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OFICJALNE PISMO POLSKIEGO TOWARZYSTWA FIZJOTERAPII

THE OFFICIAL JOURNAL OF THE POLISH SOCIETY OF PHYSIOTHERAPY

NR 5/2022 (22) KWARTALNIK ISSN 1642-0136

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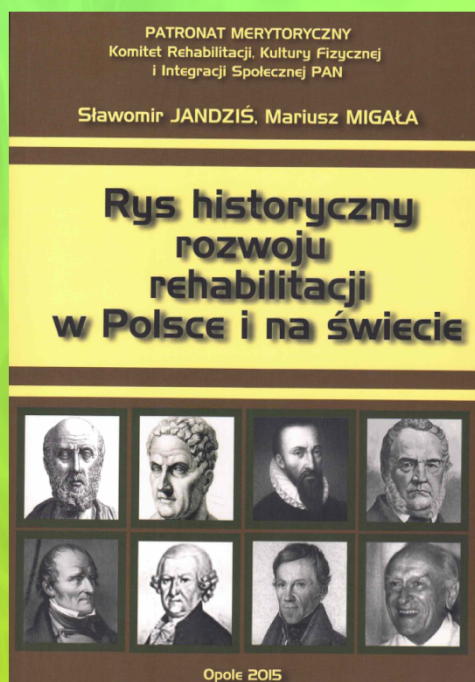
