

A Small-Scale Exploratory Study of the Pre-Service and In-Service Teachers' Attitudes on the First-Aid Workshop

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Abstract

The health education competences of teachers are essential for the effective implementation of the educational process and for imparting health knowledge to future generations. This study aimed to determine the effects of workshop activities on the knowledge and competencies of pre-service and in-service teachers regarding health conditions requiring basic first-aid. It also aimed to explore their attitudes towards the workshop. A total of 68 participants were included in the study, comprising 41 education students and 27 primary school teachers. A 13-item Likert-type scale assessed teachers' attitudes, while 'hands-on' activities demonstrated their obtained knowledge and skills on particular first-aid topics. The findings revealed similar attitudes towards first-aid workshop among all participants, with both groups recognizing the value of the knowledge gained. Most participants agreed that the workshop supported their learning and professional development, helped improve their work, and involved meaningful and useful activities. The results suggest that acquiring basic first-aid skills and knowledge has improved their readiness to handle accidental injuries or unexpected illnesses and enhanced their understanding of the importance of these skills in educational environments.

Keywords: health education, teachers, first-aid, workshop.

Маломасштабное эксплораторное исследование отношения будущих и работающих учителей к семинару по оказанию первой помощи

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Аннотация

Компетенции учителей в области здравоохранения имеют решающее значение для эффективной реализации образовательного процесса и передачи знаний о здоровье будущим поколениям. Цель данного исследования заключалась в определении влияния практических занятий на знания и компетенции будущих и работающих учителей в отношении состояний здоровья, требующих оказания базовой первой помощи. Также исследование было направлено на изучение их отношения к проведённому семинару. В выборку вошли 68 участников – 41 студент педагогического направления и 27 учителей начальной школы. Для оценки отношения учителей использовалась шкала Ликерта из 13 пунктов, а практические задания позволили продемонстрировать полученные знания и навыки по конкретным темам первой помощи. Результаты показали схожее положительное отношение ко всем аспектам семинара среди всех участников, и обе группы признали ценность полученных знаний. Большинство участников согласились с тем, что семинар способствовал их обучению и профессиональному развитию, помогал совершенствовать их работу и включал содержательные и полезные виды деятельности. Результаты свидетельствуют о том, что приобретение базовых навыков и знаний по оказанию первой помощи повысило готовность участников к реагированию при несчастных случаях или внезапных заболеваниях, а также углубило понимание важности этих умений в образовательной среде.

Ключевые слова: образование в области здоровья, учителя, первая помощь, практический семинар.

Introduction

First-aid refers to a set of measures and procedures taken at the scene of an accident (or in its immediate vicinity), immediately after an injury or sudden illness, with the aim of saving life, preserving health, and preventing further deterioration of the health of the injured or ill person. Every day all across the world, some people need assistance that can be provided in the form of self-help, mutual aid or professional first-aid. Anyone can master it, and anyone can be in a position to receive or provide help. Hence, this help is usually provided as a one-time, short-term treatment based on simple technology and basic training (U.S. Department of Labor Occupational Safety and Health Administration, 2006). First-aid is not a substitute for professional medical help, but it is an important

link in the chain of life rescue, especially knowing that very often health/life depends on time. The crucial importance of first-aid is reflected in the fact that it keeps the casualty alive until professionals arrive. Besides the main goal of preserving life, it also prevents deterioration and further harm, promotes recovery, and relieves pain and suffering (Zideman et al., 2021). Additionally, adequate first-aid while caring for someone, buys valuable time till medical assistance reaches, and also strengthens values of the society and empowers its responsibility (International Federation of Red Cross and Red Crescent Societies, 2022).

According to the World Health Organisation (WHO), injuries in children represent a major public health concern that has to be addressed. There is no single way to tackle the problem, but one of the basic principles underlying this issue is education and the teaching of skills that can prevent and treat children in need (Violence Prevention (PVL), 2008).

