SAFETY AND HEALTH PROTECTION IN SCHOOLS IN THE CONDITIONS OF CORONAVIRUS PANDEMIC

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Abstract: The conditions of the Coronavirus Pandemic have brought many problems to educational institutions. It started with the lock down of schools, followed by the transition to an online learning system and organization of educational work in new conditions. Starting from that, the paper elaborates the basic issues and problems of safety and health protection of pupils and employees in schools in the conditions of the COVID-19 pandemic.

Key words: safety, health, students, teachers, coronavirus pandemic

1. INTRODUCTION

School institutions are primarily oriented towards fulfilling their pedagogical, i. e. educational tasks. However, these original tasks of preparing the youth for the future coincide with the task of developing a culture of safety and health protection in everyday life activities. The safety of students should be considered as a part of the overall employee safety in school institutions, including both teaching and non-teaching staff. It is also important to protect the student population from those who are not employed in educational institutions, but who may directly or indirectly endanger their safety in the school environment. At the same time, teaching and non-teaching staff, just like any other employee, have their own rights, obligations and responsibilities when it comes to the safety and health protection at work.

Safety and health protection in school institutions is an integral part of the organization of their educational and other activities regulated by legislation on the educational system (primary education, secondary education, higher education), as well as by legislation on the work itself, the work safety and the environmental protection (Law on Labor, Law on Safety and Health at Work, Law on Fire Protection, Law on Environmental Protection, etc.). The laws on the occupational safety and health are complemented by certain by-laws, derived from the original laws, and by a number of other similar regulations. With the emergence and the spread of the COVID-19 pandemic⁴, the Government of the Republic of Serbia adopted the Decree on Measures for the Prevention and Suppression of the Infectious Disease COVID-19⁵ [1] which defines the appropriate measures for the prevention and control of the infectious disease COVID-19, caused by the SARS-CoV-2 virus⁶, as well as the conditions, ways of application, executors and means necessary for the implementation of such measures. At the same time, the organization of the teaching process in formal institutions of education is performed in accordance with the instructions and recommendations of the Ministry of Education, Science and Technological Development and the competent institute, i. e. the Institute of Public Health.

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⁴ In January 2020 the World Health Organization (WHO) declared an outbreak of a new coronavirus disease in the Chinese province of Hubei as an emergency situation of importance for public health at the international level. Two months later, on March 11, the WHO declared a pandemic of the Covid-19 virus.
⁵ Based on the Law on Protection of the Population from Infectious Diseases [2] and the Law on Government [3]
⁶ Covid-19 is an infectious disease caused by a newly discovered coronavirus known as the coronavirus of severe acute respiratory syndrome 2 (SARS-CoV-2). First cases of Covid-19 in humans were discovered in the Chinese city of Wuhan in December 2019 [4]
2. THE IMPACT OF THE COVID-19 PANDEMIC ON THE FORMAL EDUCATIONAL SYSTEM

In the conditions of COVID-19 pandemic, the importance of the research of the safety and health protection in educational institutions has increased. It is the most widespread global pandemic that led to the global crisis and put humanity to the severe test [5], especially when it comes to the functioning of educational systems at the global level [6]. Almost overnight, the educational institutions were closed and switched to online learning and virtual education [7]. In most countries, their reopening is based on the advice of the medical experts, while economists and business leaders had the main say when it comes to the recovery of closed services and businesses. The educational professionals have not greatly influenced the decisions about the organization of learning from home and the educational content [8].

However, when it comes to the occupational safety and health in reopened educational institutions in the conditions of the COVID-19 pandemic, the role of teachers is of great importance. The International Labor Organization [9] emphasizes the need for teachers to be involved in the assessment of safety and health risks in educational institutions as well as in creating a strategy for providing safe and healthy work environments. Also, the teachers’ perceptions on the time burden required to ensure adherence to COVID-19 policies in schools and classrooms, on the need for students to wear masks [10], as well as on the issues related to hygiene and training on preventive measures [9] should be considered.