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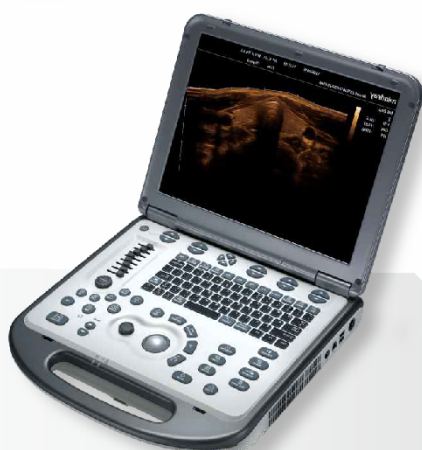
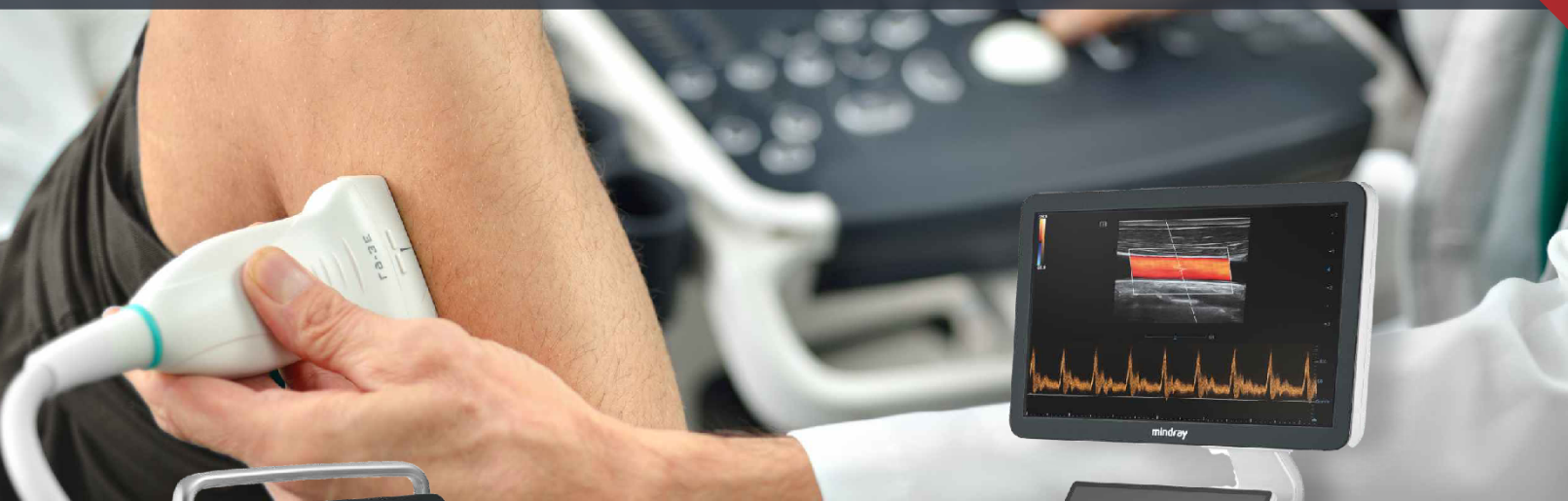
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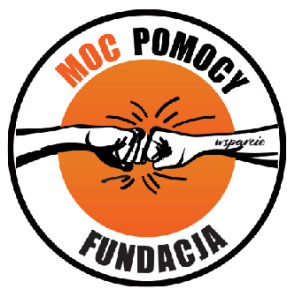
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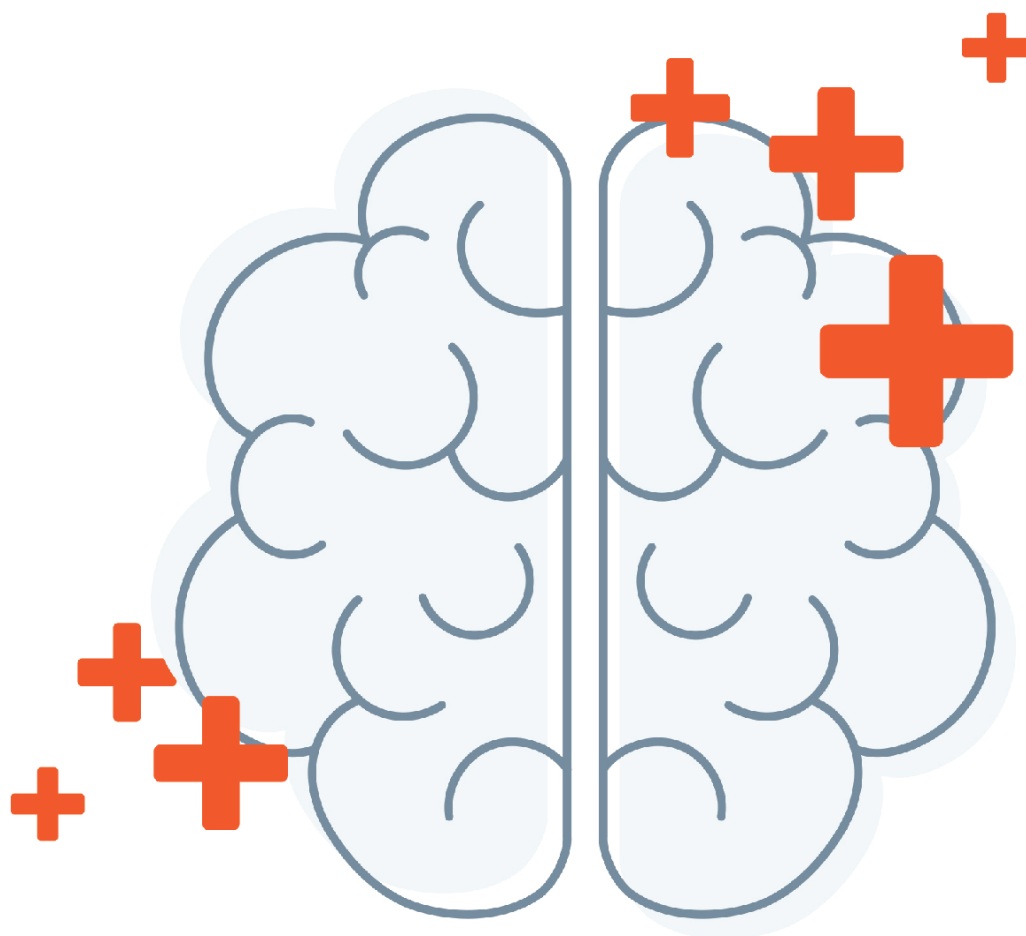

