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Rural-urban differences in the perception of cooperation between schools and the psychiatric care system for children and adolescents, and attitudes towards the ban on using phones at school – a cross-sectional study

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Abstract

Introduction and Objective. Since 2020, a new model of psychiatric care for children and adolescents has been implemented in Poland. The aim of the study is to analyze the current level of cooperation between schools and the psychiatric care system for children and adolescents, as well as to identify attitudes towards the ban on using phones at school among school principals in the Łódź province in Central Poland.

Materials and Method. A total of 1,564 school principlas from Łódź province were inivited to participate in a cross-sectional survey. The self-prepared questionnaire was available online between March – April 2025.

Results. Data were received from 605 school principals, with a response rate of 38.7%. Respondents declared an average (48.3%) level of knowledge about the new model of psychiatric care for minors. Most of the school principals declared support (66.8%' definitely yes' and 23.5% 'rather yes') for the implementation law on the banning of use of phones in schools. School principals with 1–5 years of professional experience more often declared a good level of cooperation with reference level I and II of psychiatric care for minors, as well as support for a ban on the use of mobile phones in schools ($p<0.05$). Those managing primary schools or schools in rural areas, declared more positive attitudes towards ($p<0.05$) implementation of a ban on use of mobile phones in schools. Females more often declared ($p=0.04$) that a ban on use of mobile phones will have positive impact on children's social skills. The level of support for a ban on use of mobile phones in schools increased with the years of professional experience ($p=0.02$).

Conclusions. Five years after the introduction of the new model of psychiatric care for children and adolescents, there are still significant gaps in cooperation between schools and individual reference levels of psychiatric care for minors.

Key words

health services accessibility, child psychiatry, primary health care, schools, rural population, cross-sectional studies, urban population, mental health services, school administration.

INTRODUCTION

Mental health prevention and promotion for children and adolescents is a crucial task for both education and health systems [1, 2]. The World Health Organization (WHO) estimates that 10–20% of young people suffer from mental disorders, half of whom do not receive adequate support [2]. The COVID-19 pandemic worsened this problem, causing an increase in depressive disorders, anxiety disorders, and suicide attempts [3]. In this context, schools have gained new tasks as places for early identification of mental health problems and as an intermediary between family and the health care system [4].

In response to the growing prevalence of mental health problems in minors, since 2020, a three-level model of community psychiatric care for children and adolescents has been implemented in Poland [5]. This new organizational model assumes decentralization and transfer of the burden of care from hospitalization and in-patient care, to local support

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and outpatient care close to the child's home and school [5, 6]. This process began with the creation of reference level I facilities, followed by reference levels II and III (Fig. 1). Since 2022, this new model of psychiatric care for children and adolescents has been the basic form of psychiatric care for the youngest. In addition to the three-level system, psychiatric care for minor patients in Poland is also provided by other facilities, such as departments for the treatment of neurotic disorders in children and adolescents, youth hostels, clinics specializing in childhood autism, forensic psychiatry departments for minors, and care and treatment facilities [5]. This new organizational model promotes the active involvement of schools in contact with local mental health centers to provide quick support to students [6].

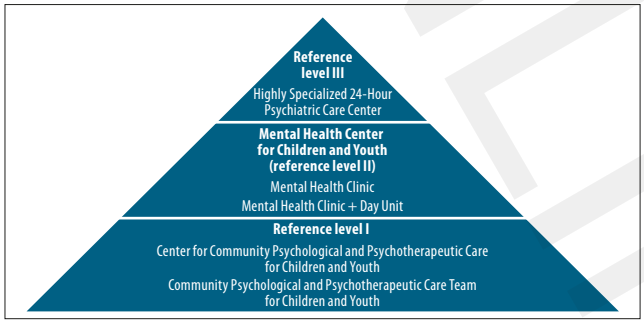

Figure 1. The three-level model of child and adolescent psychiatric care in Poland [5]

Reference level I of psychiatric care for children and adolescents includes easily accessible (without referral) community psychological and psychotherapeutic care centres operating locally and focusing on early intervention [5]. Psychologists, psychotherapists, and community therapists are available in reference I facilities. In line with the organizational plan, level I facilities operate in every county to provide assistance close to the place of residence of the patients and facilitate cooperation with schools and the local community. By May 2025, there were 498 reference level I facilities across the country [5, 6]. Facilities assigned to reference II include the Mental Health Centre for Children and Youth, which providea outpatient care and consultations, as well as the possibility of staying in the daycare ward [5].

