuanian school communities

According to the study, only 23.4% (95% CI: 22.1; 24.9) of respondents received sufficient information regarding health promotion. In terms of the factors that influenced the sufficient availability of such information, it was found that students in a HPS had a 59% higher likelihood of receiving sufficient information compared to non-HPS students. The results of the study also revealed that the children of fathers with higher educations were statistically significantly 1.41 times more likely to receive sufficient information compared to the children of fathers with lower-secondary or secondary educations. Furthermore, only 1 in 5 fathers (19.9%; 95% CI: 18.4; 21.4) received sufficient information regarding student health promotion. The remainder of the respondents did not receive sufficient information (29.8%; 95% CI: 28.2; 31.5) or did so only in part (50.7%; 95% CI: 48.5; 52.2). According to the study, parents with children attending a HPS had a statistically significant 64% higher chance of receiving sufficient information regarding health promotion compared to the parents of children in a non-HPS.

The study revealed that only 44.3% (95% CI: 41.6; 47.1) of teachers received sufficient information regarding student health promotion. The remainder of the respondents indicated receiving partial information (50.7%; 95% CI: 47.9; 53.5) or none at all (5.0%; 95% CI: 47.9; 6.3). It was determined that teachers with a higher education were 2.85 times more likely to receive sufficient information compared to teachers with a special, post-secondary, or

vocational education. Teachers working in a HPS were statistically significantly 2 times more likely to receive sufficient information compared to their non-HPS colleagues.

Analysis of the results demonstrated that only 44.2% (95% CI: 40.1; 47.7) of other school employees received sufficient information regarding student health promotion. The remainder of the respondents indicated having received such information only in part (44,0%; 95% CI: 9.8; 14.3) or not at all (11.9%; 95% CI: 28.2; 31.5). Other school employees with a higher education background, as well as employees of HPSs, were significantly more likely to receive sufficient information than respondents with other education backgrounds and those employed in non-HPSs.

The largest proportion of every section of the school community each indicated that the information on health promotion that they most required was on the subject of healthy eating: this was stated by 66.7% of students; 62.9% of parents; 58.2% of teachers; and 55.4% of other employees. Information on physical activity and fitness was also sought after by a large number of respondents: 63% of students, 52% of parents, and 37.2% of other school employees stated that they require it. It should also be noted that 38.4% of students and 49.3% of teachers stated that the information they most require concerns mental health (stress management, depression, and dealing with loss). Further, the study revealed that information about preventing infectious diseases was least required (this topic was rated as a priority by the lowest percentage of respondents).

3.7. The associations between being a member of a HPS community and smoking, alcohol consumption, and drug use

The study revealed that over half (58.2 %, 95% CI: 56.9; 59.6) of the students who participated in the survey had attempted smoking, and slightly less than one fifth (18.1% (95% CI: 16.9; 19.4) considered themselves to be smokers. Investigations into the associations between studying in a HPS and attempting smoking or being a smoker revealed

that HPS students had a higher likelihood of attempting to smoke and becoming a smoker than students from a non-HPS – however, these differences were not statistically significant. The results of the study also demonstrated that, although the majority of students in the study (74.4%, 95% CI: 72.9; 75.8) had attempted to consume alcohol, only 1 in 10 students (9.5%, 95% CI: 8.6; 10.5) did so monthly or more frequently. A similar proportion of students (9.3%, 95% CI: 8.4; 10.3) indicated having attempted to use drugs. When assessing the associations between studying in a HPS and attempts to consume or the regular consumption of alcohol, the study revealed that HPS students had a statistically significant 19% lower chance of attempting to consume alcohol, and a statistically significant 28% lower chance of consume alcohol once a month or more frequently compared to non-HPS students. HPS students were also statistically significantly 27% less likely to attempt to use drugs compared to non-HPS students.