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Psychophysical condition of a child during the COVID-19 pandemic

Kondycja psychofizyczna dziecka w czasie pandemii COVID-19

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Abstract

The aim of this article is to present the effects of the COVID-19 pandemic on the psychophysical state of a child. The diagnostic survey method and questionnaire technique were used for the study. The survey was conducted online among elementary school students. The empirical material collected shows the evaluation of remote education and its impact on the changes that occurred in children during the pandemic. The changes that occurred during remote learning include increased stress, isolation, lack of contacts with peers, exhaustion, long hours of work in front of a screen and decreased physical activity.

Key words:

COVID-19, remote education, mental development of children, physical development, social development

Streszczenie

powoduje wiele zmian w życiu społecznym i gospodarczym. Pandemia Covid-19 przypadła na czasy, podczas których wykorzystano technologie informatyczne. W trakcie izolacji społeczeństwa praca i nauka zdalna pomagały w wykonywaniu czynności zawodowych oraz edukacji szkolnej i jednocześnie wywoływały niepożądane następstwa. Celem pracy jest ocena wpływu nauki zdalnej w czasie pandemii Covid-19 na kondycję psychofizyczną dziecka. Do badania wykorzystano metodę sondażu diagnostycznego oraz technikę ankiety. Badanie przeprowadzono wśród uczniów szkół podstawowych w formie online. Zebrany materiał empiryczny ukazuje ocenę zdalnej edukacji i jej wpływ na zmiany, jakie zaszły u dzieci podczas pandemii, a tym samym nauki zdalnej. Przeanalizowano zmiany w aspekcie fizycznym, psychicznym, jak i społecznym. Zdalna realizacja nauki wywoływała u uczniów różne emocje, obawy i stres. Relacje rówieśnicze w czasie kształcenia zdalnego głównie miały charakter pośredni. W pracy podkreśla się zmiany, jakie zaszły u dzieci podczas nauczania zdalnego: stres, izolacja, brak kontaktów bezpośrednich z rówieśnikami, przemęczenie, duża ilość godzin przed monitorem, zmniejszona aktywność fizyczna.

Słowa kluczowe:

pandemia COVID-19, edukacja zdalna, rozwój psychiczny dzieci, rozwój fizyczny dzieci, rozwój społeczny dzieci, rozwój poznawczy dzieci, lockdown

Projekt finansowany w ramach programu Ministra Edukacji i Nauki pod nazwą „Regionalna Inicjatywa Doskonałości” w latach 2019–2023 nr projektu 024/RID/2018/19 kwota finansowania 11 999 000,00 zł

Project financed under the program the Minister of Education and Science called "Regional Initiative of Excellence" in the years 2019–2023, project no. 024/RID/2018/19, amount of financing 11 999 000,00 PLN

Introduction

Epidemics have plagued humanity since the dawn of time, decimating it more than wars. They affected almost all continents. Each epidemic caused many changes in social and economic life. The COVID-19 pandemic came in a time when information technology was used. In the period of social isolation, remote work and learning helped perform professional activities and ensure education, however at the same time they caused many undesirable effects. Restrictions, including closing schools and switching to online learning, were introduced for the first time in history. The consequence of this is a noticeable stir in the research and scientific community which can be observed in numerous reports – Polish and foreign, focusing on the well-being of children during the lockdowns. The authors of this article used the research that was included in the reports, among others: UNICEF, Children with autism and COVID-19, 2020, Foundation for Health Education and Psychotherapy, ETAT W SIECI (A FULL TIME JOB ONLINE), a report on their own research.

Objective

The objective of the study is to assess the impact of remote learning during the COVID-19 pandemic on the psychophysical condition of children, as well as to analyse the significance of lockdowns on the physical, mental, cognitive and social condition of children during online learning.

Material and methods

The research was carried out with the participation of 654 primary school students from grades 4-8, in June 2022 in an online form, for which a diagnostic poll and a survey were used (Appendix). The conducted tests were of a diagnostic nature. The authors tried to obtain answers to questions related to psychosocial matters, in terms of peer relationships, as well as to the ways of coping with the new unknown situation, i.e. online learning. In line with the principles adopted in the research methodology, no hypotheses of research problems were formulated. The diagnostic poll was conducted via the Internet.

As part of the main research problem, two detailed ones have been distinguished: the impact of the pandemic on the mental and physical sphere in children and the impact of the pandemic on the well-being of students and their social relationships. The resulting empirical material was organized into areas corresponding to the research issues.

Results

654 primary school students of grades 4-8 participated in the study – Table 1.

654 students participated in the study, including 319 girls and 335 boys. Seventh graders constituted the most numerous group. Most students, i.e. 298, stated that remote learning caused a very high degree of discomfort for them. Fewer students, i.e. 189, indicated a high degree of discomfort, and an imperceptible degree of discomfort, i.e. a normal degree of discomfort was indicated by 104, and a low degree of discomfort – by 63 students (Table 2).

Table 1. Division of participants according to the grade and gender

Grade	Number of students	Girls	Boys
4	90	56	34
5	128	59	69
6	136	64	72
7	182	82	100
8	118	58	60

Table 2. Degree of discomfort experienced during online learning

Degree of discomfort	Very high	High	Normal	Low	Total
Number of answers	298	189	104	63	654

Among students experiencing a very high degree of discomfort during remote learning, the majority were girls – 179, compared to 119 boys. A high degree of discomfort was experienced more by girls – 97, and less by boys – 92. Similarly, in the assessment, there were more girls, i.e. 55, who experienced a normal degree of discomfort in comparison to 49 boys. On the other hand, a low level of discomfort was indicated by more boys (45) than girls (18) – Table 3.

Table 3. Degree of discomfort experienced in remote learning, broken down by gender

Degree	Girls	Boys
Very high	179	119
High	97	92
Normal	55	49
Low	18	45

Remote learning during COVID-19 caused different emotions in students. Table 4 presents students' opinions on the emotions they experienced.