By May 2025, there were 177 reference II level facilities – 85 providing mental health clinic services and 92 with a mental health clinic and a day ward [5, 6]. One reference level II centre is providing support for patients from several neighbouring counties. Reference level III includes highly specialized, 24-hour care centre for patients in the most severe clinical condition, operating in all provinces (35 facilities operating in 2025) [5, 6].

The benefits of well-organized cooperation between education and health care are multi-dimensional and documented in studies from various countries [7, 8]. It allows for early diagnosis of disorders in children and adolescents, which significantly improves prognosis and prevents the development of more serious health problems [7, 8]. Teachers, observing students daily, play a key role in referring them to mental health specialists [9]. Thanks to cooperation, it is also possible to adjust teaching conditions to the individual needs of the student, which improves educational results and reduces the risk of secondary difficulties [10]. Coherent work with the family is also important – joint activities of the school and mental health specialists increase the effectiveness of therapy and the involvement of parents [10, 11]. In a systemic approach, this cooperation reduces the number of hospitalizations and crisis interventions, improving the use of public funds [11]. In addition, promoting mental health in schools – through education and prevention – helps reduce stigma and supports the development of emotional competencies in children [12].

The lack of systematic cooperation between schools and mental health care institutions has serious consequences for children and adolescents, and for the entire educational and health system. Students often do not receive help on time, or it is inappropriate, which leads to deepening difficulties [13]. Insufficient training for teachers and a lack of clear procedures for referring students to healthcare specialists result in delayed diagnosis and a lack of appropriate support [13]. Failure to inform the school about a child's diagnosis and lack of access to therapeutic recommendations weakens the effectiveness of therapy and disorganizes the educational process [14]. Failure to recognize symptoms of depression and self-destructive behaviour significantly increases the risk of serious health consequences, including suicide attempts [15].

Additionally, the lack of specialist support contributes to teacher burnout and may lead to a decrease in the quality of teaching [10, 12]. Clearly defined roles, constant communication between the school and psychiatric care, and regular training of teaching staff are necessary for effective cooperation between both institutions [9, 10]. In Poland, the shortage of mental health specialists remains a significant challenge, which makes it difficult to implement the assumptions of the community care model. In this situation, schools play a key supporting role, providing students with a safe environment and mental health prevention actions. Due to the high burden of mental health problems in minors [1–4], public authorities and healthcare professionals around the world are working on new measures and interventions that may support supporting children's mental well-being.

In parallel with the reforms in the field of child and adolescent psychiatric care, a debate is underway in Poland and EU countries on the use of mobile phones in schools [16, 17]. Many countries have decided to impose restrictions in this area, pointing to the negative impact of technology – especially social media – on the mental health of young people [16, 17]. For example, France has introduced a nationwide ban on the use of phones by primary and secondary school students, and Ireland is developing local 'smartphone-free schools' initiatives [17]. In Spain and Italy, legislation strengthens the role of schools and parents in regulating use of the devices, while Germany and Austria emphasize digital education and the development of digital well-being principles in schools [17]. Although approaches differ between countries, the common goal is to reduce the negative effects of excessive social media use – such as cyberbullying, social comparisons, or focus on appearance – which are associated with symptoms of depressive and anxiety disorders and decreased mental well-being [17]. A ban on mobile phones in schools is related to the organizational activities related to the functioning of schools. In Poland, however, there is a lack of systematic research on the attitude of school principals towards potential bans on the use of mobile phones, even though they play a key role in shaping and implementing school policies. Including this topic in national strategies for the mental health of children and adolescents

could strengthen preventive measures in the educational environment and contribute to building healthier conditions for the psychosocial development of children [16, 17]. In Poland, the discussion on the introduction of a potential ban on using phones at school to protect the mental health of students is one of the most important public health topics. Characterizing the perspective of school representatives can provide valuable information on activities that could potentially constitute indirect support and complementary action to the reform of the psychiatric care system for children and adolescents in Poland.

