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## Health Literacy and the School Communities Functioning During the COVID-19 Pandemic in the School Principals' Opinions in Poland: Perspectives and Risks

### Abstract

The quantitative research, the partial results described in this article, was carried out as part of the COVID-HL network (covid-hl.eu). They aimed to determine to what extent health promotion and safety measures were taken in Polish schools during the COVID-19 pandemic for members of school communities. A survey method was used to conduct the research, which included an online distributed questionnaire. The research sample consisted of principals and deputy principals of schools located in eight provinces (N = 803). The research showed that school principals were highly involved in implementing health promotion activities and were, at the same time, severely burdened with tasks related to ensuring the safety of all school community representatives and maintaining proper organisation of school work during the pandemic.

**Keywords:** *COVID-19, school community, health promotion, safety, school principals*

### Introduction

The COVID-19 pandemic had an unprecedented influence on the functioning of people in society and organisations. It also had a special impact on the activities of educational institutions that, despite the pandemic restrictions, continued their operation. In Poland, in the initial period of the pandemic, the traditional stationary model of education and the evaluation of students' knowledge was replaced

by a remote one (Jarosz et al., 2021). The new paradigm of school functioning also made it necessary to implement previously unused procedures for managing employees and, more broadly, the entire school community, which were also transferred to the virtual space. It is worth noting that the school community should be considered here in a broad, holistic context – it includes employees of educational institutions and students, their parents, and external institutions cooperating with schools (Parveen et al., 2022).

An undoubted challenge for school principals during the COVID-19 pandemic was implementing rules for the safest functioning of the school community (particularly for teachers and students) in the new pandemic reality (Harris, 2020). On returning to the stationary education model, school principals were responsible for implementing relevant regulations related to health promotion and the applicable sanitary regime. The rules for implementing the stationary education process during the pandemic in Poland were strictly defined in the regulations of the Ministry of Education and Science, the Ministry of Health and the Chief Sanitary Inspectorate. The whole situation related to organising the education process must have been very burdensome for school principals, especially on the frequent occasions when some students in their school had stationary classes and others switched to the remote mode due to COVID-19 infections in their group (Netolicky, 2020).

At the same time, the education system and, thus, the school community, mainly students and teachers, suffered particularly severe consequences of having to function in the pandemic reality. These consequences involved the negative impact of the pandemic situation on various aspects of their physical and mental health (Besser et al., 2022; Tan, 2021). For students, studies conducted so far have indicated that the effects of long-term social isolation caused by the lockdown frequently included anxiety, depressed moods, helplessness, nervousness, irritability and insomnia (Saurabh & Ranjan, 2020). Moreover, owing to the coronavirus pandemic, behavioural disorders and problems in peer relationships appeared more frequently in children and adolescents (Wiguna et al., 2020). In addition, most students performed less physical activity during the pandemic than before, with extended so-called rest periods and screen time co-occurring with other sedentary behaviours (Mitra et al., 2020; Zhao et al., 2020), which will probably have long-term consequences for their psychophysical condition. In turn, research conducted among teachers has shown that the rapid transition to remote teaching and the requirements of social distancing during the pandemic caused increased tension and stress related to the additional workload and their need to find themselves in a new, previously unknown reality (Jarosz et al., 2021; Plebańska et al., 2021). The

described consequences of functioning in the pandemic reality indicate the emergence of an urgent need to focus activities undertaken in educational institutions on supporting the biopsychosocial well-being of all school community members.

The article analyses how far actions were taken in Polish schools during the COVID-19 pandemic to promote health and increase safety in school communities, particularly students and teachers. The subject of the empirical analyses was, among others, the opinions of school principals regarding the implementation of various solutions related to health issues.

## **Research Methodology**

### **Research Background**

The empirical research, the partial results described in this article, was carried out as part of the COVID-HL network ([covid-hl.eu](http://covid-hl.eu)) among school principals and deputy principals in over 60 countries. The article presents data obtained in Poland. During the online survey, issues related to the functioning of schools during the pandemic were raised, considering the opinions of school principals.

School principals provided information on how far they supported students, teachers and students' parents during the pandemic and whether they cooperated with external entities (such as healthcare institutions) in the implementation of tasks in the area of health protection policy.

Considering how students functioned in schools, the extent to which information was provided to them on how they could contract COVID-19 and how to protect themselves against this disease was analysed. School principals also indicated whether students received information on how to deal with fear and anxiety during the pandemic. At the same time, information given to students about healthy eating principles was analysed. School principals also indicated to what extent school employees participated in training on protection against infection and potential psychological support. They also referred to issues related to cooperation with students' parents and external entities (health care institutions, non-governmental organisations) in health promotion and protection.