A total of 16.4% (95% CI: 15.0; 17.8) of parents claimed to be smokers, almost 1 in 10 (9.8 %, 95% CI: 8.8; 11.0) consumed alcohol every month or more frequently, and 1.8% (95% PI: 1.4; 2.4) admitted having attempted to use drugs. The prevalence of smoking, alcohol consumption, and drug use among the parents of both HPS and non-HPS students was similar. The parents of children from a HPS had an 18% lower likelihood of consuming alcohol once a month or more frequently than the parents of children in a non-HPS, although this difference had no statistical significance.

According to the study, 5% (95% CI: 3,9; 6,3) of teachers smoked and 10.7% (95% CI: 12.4; 17.4) of them consumed alcohol every month or more frequently. In analyzing the links between the employment of teachers in a HPS and their smoking habits, it was found that HPS teachers had a statistically significant 56% lower chance of smoking compared to their non-HPS colleagues. HPS teachers also had a 9% lower chance of consuming alcohol every month or more frequently than teachers who worked in non-HPSs, but these differences were not statistically significant.

The results of the study showed that 6% of other school employees (9 % CI: 4.6; 7.9) smoked, and 14.7% (95 % CI: 12.4; 17.4) consumed alcohol every month or more frequently. In assessing the links between their employment in a HPS and their smoking and alcohol consumption, HPS employees were found to be 29% more likely to smoke and 5% less likely to consume alcohol every month or more frequently than non-HPS employees, but these differences were not statistically significant.

3.8. The attitude of the members of Lithuanian school communities towards health promoting schools

The study revealed that only 1 in 3 students (33.6%, 95% CI: 32.1; 35.2) was inclined to study in a HPS, even though the majority of them (82.4%, 95% CI: 81.2; 83.6) indicated being at least a little familiar with the idea and the concept of a HPS.

The survey of parents demonstrated that 70.5% of them (95% CI: 68.8; 72.1) were familiar with the idea and the concept of a HPS to some extent, and a slightly smaller percentage of the respondents (63.9%, 95% CI: 61.8; 65.4) wanted their children to attend a HPS.

As for teachers, the majority (94.8%, 95% CI: 93.4; 95.9) also indicated being at least a little familiar with the idea and the concept of a HPS, but a substantially smaller proportion of respondents (39.1% (95% CI: 36.5; 41.2) wanted to work in a HPS.

A similar response was documented among the other school employees: although a large proportion claimed (91,7% (95% CI: 89.6; 93.4) to be familiar with the idea and the concept of a HPS, only 40.8% (95% CI: 37.4; 44.3) wanted to work in one.

4. DISCUSSION

Students themselves should be at the center of the school's health promotion process, but the results of this study showed that only 1 in 10 students was either actively or very actively involved. Nearly half

of the students were not participating in this process, and almost 30% were passive participants. These results reflect the results of a 2016 study, which revealed that 40% of students in small town schools and 30% of students in city schools participated in health promotion and health education activities [24]. Similar results were obtained by A. de Roiste et al. in 2012, according to which around one quarter of students took part in the development of school rules and almost 60% contributed to the organization of events [25]. The results of the current study demonstrate that older students (17–18 years old) were significantly more active in the health promotion process than students aged 16 and younger. The fact that the need to participate in decision-making increases in importance as a child grows older has already been noted by L. Chassin and his colleagues in 1989 [26]. The involvement of students in the health promotion process was also linked to certain school factors: students from schools in villages and towns were significantly more active compared to students from schools in cities and major cities. In the opinion of the authors of this current study, such a result could be explained by the smaller numbers of students that attend rural schools. Furthermore, such schools are often the only educational institutions in their areas, and it is likely that such school communities generally form stronger relationships that result in students becoming more actively involved in the health promotion process.

Although previous research has demonstrated that parental involvement in student health promotion has a positive impact on a range of aspects of their child's health and academic progress, the current study found that, of all school community members, parents were the least involved in the process of health promotion. According to some researchers, the reduced involvement of parents in the education process may be due their perception that educating students is the responsibility of the school, rather than their own duty as parents [27; 28]. The minimal involvement of parents in the health promotion process was also confirmed in an analysis of the school curricula

performed by the Center for Health Education and Disease Prevention (CHEDP) [29].