Table 4. Emotions experienced during remote learning

Emotions	1 n, %	2 n, %	3 n, %	4 n, %	5 n, %	6 n, %
I am satisfied, remote learning is better than regular learning.	96 14.7%	65 9.9%	108 16.5%	109 16.6%	145 22%	85 13%
I feel tired and stressed during remote learning.	149 22.7%	176 27%	75 11.4%	82 12.5%	98 15%	74 11.3%

Rodzaj emocji Emotions	1 n, %	2 n, %	3 n, %	4 n, %	5 n, %	6 n, %
I feel insecure during online classes.	108 16,5%	159 24.3%	176 27%	152 23%	50 7.6%	9 1.4%
I feel sleepy, overloaded.	247 37%	134 20.4%	36 5.5%	200 30.6%	37 5.6%	0 0%
I feel lonely.	325 49.6%	277 42.3%	10 1.5%	32 4.9%	8 1.2%	2 0.3%
I am afraid to speak up during online classes.	243 37%	161 24.6%	105 16%	69 10.5%	59 9%	17 2.6%
I do not care in what form the classes are conducted.	401 61%	178 27%	12 1.8%	30 4.6%	29 4.4%	4 0.6%

1 – definitely yes, 2 – rather yes, 3 – I don't have an opinion, 4 – rather not, 5 – definitely not, 6 – no answer

The analysis of the data in Table 4 shows that the emotions definitely experienced and rather experienced by almost half of students (49.7%) was fatigue with remote learning. A large proportion of the participants (91.9%) felt lonely during remote learning. A significant part of the participants (88%) stated that they did not care about the form of the classes, and 30% of students did not answer the questions. Table 5 shows the results on social relationships during on-line learning. As many as 40.5% of the participants were not mocked or insulted by their peers. Only 3.8% indicated that they had had such unpleasant experiences and were insulted. The lack of help from peers was indicated by 8.8% of students, while over 30% were satisfied with the help from their peers. 33.7% did not experience exclusion from the class/group, while 8.4% felt excluded. Over 16% cared about good relationships, and over 3% did not have such relationships.

Table 5. Social relationships with peers during remote learning, n = 654

Situation	1 n, %	2 n, %	3 n, %	4 n, %	5 n, %	6 n, %
Mocking, insulting	265 40.5%	231 35.3%	51 7.8%	72 11%	25 3.8%	10 1.5%
No help from peers	201 30.7%	132 20.1%	198 30.2%	65 9.9%	58 8.8%	0 0%

Rodzaj sytuacji Situation	1 n, %	2 n, %	3 n, %	4 n, %	5 n, %	6 n, %
Exclusion from a group/class	221 33.7%	205 31.3%	94 14.3%	46 7.0%	55 8.4%	33 5.0%
Taking care of good relationships	24 3.6%	100 15.2%	200 30.6%	224 34.2%	106 16.2%	0 0%

1 – not applicable, 2 – rather not applicable, 3 – similar to classroom learning, 4 – applicable, 5 – very applicable, 6 – no opinion

On the basis of the collected results, it is stated that 98% of students participated in physical education classes. 13.6% participated in additional activities increasing physical fitness, and 31% – not at all. Walks with parents for two or three hours a week were confirmed by 33.4% of students, and not at all – by 14.9%. Cycling and rollerblading was performed by only 2.9%, and the vast majority, 69.1%, did not undertake this form of physical activity at all. Table 6 summarizes the results that illustrate students' involvement in various physical activities.

Table 6. Physical activity during remote learning, n = 654

Type of activity	1 n, %	2 n, %	3 n, %	4 n, %	5 n, %	6 n, %
Within PE – online	645 98.2%	0 0%	0 0%	0 0%	0 0%	9 1.3%
Aerobics	0 0%	0 0%	12 1.8%	0 0%	600 91%	42 6.4%
Extra home exercises	89 13.6%	123 18.8%	45 6.9%	18 2.7%	206 31.4%	173 26.4%
Walks with parents	219 33.4%	225 34.4%	52 7.9%	30 4.6%	98 14.9%	30 4.6%
Cycling/rollerblading	19 2.9%	64 9.8%	21 3.2%	87 13.3%	452 69.1%	11 1.7%

1 – two to three hours a week, 2 – more than three hours a week, 3 – one hour a day, 4 – more than one hour a day, 5 – not at all, 6 – no answer

Table 7 shows the weekly number of hours of physical activity before the COVID-19 pandemic and during remote learning. The given results take into account the division into grades and gender.