Considering that teachers work in complex and challenging conditions, they have to be trained to implement meaningful strategies in order to resolve different health problems and mitigate potential damage they might come across while working with children. Teachers' health education competencies are critical for the successful execution of the educational process (Petrovic et al., 2021). As the first link in the transfer of knowledge and skills in school, a teacher's health knowledge is an essential prerequisite for successful health education for future generations (Maksymchuk et al., 2020). The importance of teaching and practicing first aid is growing in the general population. Fractures, cuts, burns, blows, and sprains were the most common injuries among children, which occurred accidentally or unintentionally at home or at school (Olmos-Gómez et al., 2021). A recent study demonstrated that well-trained teachers can successfully deliver first-aid instruction to students (Tse et al., 2022), suggesting the importance of adequate health education for trainee teachers. Furthermore, a systematic review reported that a number of first-aid programmes implemented in schools in Europe and the USA significantly improved students' knowledge, skills, and attitude regarding first-aid (Tse et al., 2023). In addition, a study by Toner et al. suggested that teachers who have received the adequate first-aid education may serve as facilitators in first-aid training, so helping to reduce costs of tutoring (Toner et al., 2007). Similarly, a recent study elucidated that there is no difference between teachers and professionals in performance on the first-aid topics while teaching young students. Namely, teacher-led first-aid instruction can be just as successful as instruction from trained staff, confirming a cost-effective approach (Tse et al., 2025).

The aim of the research was to examine the contribution of workshop activities on the development and improvement of the pre-service and in-service teachers' knowledge and competencies related to basic first-aid management. In addition, the aim was to establish the participants' attitudes regarding the provided first-aid workshop. The one-day workshop included duties and motives for providing first-aid, basic steps in any accident and care for an injured/ill person, triage, i.e., order of urgency, classification into certain priority groups based on the examination performed, cardiopulmonary resuscitation (CPR) and basic life support. Moreover, the basic first-aid procedures for the most prevalent injuries and health conditions affecting children, including suffocation, burns, bleeding, fractures, asthma attacks and epileptic seizures, were also comprised. A crucial part of the first-aid training was the 'hands-on' practice of the students.

Workshop activities, in general and health-related, are recommended for the development of a wider range of teachers' competencies, especially those related to their practical actions in various educational situations, which they inevitably encounter during their educational journey and professional activity (Arli & Yildirim, 2017; Cao et al., 2018;

Fengqin, 2012; Maksymchuk et al., 2020; Olmos-Gómez et al., 2021; Toner et al., 2007). Through workshop activities, simulating a context similar to real-life situations and via intensive interaction with the lecturer and other attendees, participants acquire relevant knowledge, develop practical skills, with the aim of being able to apply the proper competences as effectively as possible in their teaching practice, educating students (Bohn et al., 2013; Böttiger et al., 2017; Kuvaki & Özbilgin, 2018), and colleagues (Maksymchuk et al., 2020; Toner et al., 2007). Gaining experience through practical workshop, where each participant has an active role, contributes to the quality and durability of knowledge and skills acquired through such kind of training (Arli & Yildirim, 2017; Cao et al., 2018; Sutoi et al., 2025). This involvement is of particular importance when it comes to developing health-related competencies of pre-service and in-service teachers. Namely, these types of competences, in addition to appropriate theoretical knowledge, also include appropriate practical skills, which are built by gaining appropriate experience within carefully prepared workshop activities (Arli & Yildirim, 2017; Cao et al., 2018; Maksymchuk et al., 2020; Olmos-Gómez et al., 2021; Toner et al., 2007). These activities are carried out with tasks that require practical implementations related to specific medical challenges, since such situations can have significant consequences, both for the physical and mental health of persons exposed to risks, and in terms of appropriate prevention, it is necessary to take care of preventing both aspects of these consequences (Arli & Yildirim, 2017; De Buck et al., 2015; Petrovic et al., 2021; Violence Prevention (PVL), 2008).