Although teachers and other school employees play a key role in student health promotion, this study found that only around 30% of teachers and other school employees were either actively or very actively involved in it. Researchers at the Lithuanian University of Educational Sciences and Mykolas Romeris University also remarked on the low involvement of teachers who, as revealed in the study, themselves believed that they were not involved in health education activities enough to provide a good example of a healthy lifestyle for their students [30]. A qualitative study published in 2015 demonstrated that, although most teachers understand the importance of health education and take responsibility for the health education of their students, there are some who are inclined to limit their role solely to teaching their specific subject [31].

The limited participation of the members of school communities in the process of student health promotion has also been confirmed by studies which examine the cooperation between community members in the process of student health promotion. The issue of a lack of cooperation has been raised by both Lithuanian and international scholars [32; 33].

The results of the current study reveal that the majority of school community members participate in the school's health promotion process by attending events. Similar results were obtained in a study performed for the completion of a master's thesis in 2016 (wherein the majority of respondents who participated in the process of student health promotion at school participated in events and helped to organize them) [24]. The frequent occurrence of health promotion events in schools was confirmed by a survey conducted in 2007, in which as many as 96% of the heads of schools claimed that their schools organize such events [34]. The substantially high number of students participating in various events was confirmed in a study by R. Raškevičienė et al., where over half of 14–17 year old adolescents

indicated their participation in health promotion programs, events about eating disorders, and various competitions [35].

The results of the present study reveal that the members of school communities are interested in information regarding student health promotion at school, and are inclined to be more actively involved. The desire to participate in this process was noted by other researchers – for example, the parents who participated in a qualitative study in China in 2014 expressed their wish to be involved in the planning and implementation of various child-health promotion activities [36]. The study presented in this paper reveals that members of school communities have positive expectations regarding their participation in the process of health promotion, which can be linked to improved knowledge about student health promotion and positive changes in lifestyle and health. Positive expectations of the involvement of teachers in the health promotion process, such as increased self-confidence and improved academic achievements among students, were also noted by Norwegian researchers [37].

This paper has also revealed that lack of time is the decisive factor in preventing most members of school communities across all study groups from more actively participating in the health promotion process. Lack of inclination was also mentioned by a substantial number of respondents. Similar reasons for lack of participation were identified by J. Jafarov, who noted that low parental involvement could be the result of a lack of knowledge and time [38]. Other researchers have also identified lack of enthusiasm as a possible hindrance [39], whereas US researchers cite lack of knowledge [40].

Our data demonstrate that there is a need to provide members of school communities with information regarding health promotion, as the majority of students, parents, teachers, and other school employees wished (or wished to a certain degree) to receive more information on student health promotion, and were interested or at least a little interested in it. Although the majority of the school communities stated that they were at least slightly interested in information regarding health promotion, a significantly lower proportion of the

respondents (almost half of the students and their parents, more than 60% of teachers, and slightly more than half of other school employees) indicated that they sought such information individually. Such data show that an ample proportion of the respondents were not inclined to search for the necessary information themselves, and therefore the need to provide the desired information at school is evident.

This study also revealed that only a small proportion of the respondents (1 in 4 students, 1 in 5 parents, and over 40% of teachers and other school employees) claimed to have received sufficient information regarding health promotion. The existence of this issue in Lithuania was confirmed in a 2011 study, where only 12.8% of 9th–12th grade students were found to have received enough information about a healthy lifestyle [41].

It was determined that the majority of students most sought information regarding healthy eating, physical activity and fitness, and mental health (66.7%, 63%, and 38.4%, respectively). The relevance of these topics was confirmed in a study by R. Raškevičienė et al., which demonstrated that most 14–17-year-old students wish to learn more about a healthy, balanced diet, physical activity, and improving mental health [35]. The importance of information regarding healthy eating and physical activity was confirmed by a 1998 study in the UK, which showed that students believed such information would be useful to them in the future [42]. According to other researchers, adolescents were most interested in mental health disorders, such as anxiety, depression, and eating disorders [43].