OBJECTIVE

The aim of the study is to analyze the current level of cooperation between schools and the psychiatric care system for children and adolescents, as well as to identify attitudes towards the ban on using phones at school among school principals from Łódź province in Central Poland. Particular attention is paid to differences in results depending on gender, seniority, type of school, and location (rural-urban), which is of great importance in the context of health and education policy, especially in rural areas. The analysis of both issues in one publication may contribute to providing data on the perspective of school principals on organizational solutions supporting the protection of children's and adolescents' mental health.

MATERIALS AND METHOD

This cross-sectional survey was conducted in the Łódź province of Central Poland and focused on rural-urban differences in the perception of cooperation between schools and the psychiatric care system for children and adolescents, as well as the attitudes of school principals toward a potential ban on mobile phone use in schools. The target population consisted of all 1,564 school principals from the whole Łódź province, encompassing both primary (students aged 7–15) and secondary schools (general high schools, technical secondary schools, and vocational schools – students aged 15–19).

Data collection was carried out using the computer-assisted web interviewing (CAWI) method. Invitations containing individualized links to the survey were distributed through the regional educational information system, with the support of the Łódź Provincial Board of Education. All respondents agreed to participate in the study. Data collection took place over a four-week period. During this time, two email reminders were sent to encourage participation. A total of 605 responses were received, yielding a response rate of 38.7%.

The Łódź province, with approximately 2.4 million residents and covering 18,219 km^2, contains both urban and rural areas, offering a representative mix of socio-economic and demographic profiles. Approximately half of the responding principals managed schools located in rural areas. A proprietary questionnaire was developed based on a literature review and adapted to reflect the current organization of the psychiatric care system for children and adolescents in Poland.

Study questionnaire. The questionnaire consisted of 19 items assessing two thematic areas: (1) the level of cooperation between schools and various tiers of the psychiatric care system for children and adolescents, and (2) attitudes towards the proposed ban on the use of mobile phones in schools. Additional demographic variables included type of school, school location, the principal's gender, and years of professional experience in the role of principal.

The questionnaire used in this study was developed by the authors (experts in the field of psychiatry and public health), grounded in a thorough review of current national guidelines, policy documents, and the scientific literature on school mental health [6, 10, 11, 14, 17]. The Łódź Provincial Board of Education (Kuratorium Oświaty w Łodzi) reviewed the study questionnaire and shared comments on it, which allowed further improvement of the study tool. The questionnaire was piloted on a small sample of six school principals who completed the survey twice over a five-day interval. Following the pilot, one item was removed and two were revised for clarity. The study protocol was reviewed and approved by the Bioethics Committee of the Medical University of Warsaw (Approval No. AKBE/40/2025, dated 24 February 2025).

Data analysis. Survey data were anonymized and entered into an electronic database for statistical analysis. Descriptive statistics were used to characterize the study population. Categorical variables were presented as frequencies and percentages. Associations between variables were assessed using the chi-squared test. A p-value of <0.05 was considered statistically significant. All analyses were performed using IBM SPSS Statistics 29.

RESULTS

Data were received from 605 school principals, with a response rate calculated at 38.7%. Most school principals were females (81.8%) and managed primary schools (77.2%). Over one-third of school principals (34.5%) declared up to five years of professional experience as a school principal, 19.0% worked for 6–10 years, 18.7% for 11–20 years, and 17.7% of school principals managed a school for over 20 years. Half of the schools (49.6%) were located in rural areas.

Almost half of the school principals declared that cooperation between schools and all I-III reference levels of psychiatric care for children and adolescents was neither good nor bad (Tab. 2).