However, some challenges in developing first-aid skills may occur during the workshop implementation. The time dedicated to training is very important, as is the possibility of repeating training within certain time frames. The suggested duration of the initial first-aid hands-on training is one or two full days, with a retraining repeated through practical and theoretical directions six months later (Yan et al., 2022), and often is not easy to achieve this recommendation. Additionally, the first-aid training programmes, although mainly based on CPR, treatment of unconsciousness, bleeding, choking, paediatric first-aid, and burns, are not standardised and vary from country to country (Wang et al., 2025). Likewise, evaluation methods of obtained first-aid skills and knowledge are not performed systematically, are not consistent, and therefore these assessments need to be designed (Minna et al., 2022). Finally, first-aid workshop activities are very often highly influenced by education, motivation, willingness and self-confidence of participants, and the more positive these factors are, the greater the success of the workshop is (Huang et al., 2025; Nam, 2025).

Pre-service and in-service teachers should be trained to respond in a timely and appropriate manner in the event that a child has been exposed to a certain type of health threat or injury that requires first-aid. Namely, it is noted that especially children of pre-school and early school age are exposed to various types of injuries due to the various activities they practise at that age, and that teachers are the people who are most often near them in those moments, when it is necessary to react quickly, in order to provide the child with adequate help in a timely manner (Cao et al., 2018; Fengqin, 2012; Maksymchuk et al., 2020). Therefore, during the teachers' education, and later continuous professional development, it is necessary to conduct various trainings regarding the development of competences in the domain of first-aid, for which workshops are particularly suitable. It is very important both for the prevention and preservation of physical health and for their mental health, because health challenges and injuries also carry the risk of negative emotional responses (fear, concern) and possible behavioural difficulties (avoidance of certain situations and places where the injury occurred) at children's age (Arli & Yildirim, 2017; De Buck et al., 2015; Petrovic et al., 2021).

Methods

This research involved an exploratory study carried out as a one-day workshop with the 41 education students and 27 primary school in-service teachers. All 68 participants in the cohort were engaged in first-aid activities on the following themes: The most common injuries and health conditions of children that require first-aid; Objectives and duties in providing first-aid; Basic life saving measures and CPR; Basic measures of first-aid in certain situations; and Preventing injuries. Throughout the workshop programme, presentations, hands-on demonstrations, assessments of attitudes, and evaluations were employed. The main objective was to examine the effects of workshop activities on the knowledge and competencies of pre-service and in-service teachers regarding basic first-aid, and to explore their attitudes towards the implemented workshop. Therefore, research questions were: what are the effects of specific workshops on the knowledge, competencies and attitudes of education students and teachers about realising basic first-aid in specific health conditions.

The Likert-type attitudes' scale consisted of 10 items (questions) intended to examine participants' attitudes towards the conducted workshop (Table 1). This *Questionnaire for training participants* was created by ZUOV – Institute for the Improvement of Education Quality of the Republic of Serbia – Centre for Professional Development of Employees (n.d.) and used in its original form. The only adaptations were related to general socio-demographic data about the respondents and suggested answers to the question number 11 (source of information about workshop). For each of the 10 items, respondents provided answers on a continuum from 1 to 5 (5 – I completely agree, 4 – I mostly agree, 3 – I partially agree, 2 – I mostly disagree, 1 – I completely disagree). The total score is obtained by summing the scores on the individual items. The respondent's elevated score on the scale signifies enhanced competencies and a favourable disposition towards the outcomes of the workshops. The questions relate to the execution of the designated subjects and materials, the methodologies employed, the correlation with participants' prior knowledge and experiences, time management, the potential for application in enhancing work processes, the educator's expertise in the field, communication and feedback from the educator, encouragement and responsiveness to enquiries, working conditions, and the overall organization of the workshops. In addition, there were three questions with alternative answers, which referred to the sources from which the participants obtained information about the workshops, the assessment of the time spent on meaningful learning activities and information on whether the participants would recommend this workshop to their colleagues. Finally, the participants had the option to state their reasons for the given answers in a free form, through one open-ended question. The instrument demonstrated proper metric characteristics. The scale's reliability test revealed an appropriate Cronbach's alpha ($\alpha = 0.7$). Demographic variables for teachers included gender, years of experience in educational institutions, last completed level of education, and type of profession. For students, the variables included gender, field of study, year of study, and high school completed. The assessment of their acquired knowledge and skills regarding the specified first-aid issues was conducted directly through group work, involving practical demonstrations and oral presentations.