Responses to the questionnaire indicated that 1 in 3 students, over half of parents, and approximately 40% of teachers and other school employees wanted to study/work in a HPS, which could be the result of limited knowledge about HPS activities and their benefits.

The results of this study demonstrated that being part of a HPS had a significant influence on reducing attempts to consume, or the consumption of, alcohol among adolescents. Similar results were obtained in a study by A. Jociūtė in 2002 [44]. The positive influence

of a HPS on adolescent alcohol consumption was identified by Spanish researchers in 2017 (where a significantly greater number of HPS than non-HPS students were revealed to have never tried to consume alcohol) [45]. Conversely, other researchers have found no evidence of a positive influence of HPSs on adolescent alcohol consumption, or have indicated that any such influence was either short-term or insignificant [8; 46; 47].

The present study also highlighted a significant association between studying in a HPS and the prevalence of adolescent drug use. In the past, research into the impact of HPS interventions on adolescent drug use have produced contradictory results. For example, Dutch researchers found that a 3-year HPS intervention had a positive impact on attempted drug use among adolescent females [48], yet another study carried out by the same researchers 2 years later demonstrated that neither a 1-year, nor a 2-year intervention by a HPS resulted in significant differences in attempted use of cannabis between students from intervention and control schools [47]. Spanish researchers also found no significant influence to be exerted by a HPS on drug use among students: respondents that did not consume marijuana or hashish were similarly distributed between HPS and control schools [49]. It should be noted that the current study data did not reveal a significant association between smoking or attempting to smoke among students and studying in a HPS. This conclusion was confirmed in a study by Australian researchers, which found that studying in a HPS impacted only students' knowledge of smoking, but had no significant influence on the prevalence of smoking among them [50]. Other studies examining the influence of HPSs on tobacco use among students have provided conflicting results [49; 51].

5. CONCLUSIONS

1. Nearly half of students and parents, and nearly 80% of teachers and other school employees, indicated that the process of student health promotion at school receives sufficient attention. The majority of community members were interested or at least slightly interested in the process of student health promotion at school. Members of HPS communities had a statistically significantly higher chance of supporting conclusion that the process of student health promotion at school receives sufficient attention. The interest in the process of student health promotion was significantly associated with: females, among both students and parents; study/working in a HPS, among students and teachers; and possessing a higher education, among parents and other school employees.

2. Only 1 in 10 students, a mere 2% of their parents, and one third of teachers and other school employees were active or very active in the process of student health promotion at school. The majority of students and their parents, as well as over half of teachers and other school employees, were either passive or did not participate in the process of student health promotion. The majority of community members attended events for student health promotion or helped to organize them. HPS community members were significantly more active. Members of school communities in rural areas were also significantly more active across student, parent, and teacher groups. Other factors influencing the participation of community members varied across different groups of respondents.

3. The majority of the members of school communities were fully or partially inclined to participate more actively in the process of health promotion among students. One third of students and parents, and nearly half of teachers and other school employees, considered their participation in this process to be either good or very good. The members of communities from lower-secondary schools and schools in rural areas (villages and towns) were more favorable in regards to assessing their participation. Female respondents were more content

with their participation in the student and parent groups. Members of HPS communities were more content with their participation in the groups of students, teachers, and other school employees.

4. The majority of the members of school communities stated that cooperation was important for improving student health promotion, however only around 16% of parents reported cooperating with school employees, only half of teachers and other school staff cooperated with each other, and only one quarter of them cooperated with parents. Different sociodemographic factors were associated with cooperation across all groups of respondents. Most parents cooperated with the head teacher and other teachers, whereas most teachers and other school employees cooperated with public health specialists and other teachers. The main factors that hindered community members from cooperating more actively were lack of time and inclination, whether from themselves or other community members.