There were no gender differences in the perception of cooperation between schools and mental health facilities for children and adolescents (Tab. 3). School principals with up to five years of professional experience more often declared positive experience with collaboration schools with reference level I or II. Those managing secondary schools more often declared 'definitely good' or 'rather good' levels of cooperation with reference II level facilities. Those from urban areas more often declared good experience with cooperation with reference II level facilities.

Support for a ban on use of mobile phones in school was declared by 90.3% of school principals (Tab. 4). Moreover, 94% declared that this ban will have a positive impact on the development of social skills in children. Those managing primary schools or schools in rural areas more often declared a positive attitudes towards ($p<0.05$) implementation of such

Table 1. Level of knowledge on new model of psychiatric care for children and adolescents among school principals in Łódź province (n=605)

Variable	How do you assess the level of knowledge about the new model of psychiatric care for children and adolescents in the school you manage?					
	definitely high	rather high	rather low	definitely low	average	p
Overall	7 (1.2)	75 (12.4)	176 (29.1)	55 (9.1)	292 (48.3)	
Gender						
female (n=495)	5 (1.0)	65 (13.1)	138 (27.9)	52 (10.5)	235 (47.5)	0.05
male (n=110)	2 (1.8)	10 (9.1)	38 (34.5)	3 (2.7)	57 (51.8)	
Years of experience as a school principal						
1-5 (n=209)	2 (1.0)	34 (16.3)	56 (26.8)	17 (8.1)	100 (47.8)	0.5
6-10 (n=115)	0 (0.0)	11 (9.6)	35 (30.4)	13 (11.3)	56 (48.7)	
11-20 (n=113)	3 (2.7)	14 (12.4)	31 (27.4)	8 (7.1)	57 (50.4)	
over 20 years (n=168)	2 (1.2)	16 (9.5)	54 (32.1)	17 (10.1)	79 (47.0)	
School type						
primary school (n=467)	7 (1.5)	52 (11.1)	135 (28.9)	35 (7.5)	238 (51.0)	0.01
secondary school (n=138)	0 (0.0)	23 (16.7)	41 (29.7)	20 (14.5)	54 (39.1)	
Location						
rural area (n=300)	5 (1.7)	38 (12.7)	77 (25.7)	22 (7.3)	158 (52.7)	0.09
urban area (n=305)	2 (0.7)	37 (12.1)	99 (32.5)	33 (10.8)	134 (43.9)	

Table 2. Attitudes school principals towards cooperation with mental health facilities for children and adolescents in Poland (n=605).

Variable	n (%)
How do you assess the cooperation between the school and the first reference level (centre for community psychological and psychotherapeutic care)?	
definitely good	26 (4.3)
rather good	126 (20.8)
rather bad	101 (16.7)
definitely bad	79 (13.1)
difficult to tell / neither good nor bad	273 (45.1)
How do you assess the cooperation between the school and the second reference level (Mental Health Clinic for Children and Youth)?	
definitely good	14 (2.3)
rather good	91 (15.0)
rather bad	94 (15.5)
definitely bad	103 (17.0)
difficult to tell / neither good nor bad	303 (50.1)
How do you assess the cooperation between the school and the second reference level (Day Psychiatric Ward for Children and Adolescents)?	
definitely good	5 (0.8)
rather good	52 (8.6)
rather bad	102 (16.9)
definitely bad	139 (23.0)
difficult to tell / neither good nor bad	307 (50.7)
How do you assess the cooperation between the school and the third reference level (stationary psychiatric wards)?	
definitely good	3 (0.5)
rather good	48 (7.9)
rather bad	97 (16.0)
definitely bad	158 (26.1)
difficult to tell / neither good nor bad	299 (49.4)

a ban (Tab. 4). Females more often declared that (p=0.04) a ban on use of mobile phones will have a positive impact on children's social skills. Definite support for such a ban increased with the years of professional experience (p=0.02).

DISCUSSION

The study constitutes an attempt to diagnose the current state of cooperation between schools and the psychiatric care system for children and adolescents in the Łódź province and show the position of school principals towards a potential ban on the use of mobile phones in educational institutions. The study revealed gaps in cooperation between schools and reference levels of psychiatric care for children and adolescents in Poland. The differentiation of responses depending on gender, professional experience, type of school and location (rural–urban) allowed the pinpointing of important patterns and inequalities that may have practical implications for health and education policy, especially in the context of equalizing access to mental health support in rural areas.