Safe and adequately resourced teaching environments and decent working conditions are necessary for the continuation of quality learning in the conditions of COVID-19 pandemic [9]. It is necessary to ensure the safety of teachers, students and other school staff and to prevent the unconscious transmission of the virus [11]. Prevention and reduction of COVID-19 transmission in school settings should be based on the following principles: (1) ensuring a continuous safety and an appropriate education and development of children; (2) minimizing the risk of virus transmission between students, teachers and other staff both within school and school-associated settings; (3) ensuring that the schools do not act as amplifiers for the virus transmission within communities; (4) ensuring that the school-related public health and social measures are integrated into and support the wider community-based measures [12].

3. MANAGEMENT OF SAFETY AND HEALTH PROTECTION ISSUES IN SCHOOLS

The quality of management of safety and health protection issues in schools mostly depends on the quality of the school work, as well as on the decisive leadership and the participation of both students and employees. In addition, successful and safe school operations also require appropriate material and financial support which directly or indirectly affect safety and health protection. Schools should be a safe place within which the social and psychophysical safety and health of students and teachers are ensured. Therefore, it is necessary to assess the health risks in overall school facility (sports fields, cabinets, classrooms, offices etc.).

Every school should have a well-organized information system in order to share and disseminate information and instructions related to the safety and health protection of its employees and students. In addition, schools should continuously provide the necessary job equipment and personal protective equipment and carry out the procedures required for occupational safety in the conditions of the COVID-19 pandemic. The inspiration of this paper was found in the lack of current knowledge on the safety and health protection issues in schools in the conditions of COVID-19 pandemic.
The valid legal regulations\textsuperscript{7} obligate the employers to inform their employees, as well as to consult and include them when deciding about the issues related to the occupational safety and health. School institutions most often do not form a Board of Occupational Safety [14]; they usually appoint people who deal with the issues related to the occupational safety and health or the fire protection, and who administrate the necessary documentation related to such issues [15]. In addition to ensuring that employees are well informed, trained and work in accordance with the rules of occupational health, the employers should pay special attention to the cooperation with public health institutions and the promotion of health care both in everyday and emergency circumstances [16].

Ensuring the safety and health protection in schools requires students to be acquainted with various risks and hazards through the contents of various school subjects, but also through extracurricular activities. Teachers and other employees should be familiar with and implement the new regulations related to the prevention of the spread of the COVID-19. Furthermore, it is important to organize parent meetings (in primary and secondary schools) to allow teachers and professional associates of the school to introduce the issues of safety and health at school institutions to parents. It is particularly important to implement the protective measures and the prevention programs (workshops, seminars, counseling, cooperation with students and their parents, joint actions of parents and school pedagogues, teachers’ supervising duties in hallways, classrooms, yards etc.).

4. MEASURES TO PREVENT THE INTRODUCTION AND SPREAD OF COVID-19 IN SCHOOL INSTITUTIONS

John Hopkins University’s response to the COVID-19 pandemic, based on a framework for assessing methods for controlling exposure to workplace hazards developed by the National Institute for Occupational Safety and Health, can serve as a starting point for implementing the appropriate protective measures in educational institutions [11]. The model includes (Image 1) [17]:

- Physical distancing – working from home; redistributing the responsibilities in order to reduce the number of employees whose physical presence at the workplace is necessary;
- Engineering controls – creating physical barriers;
- Administrative controls – redistributing the responsibilities in order to reduce the mutual contact; relying on communication technology;
- Personal protective equipment – wearing masks.

The application of preventive and control measures in the case of communicable diseases such as COVID-19 is more effective in “controlled” environments, such as schools, because in such environments these measures can be applied consistently. Schools are “controlled” environments because: they involve a consistent grouping of people; they have strict rules in case of illness of students and staff; they can consistently implement personal preventive activities, such as hand hygiene, respiratory etiquette, etc.; they can apply various safety and health measures, such as intensified cleaning and disinfection, outdoor learning, creating the learning groups in order to limit contacts, etc. [18].