Table 7. Hours devoted to physical activity before the Covid-19 pandemic and during remote learning

Grade	Weekly hours of physical activity before the Covid-19 pandemic		Weekly number of hours of physical activity during remote learning	
	Girls	Boys	Girls	Boys
4	8	9	5	5
5	7	9	5	6
6	6	8–9	4–5	7
7	5–6	7–8	4–5	6
8	5–6	7–8	4	4

In individual grades, during remote learning, the number of hours of physical activity decreased: grade 4 – for girls by 3 hours, for boys by 4 hours, in total by 1/3 compared to the number of hours before COVID-19. In the fifth grade, physical activity decreased on average by 1/3 – for girls by 2 hours, for boys by 3 hours. In the sixth grades, on average, physical activity decreased by 1/4 – for girls by about 2 hours, for boys by over 2 hours. Similarly, physical activity decreased by an average of 1/3 in the seventh grade. In the eighth grade, the time devoted to physical activity was shorter by almost 1/2 – for girls by 2 hours, for boys by almost 4 hours. During remote learning, reduced physical activity resulted in weight gain, as shown in Table 8.

Table 8. Problems with weight gain during remote learning

Problems with weight gain/loss	Girls	Boys	Percentage %
Weight gain from 1 to 2 kg	133	128	40%
Weight gain from 2 to 4 kg	69	56	19.1%
Weight gain over 4 kg	42	21	9.6%
No weight gain	72	89	24.6%
Weight loss	28	16	6.7%

Table 8 presents problems with maintaining optimal body weight by children during remote learning, as a result of COVID-19. An increase in body weight from 1 to 2 kg was observed in 40% of students (there were no major disproportions between girls and boys). Slightly less, 19% of children, gained from 2 to 4 kg. Body weight gain greater than 4 kg was recorded in 9.6% of students (half as many girls as boys). During remote learning, weight loss was indicated by 6.7% of children, and no weight gain – by 24.6% of students.

Students also indicated their greatest problems during the pandemic and remote learning (Figure 1). Among children, most complaints concerned isolation (30%) and lack of exercise/physical activity (25%). In turn, 15% of students admitted that they had trouble sleeping, and 12% felt fear and sadness

during remote learning. 10% of students did not have contact with their peers in real life and 8% admitted that during remote learning they consumed too many meals and gained weight.

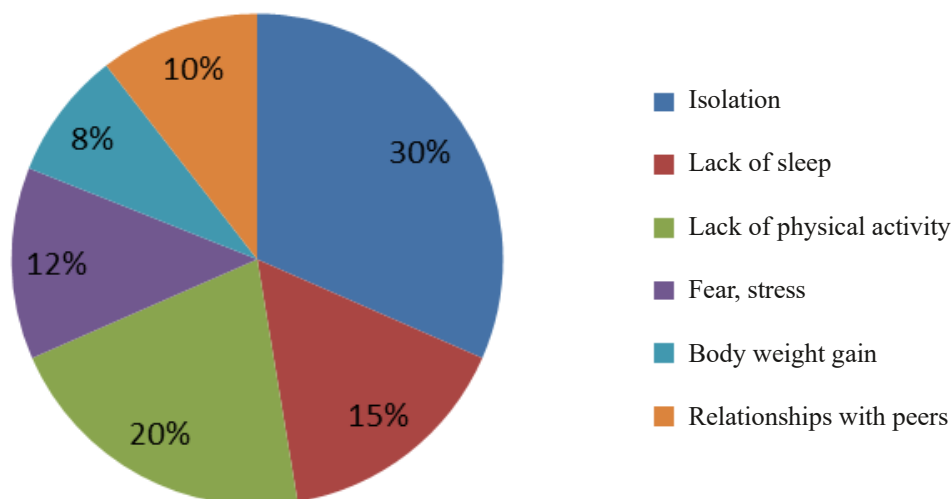


Figure 1. Analysis of data on the biggest problems of children related to remote learning during Covid-19

Discussion

Based on foreign and domestic reports on students, during remote learning forced by the COVID-19 pandemic, it is stated that many problems arose that caused nervous and anxiety states in students. A significant problem that emerged after the introduction of online education was students' confusion in the new situation. Children who previously revealed emotional problems or depressive states did not find themselves in a new reality during the pandemic [1]. The Lockdown Generation emphasizes the negative impact of many factors on the lives of young people in times of social isolation. The experience gained in the first months of the COVID-19 pandemic is not fully transferable to the conditions prevailing in subsequent waves of the threat. Nevertheless, they constitute an important reference defining the initial state, supplemented then with further studies that allow to indicate the tendencies of these changes. Remote learning, which was inevitable during the first wave of COVID-19, adversely affected the psyche of students. Isolation from peers and prolonged confinement at home exacerbated mental disorders, including depression, anxiety, and computer addiction, in adolescents. The children struggled with apathy and loneliness, as well as stress resulting from, for example, a lack of relationships with others. In addition to separation from peers, the following factors contributed to the decline in the quality of life of children: less physical activity and longer time spent in front of screens. The pandemic confirmed that school is important not only for gaining knowledge, but also for building social bonds. According to many educators and psychologists, some post-pandemic psychological effects will only become apparent in a few years [2]. During the COVID-19 pandemic, Polish and global education faced the difficult task of meeting the challenges related, in particular, to remote learning. The World Health Organization