Although most respondents were female principals (81.8%), analysis of responses in the context of gender indicates no significant statistical differences in the assessment of the level of knowledge about the new model of psychiatric care, or the assessment of cooperation between schools and the individual reference levels of the mental health care system for children and adolescents. A similar percentage of women and men also support the introduction of a ban on the use of mobile phones in schools (67.3% of women vs. 64.5% of men). However, women more often than men believe that this ban may have a positive impact on the development of students' social competences (71.3% vs. 65.5%; p = 0.04). It can be assumed that women, as they more often represent professions related to education and upbringing, may focus more on the socio-developmental aspects of students' functioning [18]. Similar phenomena were observed in international studies, where teachers' gender correlated with their approach to technology

Table 3. Differences in attitudes of school principals towards cooperation with mental health facilities for minors in Poland (n=605)

Variable	Cooperation between the school and the first reference level (centre for community psychological and psychotherapeutic care)		Cooperation between the school and the second reference level (Mental Health Clinic for Children and Youth)?		Cooperation between the school and the second reference level (Day Psychiatric Ward for Children and Adolescents)?		Cooperation between the school and the third reference level (stationary psychiatric wards)?	
	definitely good or rather good	p	definitely good or rather good	p	definitely good or rather good	p	definitely good or rather good	p
	n (%)		n (%)		n (%)		n (%)	
Overall	152 (25.1)		105 (17.4)		57 (9.4)		51 (8.4)	
Gender								
female (n=495)	122 (24.6)	0.6	82 (16.6)	0.3	45 (9.1)	0.6	40 (8.1)	0.5
male (n=110)	30 (27.3)		23 (20.9)		12 (10.9)		11 (10.0)	
Years of experience as a school principal								
1–5 (n=209)	63 (30.1)	0.04	49 (23.4)	0.003	24 (11.5)	0.07	20 (9.6)	0.08
6–10 (n=115)	20 (17.4)		9 (7.8)		4 (3.5)		3 (2.6)	
11–20 (n=113)	32 (28.3)		22 (19.5)		14 (12.4)		13 (11.5)	
over 20 years (n=168)	37 (22.0)		25 (14.9)		15 (8.9)		15 (8.9)	
School type								
primary school (n=467)	112 (24.0)	0.2	71 (15.2)	0.01	38 (8.1)	0.04	37 (7.9)	0.4
secondary school (n=138)	40 (29.0)		34 (24.6)		19 (13.8)		14 (10.1)	
Location								
rural area (n=300)	65 (21.7)	0.05	44 (14.7)	0.08	21 (7.0)	0.04	20 (6.7)	0.1
urban area (n=305)	87 (28.5)		61 (20.0)		36 (11.8)		31 (10.2)	

Table 4. Attitudes towards ban on use of mobile phones in schools in the opinion of school principals in Łódź province (n=605)