\textsuperscript{7} Law on Occupational Safety and Health [13].
The hierarchy of controls for potentially harmful workplace hazards [17 p. 10].

The document Considerations for school-related public health measures in the context of COVID-19 [12] presents comprehensive, multi-layered measures to prevent the introduction and spread of SARS-CoV-2 in educational settings (Table 1).

<table>
<thead>
<tr>
<th>community</th>
<th>school</th>
<th>classroom</th>
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<tbody>
<tr>
<td>- early detection of suspected cases, testing, monitoring of contacts, quarantine;</td>
<td>- administrative measures: establishing the rules on attendance and entry into schools,</td>
<td>- physical distancing, where possible;</td>
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<td>- spreading the information about the local measures in order to limit gatherings and</td>
<td>cohorting (keeping teachers and students in small groups that do not interfere) etc.;</td>
<td>- wearing masks, where recommended;</td>
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<td>- physical distancing (at least 1m), personal hygiene practices, wearing masks;</td>
<td>- infrastructure: reorganization of space, defining places for entry/exit and marking</td>
<td>- frequent hand hygiene;</td>
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<td>- initiatives aimed at reducing risks (e.g. identification of incorrect information,</td>
<td>the route, handwash facilities etc.;</td>
<td>- respiratory etiquette;</td>
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<td>- rumors and stigma) and protection of vulnerable groups, safety in public transport, etc.</td>
<td>- maintaining a clean environment: frequent cleaning of surfaces and common facilities;</td>
<td>- cleaning and disinfection;</td>
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<td>- adequate ventilation, outdoor activities;</td>
<td>- adequate ventilation;</td>
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<td></td>
<td>- the age-appropriate use of masks, where physical distancing cannot be</td>
<td>- spacing of desks or grouping the children, if necessary</td>
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<td>established, ensuring the availability of masks;</td>
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<td></td>
<td>- monitoring the symptoms by parents and teachers, testing and isolation of suspected</td>
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<td>cases, establishing rules on staying home in case of illness;</td>
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<td>- reorganization of school transport;</td>
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<td>- open communication between the parents, teachers and students;</td>
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<td>- providing services such as mental health and psychosocial support, school feeding and</td>
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<td>nutrition programs, immunization, etc.</td>
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The development of clear protocols on social distance measures (e.g. avoiding large gatherings, extracurricular activities, shift work etc.), the development of protocols related to hygiene (hand washing, respiratory etiquette, using the protective equipment, cleaning, safe food preparation practices) and the protection of teachers, administrative staff and students who are at high-risk (either due to their age or the underlying medical conditions), while simultaneously planning to cover the absent teachers and to implement the distance education, are all of equal importance. It is also necessary to organize trainings for teachers and other staff in order to prepare them for identifying the risks and implementing the appropriate protective measures [19]. The ACHA Guidelines: Considerations for Reopening Institutions of Higher Education in the COVID-19 Era [20] publication highlighted that the training in COVID-19 can help in providing students, teachers and other staff with the same basic information. This training should provide general information on COVID-19, including the prevention and protective measures (hand hygiene, respiratory etiquette, physical distancing, cleaning and disinfection), as well as the specific information related to the rules of behavior on campus: infection prevention and control, campus health and safety resources, use of personal protective equipment (masks and other face covers) and behaviors in case of infection.

5. INSTEAD OF CONCLUSION & RECOMMENDATIONS AND SUGGESTIONS

We are the witnesses of a time when the COVID-19 pandemic, caused by SARS-CoV-2, greatly disrupts the whole society and all its systems, including the educational one. The COVID-19 pandemic represents a great challenge, especially for the system of formal education, i.e. for school institutions at all levels of the formal educational system.