### **Sample**

Purposeful sampling was used in the research. In total, nearly 2,000 respondents – school principals and deputy principals – took part in the survey. However, owing

to the purpose of the research and the completeness of the collected empirical material (including the possibility of making correlations), the statements of 803 respondents were considered in this article. Responses from 615 primary school principals and 188 secondary school principals were obtained. The type of school (primary or secondary) was the key variable, as the relationship between the type of school and the promotion of pro-health behaviours among school community members was analysed.

### **Instruments and Procedures**

A survey method was used to conduct the research, which included an online distributed questionnaire. The research, the results of which are described in this article, was carried out in eight provinces in Poland: Kuyavian-Pomeranian, Lubusz, Lodz, Subcarpathian, Podlasie, Silesian, Warmian-Masurian, and Greater Poland. Descriptive statistics and statistical tests were used to analyse the data obtained.

The research was approved by the Research Ethics Committee of the University of Silesia in Katowice, No. KEUS.118/04.2021.

### **Data Analysis**

In addition to descriptive statistics, the Mann-Whitney U test was used to analyse the data obtained. The hypothesis was tested regarding the existence of statistically significant differences between the type of school (primary and secondary) and the actions taken to promote health-related behaviours among school community members. The effect size was determined from the non-directional formula for the rank-two-series correlation ( $r$ ) proposed by Wendt. The observed probability ( $p$ ) was used in reading the test results. If this probability was lower than the assumed significance level  $\alpha = 0.05$ , then the null hypothesis about the lack of differences between the two samples was rejected in favour of the alternative hypothesis that the two samples differ.

### **Results**

Analysis of the collected empirical material has shown that school principals clearly emphasised that health issues relating to the general well-being of the school community were particularly important to them during the COVID-19

pandemic. By a wide margin, most school principals participating in the survey (96.1% – the sum of the answers ‘definitely yes’ and ‘somewhat yes’) indicated that the schools they managed provided students with coronavirus information, ways of contracting the infection and ways to protect themselves from being infected. Therefore, first – taking account of health issues – school principals implemented measures to prevent health problems to prevent the spread of COVID-19. Only a small percentage of respondents (3.9% – the sum of the answers ‘somewhat not’ and ‘definitely not’) indicated that their schools did not carry out such preventive activities with students. A very high percentage of school principals surveyed (95.5%) indicated that students were provided information on maintaining physical activity despite pandemic restrictions. The same can be said about the support offered to students, aimed at informing them about how to deal with anxiety and fear of the pandemic (95%) and how to eat healthily (94.5%) or involving students in health-promoting activities (88.6%) (Table 1).

**Table 1.** The extent to which selected health issues related to the functioning of students at schools during the COVID-19 pandemic were considered in the opinion of school principals (in percentage points)

Health issues	Definitely no	Somewhat no	Somewhat yes	Definitely yes
Students are given basic information about the coronavirus (for example, routes of infection)	3.2	0.7	13.5	82.6
Students are given information on how to protect themselves from infection	3.3	0.6	18.3	77.8
Students are given information on how to stay physically active despite the coronavirus restrictions	3.3	1.2	29.1	66.4
Students receive support to deal with fears and anxiety related to the coronavirus	3.2	1.8	31.8	63.2
Students are given information on how to eat healthily despite the coronavirus restrictions	3.3	2.2	31.5	63.0
Students are involved in planning preventive and health-promoting activities	2.8	8.6	49.9	38.7

Source: own research.

The empirical research has also shown that school principals attached great importance to organising appropriate working conditions for their employees (93.7%), who also received support in dealing with stressful situations related to the COVID-19 pandemic (90.4%). Slightly less frequently, respondents indicated

that they discussed with teachers issues related to the stress generated when performing professional duties during the coronavirus pandemic (84.9%) and that school employees participated in training on health issues, including protection against coronavirus infection (76.2%) (Table 2).

**Table 2.** The extent to which selected health issues related to the functioning of teachers in schools during the COVID-19 pandemic were considered in the opinion of school principals (in percentage points).