The analysis and interpretation of the acquired data were conducted using SPSS statistical software and the descriptive approach.

Table 1. List of 13 items utilised to assess the workshop and analyse the participants' attitudes

QUESTIONS/STATEMENTS
1. The topics/contents outlined in the programme were implemented.
2. The workshop approach ensures learning and professional development of the participants.
3. The participants' prior knowledge and expertise are taken into consideration when implementing the workshop activities.
4. The stated schedule was followed during the workshop.
5. Participating in this workshop will help me improve my own work.
6. The implementers have extensive knowledge in the field to which the workshop applies.
7. The implementers actively interact/communicate with the participants and provide/give them feedback on their work and outputs.
8. The implementers provide solutions to the participants' inquiries and encourage them to learn.
9. Working conditions (space, technical support) enabled the successful implementation of the workshop.
10. The entire event organisation contributed to the successful implementation of the workshop activities.
11. Information regarding the workshop was provided to me from: For teachers: a) the Catalogue, b) my colleagues, c) my workplace, d) the professional development centre, e) the school administration, f) some other source For students: a) Faculty website, b) my colleagues, c) lectures I attend, d) some other source
12. What percentage of the workshop time was devoted to meaningful/worthwhile learning activities? a) 0% b) 1-19% c) 20-39% d) 40-59% e) 60-79% f) 80-99% g) 100%
13. Would you recommend this workshop to your colleagues? a) Yes b) No Please provide reasons/observations:

Results

Interactive lectures and 'hands-on' first-aid demonstrations were given on basic CPR and basic characteristics of children's health-risk behaviours and accidental injuries (fractures, choking, bleeding, burns, sunstroke, frostbite, poisoning, and bites), as well as cardiovascular diseases, diabetes, asthma, allergy, and epilepsy.

Pre-service teachers

The students' cohort consisted of 41 participants: 29 females (70.7%) and 12 males (29.3%). All students were in the first year of teacher education study, and had different secondary school backgrounds: 6 (14.6%) were from medical schools, 13 (31.7%) were from grammar schools, and 22 (53.7%) attended some other schools. Distribution of answers to the first ten questions is shown in Figure 1.

According to quantitative analysis, 36 students (87.8%) strongly agreed that all planned workshop activities were completed, while 25 of them (61.0%) thought that attending the workshop would enhance their own work. However, only 14 pre-service teachers (34.2%) strongly, and the same number moderately, concurred that the implementers had taken into account their previous experience and knowledge when developing the workshop activities. Further analysis revealed that 32 (78.1%) students emphasised that the activities were conducted in accordance with the schedule and 29 (70.7%) that the workshop approach ensures learning and professional development. The overwhelming majority, 39 (95.1%) students strongly agreed that the implementers were the experts in the workshop's topics. Moreover, almost all participants (40, 98.6%), emphasised

that implementers actively interacted with them and gave them feedback on their work, whereas 38 (92.7%) students underlined that they were encouraged to learn and were provided with responses to all their enquiries. Also, 29 (70.7%) students highlighted that the working environment with regard to space, equipment, and technical assistance enabled the successful implementation of the workshop. The effective conclusion of the workshop was attributed to the entire workshop organisation, as nearly all students strongly or mostly agreed (32 and 8, respectively) on this issue.