Even though most of the implemented measures aim to reduce, mitigate or delay the spread of the virus, there is a great polemic regarding which measures are the most appropriate – starting from the instructions on enhanced hand and school environment hygiene, wearing masks or other protective equipment, social and physical distancing, school restrictions, i.e. the transition to online or hybrid learning, followed by the closure of schools, restaurants, cafes and shops, and eventually by the complete ban on the movement of the majority of the population. Every employer, including the head of the school institution, has a legal and a moral obligation to ensure that the students, teachers and non-teaching staff respect the social/physical distance (geofencing system, warnings, online meetings, etc.), maintain the personal hygiene (washing facilities and disinfectants) and use the personal protective equipment [21] when working or staying in school institutions.

Occupational safety and health professionals have a significant role in achieving the safety and health protection – they can help employers in balancing the health and business operations in the conditions of the COVID-19 pandemic. Their assistance is also important in planning and implementing the COVID-19 protective measures in workplaces [21]. Protecting the employees’ health and reducing the virus transmission is based on instructions on how to monitor the presence of the virus symptoms, as well as the instructions to stay at home or to leave the workplace if any of the symptoms appear (and notify the supervisor), to avoid gatherings, to wear masks or face coverings in public places and places used by multiple

Source of table [12, p. 3]
people, and to know where they can find information about the current situation with COVID-19 at the local level [20].

In addition, there is a question of whether there is a need to employ the occupational safety and health professionals in school institutions. The role of these professionals would be to deal with all activities related to the safety and health of the employees (both teachers and non-teaching staff) – assisting the employers and employees in accomplishing and improving the overall safety and health; supervising the internal application of the safety procedures; encouraging employers to work on the identified deficiencies; monitoring the data on hazards, harms and risks in the school environment and preparing an annual report; cooperating with bodies responsible for labor inspection and training in the field of occupational safety and health; creating the committees for the occupational safety and health; cooperating with professional services during the construction and the reconstruction of educational facilities, as well as the procurement of personal protective equipment; cooperating with health institutions; cooperating with other school professionals (pedagogue, psychologist etc.).

The presence of multiple risks in the educational institutions opens the question of whether there is a need for the employment or the additional education/training of before mentioned professionals in order for them to become the experts for integral protection. The results of the research [15] show that school principals believe that there is a necessity for hiring an integral protection expert, who would not only deal with supervision and control of the schools’ technical protection system, but also with the issues of physical/health protection of employees and students.

The results of the aforementioned research also imply that the standards of every area of school safety (safety and health of students, teachers and non-teaching staff; protection of the school facilities, including the school playground; fire protection; environmental protection; protection in emergency situations etc.) should be determined by law. In addition, the results point to the need for establishing a Committee for Safety and Health in Schools as an advisory body to the employer, but also as an important coordinator in cooperation with the students, parents and the local community when addressing the issues of safety and health in everyday and emergency situations [15].

Finally, the need for social and legislative definition and determination of the education for safety, protection and sustainable development as elements of the national strategy for education, is of crucial importance. Therefore, it is necessary to provide an equal treatment of the contents and the forms of such an education at every level and in all segments of the educational system (especially when it comes to the selection of the educational contents, the design of the educational programs and the implementation of the non-formal and self-education in this field). The educational and scientific institutions should initiate the systematic preparation and training (professional and didactic-methodical preparation) of the existing and future educational staff in the field of safety, health protection and sustainable development, that will work with children, youth and adults. The educational and other competent bodies and services should be convinced that the introduction of such contents into the formal and non-formal education is not an additional burden for the curricula, but rather the necessary content for the modern educational systems, in order to ensure the secure future of the nation that lives in a healthy work and living environment. The education for safety, protection and sustainable development should be considered as a basic and integral part of

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8 Integral protection is the highest form of protection of people and properties, i.e. it combines technical and physical protection, supervision and intervention
the overall school philosophy in the context of the present risk society and uncertain living and development conditions in the future.

6. ACKNOWLEDGEMENT

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7. REFERENCES