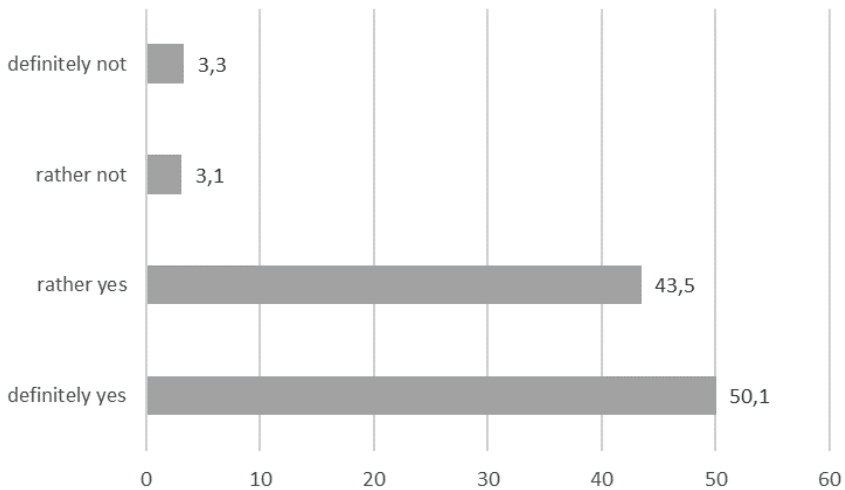
Health Issues	Definitely no	Some-what no	Some-what yes	Definitely yes
Health promotion aspects play an important role in the planning of working conditions (including homeschooling)	3.2	3.1	38.1	55.6
School employees receive support in dealing with stressful situations related to the coronavirus	3.3	6.3	38.7	51.7
Issues of stress resulting from the COVID-19 pandemic (workload, student stress) are regularly discussed with school employees)	3.2	11.9	50.7	34.2
School employees participate in health training (for example, protection against coronavirus infection)	3.5	20.3	48.0	28.2

Source: own research.

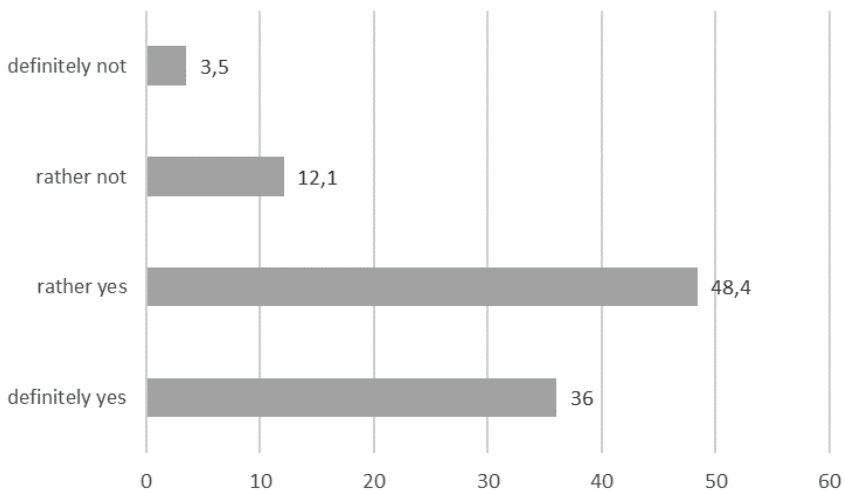
School principals also indicated whether the schools they managed created spaces for representatives of school communities, enabling work and social interaction under pandemic restrictions. Analysis of the empirical material has shown that such space was created in most schools (90.0%) during the pandemic for representatives of school communities (Figure 1).

An important aspect of the research was the assessment of cooperation between schools and students' parents (Figure 2) and with health service representatives and non-governmental organisations (Figure 3) in matters relating to promoting health attitudes among students.

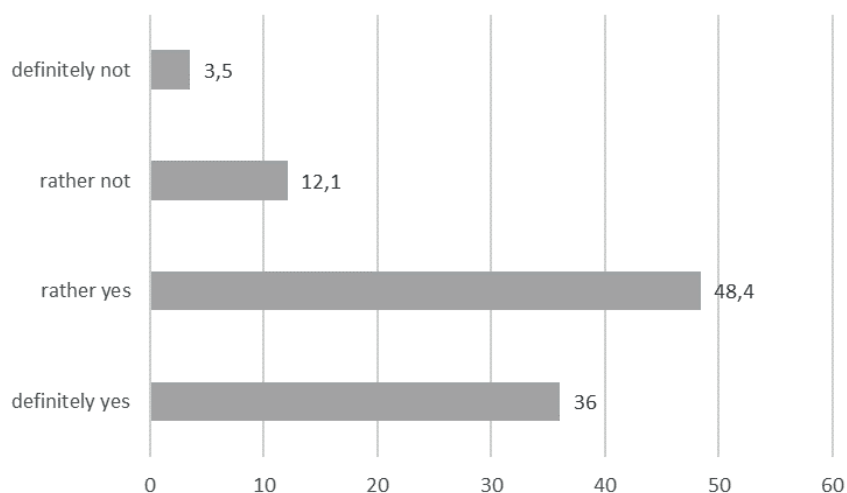
The empirical analysis has shown that most school principals (93.6%) declared that they cooperated closely with students' parents in promoting pro-health attitudes in their children. A slightly smaller percentage of school principals (84.4%) declared cooperation with health service representatives and non-governmental organisations in promoting and protecting students' health.