5. Expectations regarding participation in the process of health promotion for most school community members were positive, and related to the improvement of health-promoting knowledge and positive changes to both lifestyle and health. Positive expectations across the different groups of respondents were significantly influenced by various factors: among students – gender, which grade they were currently in, and their average grades over the last 6 months; among parents – their level of education; among teachers – the subject they taught; and among other school employees – their education, their school's membership in the HPS network, and their position. The main factors that prevented community members from participating more actively in the process of student health promotion were lack of time, inclination, and knowledge.

6. The majority of school communities lacked sufficient information regarding student health promotion, but the members of HPS communities had a significantly higher likelihood of receiving sufficient information. The most sought-after information for the majority of the members of school communities concerned healthy eating, physical activity and fitness, and mental health. The least

required topic was the prevention of infectious diseases. The need for information on different topics related to the gender of the respondents.

7. Studying/working in a HPS was significantly associated with a lower likelihood of students attempting to consume or regularly consuming alcohol or attempting to use drugs, and a lower chance of teachers smoking. The relationship between the prevalence of harmful habits among parents and other school employees and the school's affiliation with the HPS network was not statistically significant.

8. One third of students, over half of parents and around 40% of teachers and other school employees wanted to study/work in a HPS. Nearly half of students and over half of parents, teachers, and other school employees agreed with the statement that HPS students led a healthier lifestyle than non-HPS students. Respondents, who wanted to study/work in a HPS, were significantly more numerous among non-HPS community members. Members of HPS communities were more likely to support the statement that HPS students led a healthier lifestyle than non-HPS students.

6. RECOMMENDATIONS

1. School administrations and other school employees should use various means to (meetings, events, online records) more actively inform members of school communities of the process of health promotion at their school and its positive influence on students.

2. School administrations and other school employees should encourage and motivate members of the school community to be more actively engaged in the health promotion process at school by ensuring that participation is not merely a formality, but rather a genuine partnership that influences the decision-making process and organization of health-promoting activities.

3. School administrations and other school employees should encourage cooperation between parents and school employees, as well

as among school employees themselves, in the pursuit of increased health promotion among students.

4. It is recommended that the school's own public health specialists, together with the school administration, assess the informational requirements of the school communities regarding student health promotion, and organize events that provide the relevant information. Community members should also be mindful of the relevance of infectious disease prevention.

5. The Ministry of Health and the Ministry of Education, Science, and Sport are recommended to continue the expansion of the HPS network in Lithuania.

6. The Ministry of Health, the Ministry of Education, Science, and Sport, and the Center for Health Education and Disease Prevention are recommended to initiate public awareness campaigns regarding the benefits of HPSs for the members of school communities.

7. Lithuanian researchers are encouraged to carry out further studies on the various aspects of the process of health promotion at school, such as longitudinal studies that assess the impact of HPSs on lifestyle, and to evaluate current health-promoting activities.

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8. PUBLICATIONS AND PRESENTATIONS

Publications on the theme of the dissertation

1. Maceinaitė R, Šurkienė G, Lietuvos mažųjų miestų mokyklų mokinių tėvų dalyvavimas vaikų sveikatą stiprinančiame procese. Vaikų pulmonologija ir alergologija 2017; 1(20): 40-48.
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4. Maceinaitė R, Šurkienė G, Sketerskienė R, Butikis M. Mokytojų nuomonė apie jų ir jų mokinių sveikatos stiprinimo informacijos poreikį. Sveikatos mokslai 2020; 2 (30): 37-42.
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Presentations on the theme of the dissertation

Presentations at National Conferences

1. Maceinaitė R, Šurkienė G, Žeromskienė D, Sketerskienė R. Lietuvos mažųjų miestų mokyklų mokytojų dalyvavimas mokinių

sveikatą stiprinančiame procese. I-oji nacionalinė mokslinė-praktinė konferencija „Visuomenės sveikata saugiai Lietuvai“. 2016 m. spalio 6 d., Kaunas, Lietuva.