Variable	If Poland passed a law giving the possibility of introducing a ban on the use of mobile phones in schools, would you be in favor of introducing such a ban in your school?						Do you think that banning the use of mobile phones at school would help children develop social skills?					
	definitely yes	rather yes	rather no	definitely no	difficult to tell	p	definitely yes	rather yes	rather no	definitely no	difficult to tell	p
			n (%)/						n (%)/			
Overall	404 (66.8)	142 (23.5)	32 (5.3)	11 (1.8)	16 (2.6)		425 (70.2)	144 (23.8)	25 (4.1)	2 (0.3)	9 (1.5)	
Gender												
female (n=495)	333 (67.3)	118 (23.8)	22 (4.4)	8 (1.6)	14 (2.8)	0.3	353 (71.3)	115 (23.2)	20 (4.0)	0 (0.0)	7 (1.4)	0.04
male (n=110)	71 (64.5)	24 (21.8)	10 (9.1)	3 (2.7)	2 (1.8)		72 (65.5)	29 (26.4)	5 (4.5)	2 (1.8)	2 (1.8)	
Years of experience as a school principal												
1–5 (n=209)	118 (56.5)	63 (30.1)	15 (7.2)	4 (1.9)	9 (4.3)	0.02	127 (60.8)	66 (31.6)	10 (4.8)	0 (0.0)	6 (2.9)	0.07
6–10 (n=115)	84 (73.0)	22 (19.1)	6 (5.2)	1 (0.9)	2 (1.7)		87 (75.7)	23 (20.0)	4 (3.5)	0 (0.0)	1 (0.9)	
11–20 (n=113)	79 (69.9)	24 (21.2)	3 (2.7)	2 (1.8)	5 (4.4)		87 (77.0)	20 (17.7)	4 (3.5)	1 (0.9)	1 (0.9)	
over 20 years (n=168)	123 (73.2)	33 (19.6)	8 (4.8)	4 (2.4)	0 (0.0)		124 (73.8)	35 (20.8)	7 (4.2)	1 (0.6)	1 (0.6)	
School type												
primary school (n=467)	345 (73.9)	100 (21.4)	14 (3.0)	2 (0.4)	6 (1.3)	<0.001	350 (74.9)	99 (21.2)	11 (2.4)	0 (0.0)	7 (1.5)	<0.001
secondary school (n=138)	59 (42.8)	42 (30.4)	18 (13.0)	9 (6.5)	10 (7.2)		75 (54.3)	45 (32.6)	14 (10.1)	2 (1.4)	2 (1.4)	
Location												
rural area (n=300)	225 (75.0)	64 (21.3)	7 (2.3)	2 (0.7)	2 (0.7)	<0.001	238 (79.3)	54 (18.0)	5 (1.7)	0 (0.0)	3 (1.0)	<0.001
urban area (n=305)	179 (58.7)	78 (25.6)	25 (8.2)	9 (3.0)	14 (4.6)		187 (61.3)	90 (29.5)	20 (6.6)	2 (0.7)	6 (2.0)	

in the classroom and psychosocial aspects of learning [19].

The results of the study reveal significant differences in the assessment of cooperation with the novel psychiatric care system depending on the length of experience as a director. People with shorter experience (1–5 years) more often assessed cooperation with reference level I (30.1%; p = 0.04) and level II (23.4%; p = 0.003) as 'good' or 'rather good' compared to directors with longer experience. This relationship may result from the greater openness of younger leaders to new models of cooperation or a fresh perspective on institutional structures [20]. Moreover, younger school principals may be more willing to engage in educational

and informational activities related to the reform of child psychiatry, influencing a more positive assessment of cooperation. Research on the adaptation of innovations in the education sector indicates that shorter experience and younger age correlate with greater innovation, openness to change and readiness to experiment with new solutions [21]. Research indicates that leadership that favours intersectoral cooperation and promotes student health is more often represented by management staff actively involved in knowledge exchange networks and the development of the so-called professional learning communities [22, 23]. It is also worth noting that principals with the shortest experience are less likely to support the introduction of a ban on phones in schools (56.5%, $p = 0.02$). This may indicate greater flexibility towards technological changes and the perception of smartphones as tools supporting education, and not only as a source of threats. Studies show that leaders who are open to educational innovations are more likely to experiment with the integration of technology in teaching and show greater tolerance towards students' digital autonomy [21].

In the current study, primary school principals were more likely than their secondary school counterparts to support the ban on phones (73.9% vs. 42.8%; $p < 0.001$) and believe in its positive impact on the development of students' social competences (74.9% vs. 54.3%; $p < 0.001$). It can be assumed that in primary schools, where students are younger, phones are perceived as a greater threat to social and emotional development. According to research by the United Nations Children's Fund (UNICEF), early exposure to mobile technology can negatively affect the development of interpersonal relationships in younger children [24]. The level of knowledge about the new model of psychiatric care for children and adolescents was also higher in primary schools – as many as 51% of primary school principals assessed their knowledge as 'average', which suggests that this type of facility may be better integrated with the children's mental health care system than secondary schools, where as many as 14.5% of respondents assessed the level of knowledge as 'decidedly low'.