**Figure 1.** Opinions of school principals and deputy principals on the spaces created in schools (also equipped with computer hardware) to enable work and social interaction under coronavirus-related restrictions (in percentage points). Source: own research.



**Figure 2.** Opinions of school principals and deputy principals on close cooperation with students' parents on issues related to the promotion and protection of children's health (in percentage points). Source: own research.



**Figure 3.** Opinions of school principals and deputy principals on close cooperation with representatives of the health service and third sector units in the area of promotion and protection of students' health (in percentage points)

Source: own research.

In addition, based on the assumptions of the Mann–Whitney U test, correlations were demonstrated between the type of school (primary and secondary) and the actions taken to promote health-related behaviours among representatives of school communities. Statistical analysis of the collected empirical material (Table 3) showed correlations in six out of fourteen analysed activities implemented in schools to promote pro-health behaviours.

**Table 3.** Type of school and implementation of pro-health tasks  
(Mann-Whitney U test)

No.	Health issues	Mid- dle-rank- ing primary school	Mid- dle-rank- ing secondary school	Z	p	r
1	Students are given information on how to protect themselves from infection	415.7	357.1	4.22	0.000	0.146



No.	Health issues	Mid- dle-rank- ing primary school	Mid- dle-rank- ing secondary school	Z	p	r
2	Students are given information on how to maintain sufficient physical activity despite the coronavirus restrictions	412.1	366.9	2.85	0.004	0.113
3	Students are given information on how to eat healthily despite the coronavirus restrictions	421.5	338.3	5.09	0.000	0.207
4	School employees participate in health training (for example, protection against coronavirus infection)	410.0	373.6	2.04	0.042	0.091
5	There is a close cooperation with students' parents on issues related to the promotion and protection of children's health	414.4	356.7	3.36	0.001	0.144
6	Students are involved in planning preventive and health-promoting activities	413.0	365.9	2.70	0.007	0.117

Note: The analysis includes responses from 615 primary school principals and 188 secondary school principals.

Source: own research.

The empirical research has shown statistically significant differences between primary and secondary schools in all points related to health issues listed in Table 3. Analysis of the research material has shown that primary schools have higher rank values in all these cases than secondary schools. The interpretation of school principals' indications is as follows: in primary schools, the health issues listed in Table 3 were more considered during the COVID-19 pandemic than in secondary schools. At the same time, it should be noted that the primary schools whose principals participated in the survey were much more likely to belong to the nationwide Network of Health Promoting Schools, which might explain their greater focus on health issues. It turned out that 52.1% of the primary schools participating in the study belonged to the Network of Health Promoting Schools. In the case of secondary schools participating in the research, the percentage of institutions belonging to the Network of Health Promoting Schools was 31.5%.

The analysis of the strength of correlations (Wendt's rank-biserial coefficient of correlation) shows that, although statistically significant, the demonstrated

relationships are weak and very weak (values from 0.091 for school employees participating in training on, for example, protection against coronavirus infection to 0.207 for providing students with information on how to eat healthily despite the coronavirus restrictions).

## **Discussion**

The analysis of the collected empirical material indicates that representatives of school communities cared for health issues during the COVID-19 pandemic. It proves the tendency of the surveyed school principals to develop health literacy among members of the school community, particularly students. Health literacy is the cognitive and social skills that determine the motivation and ability of individuals to gain access to, understand and use information in ways that promote and maintain good health (WHO, 1998, p. 20). In the context of the conducted research, it concerned primarily the ability to prevent infection with the SARS-CoV-2 virus and shape appropriate health behaviours, including those relating to mental health. It is in line with the recommendations formulated in the literature on the subject, according to which the development of coronavirus-related health literacy should be carried out by providing up-to-date information understandably and transparently while strengthening the conscious responsibility of individuals and groups for their health choices (Okan et al., 2020).