(WHO) on January 30, 2020 announced a public health emergency of international scope. Since then, in a few weeks, 172 countries around the world have introduced various types of restrictions, including those relating to the operation of schools. It is estimated that the situation affected 98.5% of the world's student population, and it concerned children from 188 countries [3]. Remote or hybrid learning covered children at all educational levels. The phenomenon of such a scale has not been known in history so far, therefore reports containing data from medical, social, psychological and educational research are constantly being prepared [4]. In order to present the most complete picture of the situation of school-age children who were deprived of full-time education during the pandemic, a comprehensive review of the reports on the impact of the COVID-19 pandemic on the psychophysical development of children was carried out. After analysing the information provided by researchers from many countries of the world, a catalogue of barriers that appeared and were faced by school-age children was created. It should be emphasized that online education was the subject of discussion long before the outbreak of the pandemic. Researchers describing the opportunities and threats of online education pointed to the difficulties that arise in the process of creating an Internet community [5]. Foreign and Polish reports analysing physical health show a decrease in the time devoted to physical activity of children. Previously, respondents spent an average of more than nine hours a week on various forms of physical activity, while during the pandemic it was less than two hours. Screen time increased proportionally to the decrease in physical activity [6]. In the authors' own research, similarly to global research, the decrease in the number of hours devoted to physical activity was assessed. Analysing the data, it is stated: in lower grades, i.e. in the fourth and fifth grades, physical activity during remote learning decreased by 1/3. In the sixth grades, on average, physical activity decreased by 1/4. In the seventh grade, physical activity decreased by an average of 1/3. The greatest hourly decline in physical activity was recorded among eighth grade students. Older primary school students reduced their physical activity by half. The decrease in the level of physical activity was the result of not participating in physical education classes and most of the extra physical or recreational activities. Remote learning also limited physical activity of children and young people related to daily commuting to school and meeting peers. In many cases, not attending school has generated inappropriate eating habits in minors. According to the American Center for Disease Control and Prevention (CDC), childhood obesity rates have increased significantly since the beginning of 2020. During a study conducted on a group of people aged 7 to 19, it turned out that children gained weight during lockdowns twice as fast as before [7]. In addition, people with moderate or severe obesity prior to the pandemic had significantly higher BMI growth rates. Accelerated weight gain, especially among overweight or obese children, may lead to long-term metabolic changes that further expose them to the risk of serious and costly comorbid conditions such as type 2 diabetes, hypertension and depression [8]. The study consisted in collecting parents' opinions about their children's physical health. The results of this diagnosis show that over half of the respondents believe

that online learning in the manner that was forced by the pandemic caused a reduction in physical and mental fitness in children. Students spent less than two hours a day outdoors. Conducting classes with the use of computers increased the risk of eyesight deterioration in children. An additional phenomenon that arose during the isolation of children was the occurrence of emotional or behavioural problems. The data was obtained using a questionnaire for assessing children's strengths and difficulties, completed by guardians/parents [9]. Another group of inquiries are reports on aspects of children's mental health. The consequences of isolation will be the subject of research for many years to come. Researchers are increasingly focusing on children's responses that result from being isolated from their peers. The following factors contributed to the lowered well-being of children during remote education: stress caused by the pandemic, stress of parents/guardians, fear of falling ill, lack of contact with the immediate family, inability to leave home, long hours spent in front of the screen. The general indicator of the psychological condition of children after the pandemic was checked and, on the basis of mental well-being tests, a significant deterioration in comparison to the pre-pandemic condition was observed. Thus, the first conclusion concerned the increased level of hyperactivity. During the research, a greater tendency of children to express their emotions in an aggressive manner and inadequate to the situation was noticed. Another study from the UK on the mental well-being of children showed that children struggled with difficulties caused by being locked up at home, loneliness increased symptoms of depression, and lockdowns reduced activity and involvement in games that could help improve children's mood [10]. In the area of social and educational development, the consequences of disrupting the pre-pandemic routine have been reported. Children often stressed that they were bored and that they missed meetings with peers. In the authors' own research, the greatest problem among students was isolation, however they mention that they were not exposed to insults and mocking from their peers - they did not report any problems in social relationships. In the analysis of students with autism spectrum disorders, the change in the mode of learning was very much noticed: from traditional to remote learning. Parents noticed an alarming increase in their children's anxiety and irritation, which in turn resulted in an increase in behavioural problems and acts of self-harm [11]. Students with attention deficit hyperactivity disorder also found themselves in a difficult situation. In the opinion of parents and teachers, the adaptation of the children to the remote learning mode was very difficult. Engaging in online school education and managing tasks constituted the major problem [12]. Another effect of keeping children at home was the compulsive use of the Internet as a compensation for meetings with peers or participation in organized sports activities. Such behaviour led to greater access to content unsuitable for children, which could consequently increase the child's vulnerability to bullying and possible abuse [13]. In terms of physical health and physical activity, the results vary depending on the country and the restrictions applied. The milder the restrictions were, the more time was devoted to unorganized sports activity. In the authors' own research, most children less frequently used additional