The current study also revealed differences between schools located in rural areas and those operating in cities. Schools located in rural areas showed a lower level of cooperation with all reference levels of psychiatric care for children and adolescents. While cooperation with a reference level I centre (centre/teams of community psychological and psychotherapeutic care) [5,6] was assessed positively by only 21.7% of rural schools, compared to 28.5% of urban schools ($p = 0.05$), the difference becomes even more visible in the case of level II (mental health clinics and day wards) – 14.7% vs. 20.0% ($p = 0.08$) and 7.0% vs. 11.8% ($p = 0.04$), respectively. Cooperation with reference level III (24-hour psychiatric wards) was assessed positively by only 6.7% of rural schools, while in the case of urban schools it was 10.2%. The low level of cooperation between rural schools may be due to the lower availability of psychiatric facilities, especially reference levels II and III, which are located mainly in urban centres [5, 6]. In practice, this means a longer waiting time for specialist intervention, greater logistical difficulties in organizing transport for students, and fewer opportunities for regular consultations. This problem is confirmed by previous systemic analyses, which showed that the structure of the distribution of psychiatric facilities in Poland favours urbanized regions, which leads to permanent territorial inequalities in access to mental support for children and adolescents [25]. For this reason, it is particularly important to strengthen local resources in rural areas and develop integrated models of cooperation between schools and mental health institutions. At the same time, however, rural school principals were more willing to introduce a ban on using phones (75.0% vs. 58.7%; $p < 0.001$) and more often believed that this ban would improve students' social competences (79.3% vs. 61.3%; $p < 0.001$). This may suggest that in rural communities there is greater emphasis on the development of traditional forms of social relationships, and mobile phones are perceived as a threat to these values.

The World Health Organization report on adolescent social media use and gaming in Europe, Central Asia and Canada [15] showed that in 2022, 11% of adolescents were classified as problematic social media users and 32% as intense users. Mobile phones are often used by adolescents for browsing social media or mobile games. The highest prevalence of problematic social media use among adolescents occurs in Romania (22%), Malta (18%) and Bulgaria (17%), wherein the lowest in the Netherlands (5%) [15]. In Poland, 12% of adolescents may present problematic social media use [15]. The WHO underlines that policymakers and school leaders should be advised to establish clear policies for using smartphones in the school environment [15].

PRACTICAL IMPLICATIONS

The results of the study are an important source of knowledge for decision-makers responsible for shaping educational and health policies. Information and training activities should be intensified, especially those aimed at secondary schools and institutions located in rural areas. The development of regional maps of cooperation between educational institutions and child psychiatry institutions and the implementation of mentoring programs supporting local educational leaders in the integration of intersectoral activities may be an important element of improving the current system. In the area of technological policy, it seems reasonable to conduct further research on the effects of introducing a ban on the use of mobile phones in schools, considering environmental and demographic conditions

Limitations of the study. The study has limitations typical for a cross-sectional survey. Respondents were recruited from one of 16 provinces in Poland which affected the generalizability of the results. However, all school principals from the analyzed province were invited to participate. The study questionnaire was self-prepared, and the scope of analysis was limited to several questions included in the questionnaire. Demographic characteristics of the school principals were limited to four key questions, therefore multivariable logistic regression analyses could not be performed.

CONCLUSIONS

Five years after the introduction of the new model of psychiatric care for children and adolescents in Poland, there are still significant gaps in cooperation between schools and individual reference levels of psychiatric care for minors.

Factors such as years of professional experience, type of school and location of the school significantly affect the perception of cooperation with the mental health care system for children and adolescents, as well as the opinion on the ban on the use of mobile phones in schools. In rural schools, cooperation between schools and reference level II and III of psychiatric care for minors is much weaker than in urban schools. At the same time, principals of rural schools showed a stronger conviction about the positive impact of the phone ban on students' social development. Rural-urban differences in access to psychiatric care should be limited to avoid health inequalities.

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