The surveyed school principals also declared that they offered multi-directional support to teachers working in the schools they managed in relation to both organising work under pandemic conditions and coping with stress generated by the need to function in previously unknown circumstances. It is worth noting that the results obtained are consistent with those of research by E. Jarosz et al. (2021, p. 22), who analysed how teachers saw themselves functioning under the pandemic conditions. These teachers reported that they received support, primarily from school principals and other teachers, in preparing remote classes (Bolstad, 2004), interpreting documents, solving educational problems with students and cooperating with their parents. Additionally, the surveyed school principals – at least declaratively – tried to win parents' cooperation and ensure the best possible working and education conditions during the pandemic, taking care of the proper organisation of the school's physical environment. The readiness/ability to cooperate with external entities was ranked slightly worse in the conducted research. In this context, it is worth noting that one of the key elements of a health-promoting school is cooperation with the local community in the systematic and planned

creation of a social and physical environment that was conducive to the health and well-being of the entire school community (Paakkari, 2015; Young et al., 2014).

At the same time, it should be emphasised that school principals participated in the survey. These people undoubtedly care about the positive image of the schools they are responsible for. It may have been a factor affecting the high frequency of positive responses regarding the measures taken to ensure the safety of students and teachers during the COVID-19 pandemic. However, some differences can be observed between the frequency of the answer 'definitely yes' given by the surveyed school principals. It turned out that most school principals answered 'definitely yes' to questions directly related to health issues aimed at ensuring the safety of students during the pandemic. In turn, the fewest such answers were given to questions about the engagement of students in planning preventive and health-promoting activities and school employees' participation in health training. It may indicate that *the whole school approach*, which is one of the main standards of a health-promoting school, was not considered in school management. It requires that the concept of school work, its structure and organisation should foster the participation of the entire school community in the implementation of activities in the area of health promotion and thus guarantee their effectiveness and long-term character (Paakkari, 2015; Young et al., 2014). It also suggests that the surveyed school principals had difficulty delegating tasks and responsibilities, which probably resulted in more tension and stress, as reported by most respondents.

It should be noted that the conducted research also has limitations, setting the direction for further research analyses. First of all, the research was conducted using a questionnaire prepared within the COVID-HL network, distributed in the same form in all member countries. The questionnaire did not contain questions about specific forms and methods of implementing preventive and promotional activities in schools, which would certainly allow for better verification of respondents' declarations. Moreover, the research did not take account of the perspectives of students, teachers and parents, so they cannot be compared to the answers obtained from school principals. It would also be worth determining what support school principals received during the pandemic and how helpful it was for them.

## **Conclusions**

Due to the nearly two-year pandemic and under the related restrictions, school principals, teachers, students, and parents learned how to function in the new school reality for many months. They were burdened with additional stressors

resulting from the general health and social situation, which increasingly affected their psychosocial condition. The experience gained at that difficult time can help them to use the constructive phenomena and skills acquired to, first, act immediately and effectively in similar – and unfortunately probable – situations in the future and, second, treat this experience as an impulse to change the solutions implemented so far (Xie et al., 2020; Jarosz et al., 2021, p. 4).

As the conducted research has shown, on the one hand, school principals quickly implemented a new model of school management, teaching and assessment of students' knowledge, which was transferred to the virtual space. On the other, the school principals implemented the policy of promoting health issues, which had a positive impact on reducing the likelihood of coronavirus infection and was also supposed to improve the well-being of representatives of the school community during the pandemic.

The empirical research has also shown that school principals were highly involved in the implementation of tasks in the area of security policy for representatives of school communities during the pandemic. On the one hand, the activities were addressed directly to students and teachers. On the other hand, school principals also declared that they cooperated with students' parents and external entities (health care facilities, non-governmental organisations) in limiting the consequences of functioning under pandemic conditions. It can be assumed that in the future, restrictions on the activities of educational institutions, which were introduced during the pandemic, will be restored to some extent for various reasons. In this context, the methods of functioning that schools developed at that time will probably greatly facilitate the future work of school principals.

Summing up the conducted research, it is also worth noting that school principals were heavily burdened, trying to meet all the requirements imposed on them, ensure the best possible working and education conditions, and maintain control over the dynamically changing situation, thus taking on a very large responsibility. It generated increased tension and long-term stress, which the school principals faced throughout the pandemic. Therefore, when drawing conclusions and 'learning from the pandemic', it may be worth taking care of the health and safety of school principals by organising appropriate educational and promotional activities for them, which would certainly require implementing specific systemic solutions.

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