forms of extra-curricular physical activity. The significant increase in recreational screen time and the compulsive use of the Internet are worrying.

In March 2020, many restrictions were introduced in Poland, both sanitary and in the field of children's education. Remote or hybrid learning applied to school-age children for over eight months. Looking at the restrictions introduced in Poland, the very closure of schools was not the only restriction imposed on children. The restrictions also included the order that persons under the age of 18 could leave their place of residence only under adult supervision, a ban on using parks, boulevards, beaches and forests. Further restrictions were introduced in the winter semester of the 2020/2021 school year. When analysing Polish reports and findings, professional research conducted on educational platforms was taken into account. Among others, the report entitled Remote education, what happened to students, their parents and teachers? was analysed [14]. The time spent on preparation, implementation and learning turned out to be an important aspect in remote learning. The amount of time spent in front of a screen increased significantly, on average up to nine hours a day [15]. Children declared that they spent much more time in front of the screens both during the week and at weekends. Intensive use of digital tools has disrupted so-called digital hygiene. In addition, the transfer of most of the activities to the virtual world has blurred the line between the time spent on learning and entertainment. This led to disturbances in the secretion of melatonin - a hormone that facilitates falling asleep and regeneration of the body during sleep. More than 30% of students declared that they had troubles sleeping due to the use of a computer or smartphone. Based on the authors' own research, it is stated that 15% of the respondents complained about the lack of sleep or problems with falling asleep during remote learning. Moving most of the classes to the Internet, combined with a lack of exercise, made it more difficult for children and teenagers to fall asleep. Lack of sleep, being locked up at home, and long hours of using a computer made many children feel overloaded with information and irritated. In the context of such symptoms researchers are increasingly using the term "digital fatigue". The biggest problem for students was social isolation, during which they most lacked contact with their peers. The authors' own research confirmed that the lack of such interaction was also a problem for them. Moreover, the respondents were dissatisfied with the forced isolation, which became a burden for 30% of them. There is no doubt that isolation, home quarantine, change of stimulus stimulation and psychophysical activity contributed to the deterioration of health in children. On the basis of the report *Moje s@mpoczucie w e-szkole* (My fr@me of mind at e-school) [16], the majority of students declared that they cared about their physical condition and undertook various activities to improve it on their own. After the analysis of the author's own results, it is concluded that students, despite the lack of stationary physical education classes, tried to be physically active during remote learning. 98% of students regularly participated in physical education (online) classes, 32% indicated that they additionally exercised independently at home, and 67% declared that they tried to increase their physical activity during

the pandemic by walking. The physical effects of remote learning can be divided into short-term and long-term effects. Long-term effects will be observed only in the next several/several dozen months. The World Health Organization reported that the weight of the average student increased by two kilograms due to the pandemic. Similarly, in the authors' own research, 40% of students gained weight by one to two kilograms (the surveyed girls faced a greater problem with weight gain). In national studies, attention was paid to general fatigue, backache and muscle pain, as well as headaches that appear temporarily [17]. The most commonly reported symptoms were nervousness, apathy, feeling sad, discouragement, stress, and difficulty concentrating. A similar analysis also confirms that the feeling of sadness appeared in 12% of the surveyed students, and stress related to remote learning in 49% of the respondents. Depressive tendencies and suicidal thoughts seem to be dangerous. There is also a noticeable increase in anxiety tendencies and affective disorders [18]. It is estimated that in one fifth of students psychosomatic health deteriorated significantly compared to the time before isolation. Based on Polish reports, the effects of isolation include: nervousness, irritation, cognitive impairment [19]. As a summary of these findings, it is proposed to present the most important conclusions related to online education. The mental, physical and social condition of some students deteriorated significantly. It is considered paramount to restore the mental and physical well-being of children as soon as possible. Their well-being was significantly impaired, which was caused by low physical activity, which in turn caused weight gain in many children, changes in body posture as a result of a long time spent in an incorrect position at the screen, and problems with vision. In terms of social changes, children lost the need to contact their peers, as social relationships were transferred to the Internet. Based on the authors' own results, it is noted that the lack of contact with peers was not the biggest problem for students, as it was transferred to the virtual world much earlier than the COVID-19 pandemic. The respondents indicated that there were no major difficulties with peer support (18% of students indicated the lack of it), and 15% of the respondents noticed being excluded from the group. After reviewing the research, both foreign and Polish, it is concluded that the problems caused by the closure of schools and conducting remote education concern a significant part of the population of school-age children. At the same time, it is noted that prophylaxis should be developed in order to prevent undesirable phenomena or conditions. Most of the analysed studies are rather opinion-based, as hard clinical data is still lacking [20]. It is recommended to monitor the health of children and adolescents on an ongoing basis. Such monitoring should be multifaceted, involving many research units. Research should be carried out in an interdisciplinary manner [21]. In addition to monitoring, it is advisable to appoint teams whose task would be to counteract and mitigate the effects of restrictions related to the COVID-19 pandemic. It is worth noting that the observed differences in students' well-being were revealed mainly in older children [22].