2. Maceinaitė R, Šurkienė G. Lietuvos mokyklų bendruomenių dalyvavimas stiprinant vaikų sveikatą. Lietuvos mokslų akademijos motinos ir vaiko komisijos metinė konferencija „MODERNIOJI PEDIATRIJA 2017“. 2017 m. birželio 1 d., Vilnius, Lietuva.

3. Maceinaitė R, Šurkienė G. Lietuvos mažųjų miestų mokyklų aštuntokų ir dešimtokų dalyvavimas sveikatą stiprinančiame procese. II-oji nacionalinė visuomenės sveikatos konferencija „Lyderystė sveikatai – sveikata lyderystei“. 2017 m. spalio 10 d., Kaunas, Lietuva.

4. Maceinaitė R, Šurkienė G. Mokinių, mokytojų bei tėvų dalyvavimas sveikatą stiprinančiame procese. Mokslinė-praktinė konferencija „VISUOMENĖS SVEIKATOS KONGRESAS 2017. VISUOMENĖS SVEIKATOS AKTUALIJOS“. 2017 m. lapkričio 9 d., Vilnius, Lietuva.

5. Maceinaitė R, Šurkienė G. Mokinių, mokytojų bei tėvų dalyvavimas sveikata stiprinančiame procese: bandomojo tyrimo rezultatai. Gerosios praktikos seminaras-diskusija „Vaikų aplinkos sveikatinimas neformaliomis priemonėmis“. 2018 m. rugsėjo 24 d., Palanga, Lietuva.

Presentations at Internationsl Conferences

1. Maceinaitė R, Šurkienė G. School Communities’ Participation In Health Promotion Process In Lithuania. ISPOR (International Society for Pharmacoeconomics and Outcome Research) 20th Annual European Congress „The Evolution of Value in Health Care“. 4-8 November 2017, Glasgow, Scotland.

2. Maceinaitė R, Šurkienė G. Kauno ir Klaipėdos mokyklų mokinių dalyvavimas sveikatą stiprinančiame procese. 20-oji Vydūno tarptautinė mokslinė konferencija „Į sveiką gyvenseną ir skaidrią būtį Vydūno keliu“. 2018 m. kovo 23 d., Klaipėda, Lietuva.

3. Maceinaitė R, Šurkienė G. Teachers' Participation in Schoolchildren's Health Promotion Process: Results of A Pilot Study. Fourth International Conference dedicated to the 100th Anniversary for the Restoration of Lithuania's Independence „Evolutionary medicine: health and disease in changing environment ". 5-10 June 2018, Vilnius, Lithuania

4. Maceinaitė R, Šurkienė G. Parents' Participation In Schoolchildren's Health Promotion Process: results of a pilot study. 11th European Public Health Conference „Winds of change: towards new ways of improving public health in Europe". 28 November - 1 December 2018, Ljubljana, Slovenia.

5. Maceinaitė R, Šurkienė G. Klaipėdos ir Kauno mokyklų mokytojų dalyvavimas sveikatą stiprinančiame procese. Tarptautinė mokslinė konferencija „Į sveiką gyvenseną ir skaidrią būtį Vydūno keliu", skirta Sveikatos mokslų fakulteto veiklos 20-mečiui paminėti. 2019 m. kovo 22 d., Klaipėda, Lietuva.

6. Maceinaitė R, Šurkienė G, Sketerskienė R. Schoolchildren's participation in health promotion process. 12th European Public Health Conference „Building bridges for solidarity and public health". 20 - 23 November 2019, Marseille, France.

7. Maceinaitė R, Šurkienė G, Sketerskienė R. Impact of health promotion in Lithuanian pupils smoking, alcohol and drug use. 16th World Congress on Public Health 2020 „Public health for the future of humanity: analysis, advocacy and action". 12-16 October 2020, Roma, Italija.

8. Maceinaitė R, Šurkienė G, Sketerskienė R. Teachers' opinion about the need for health promotion information. 16th World Congress on Public Health 2020 „Public health for the future of humanity: analysis, advocacy and action". 12-16 October 2020, Roma, Italija.

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