Conclusions

1. Remote learning during the COVID-19 pandemic had a negative impact on the mental condition of students due to their excessive fatigue and loneliness, and not coping with stress.
2. Remote education and isolation contributed to problems with sleep and to a reduction in physical activity in the form of additional, extracurricular physical activities, as well as to weight gain.
3. Lockdowns did not worsen students' social relationships with their peers.

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APPENDIX

Survey

The impact of remote learning during Covid-19 on the psychophysical and social attitudes of primary school students in grades 4-8 in the 2021-2022 school year.
Mark X next to your answer.

1. Grade:

4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐

2. Gender:

girl ☐ boy ☐

3. How do you feel about remote learning?

very well ☐ rather bad ☐ I don't know ☐ well ☐ bad ☐ no answer ☐ rather well ☐

4. What emotions did you experience during remote learning? (What did you feel?) – you can mark more than one answer.

satisfaction with online learning ☐ stress ☐ fatigue ☐ fear ☐ uncertainty ☐ weariness ☐ loneliness ☐ I don't know ☐ lack of sleep ☐ overload ☐ no answer ☐

5. How do you rate your well-being?

very good ☐ good ☐ rather good ☐ bad ☐ very bad ☐ I don't know ☐ no answer ☐

6. What was the biggest problem with remote learning? (you can mark more than one answer).

lack of sleep ☐ no going outside ☐ staying at home ☐ sitting in front of the screen for a long time ☐ being examined in front of the camera ☐ boredom ☐
no contacts with friends ☐ I don't know ☐ tests ☐ no answer ☐

7. How were your relationships with your friends during remote learning?

good ☐ I had help from my friends ☐ it happened that my friends laughed at my statements ☐ I had no help from friends ☐ most of them tried to be nice and kind ☐
I was mocked ☐ I was insulted ☐ I was excluded from the group ☐ I don't know ☐ no answer ☐

8. Were you physically active during remote learning? (maximum 3 answers).

I participated in PE lessons (online) ☐ I additionally exercised at home ☐ dancing ☐ cycling ☐ aerobics ☐ no physical activity ☐
rollerblading ☐ no answer ☐ stretching ☐ walking outside ☐

9 How much time did you spend on physical activity during remote learning? (Select one answer)

only as much as in the PE schedule ☐ 6-7 hours a week ☐ one hour a week ☐ more than 7 hours a week ☐ one hour a day ☐ no answer ☐
3 hours a week ☐ none ☐ 4-5 hours a week ☐ I don't know ☐ no answer ☐

10. How much time did you spend on physical activity before the Covid-19 pandemic?

only as much as in the PE schedule ☐ from 7-8 hours a week ☐ from 3-4 hours a week ☐ 9 hours a week ☐ from 4-5 hours a week ☐ more than 9 hours a week ☐
from 5-6 hours a week ☐ none ☐ from 6-7 hours a week ☐ I don't know ☐

11 Did you eat properly and regularly during remote learning?

meals at intervals ☐ large amount of vegetables and fruits ☐ snacking ☐ no regular meals ☐ more sweets ☐ I don't know ☐ more soft drinks ☐ no answer ☐

12 Has your body weight changed during remote learning?

more by 1 kg ☐ less by 1 kg ☐ I don't know ☐ more by 2 kg ☐ less by 2 kg ☐ no answer ☐ more by 3 kg ☐ less by 3 kg ☐ more by 4 kg ☐ less by 4 kg ☐