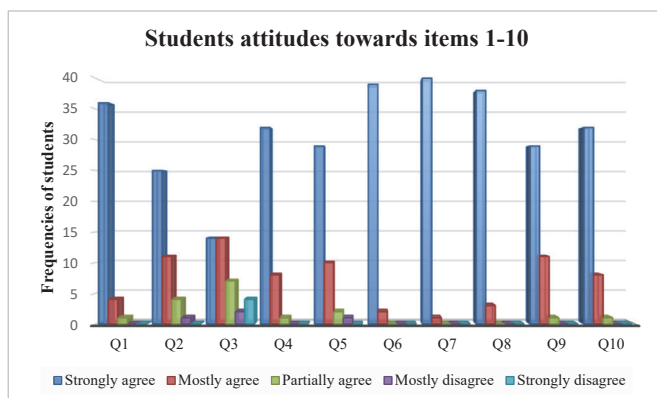


Figure 1. Frequencies of students' answers on questions/statements 1-10

The majority of students, 37 (90.2%) responded that they learnt about the workshop through lectures they attended, while 4 (9.8%) were informed in some other way (question 11). Moreover, 23 (51.2%) participants estimated that more than 80% of the whole workshop time was spent on meaningful and valuable learning activities, whereas 14 (34.2%) opted for 60-80% (question 12). Table 2 provides data for each category.

Table 2. The distribution of students' answers about the meaningful learning activities during the workshop

TIME %	frequencies	percentage
0%	0	0
1-19%	0	0
20-39%	0	0
40-59%	6	14.6
60-79%	14	34.2
80-99%	6	14.6
100%	17	36.6

All surveyed pre-service teachers would endorse the first-aid workshop to their colleagues (question 13). Approximately half of them (22, 53.7%) have had no written comments about the workshop and professionals that delivered it. However, 11 of them (26.8%) emphasised the extraordinary quality and practical applicability of the implemented content, whereas 8 (19.6%) highlighted the exceptional quality of the workshop and the proficiency of the implementers.

In-service teachers

A research sample was composed of 27 participants: 26 females and 1 male. Demographic characteristics also included the length, i.e. number of years of service (yos), which were divided into six categories: 3 (11.2%) teachers with 0-2 years of service, 4 (14.8%) with 3-7 yos, 8 (29.6%) teachers had 8-15 years of service, 8 (29.6%) 16-25 yos, 4 (14.8%) teachers with 26-35 yos, and there were no participants with more than 35 years of service. According to the level of education, they were grouped into three categories: 5 (18.5%) completed high school, 16 (59.3%) completed university, and 6 (22.2%) participants completed a Master's degree. There were no teachers with a PhD level of education. Concerning the profession, there were 13 classroom teachers (48.2%), 10 subject teachers (37%), and 4 (14.8%) school psychologists. The respondents' answers to the first ten questions are shown in Figure 2.

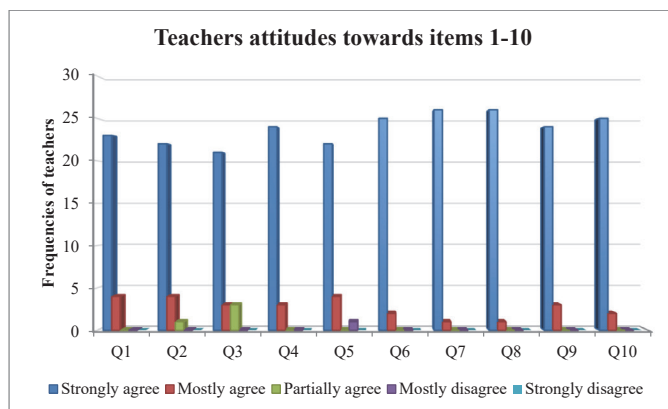


Figure 2. Frequencies of teachers' answers on questions/statements 1-10

According to a quantitative analysis, 23 teachers (85.2%) strongly agree that all planned workshop activities were accomplished, while 22 of them (81.5%) believe that attending the workshop will help them improve their own work and that the workshop approach ensures learning and professional development. The least number of teachers, 21 out of 27 (77.8%), confirm that their prior knowledge and expertise were taken into consideration by the implementers while creating the workshop activities. Further analysis revealed that 24 participants (88.9%) underline that activities were held according to the timetable and in excellent working conditions regarding space, equipment and technical support. Moreover, the vast majority of teachers (25, 92.6%) strongly agree that implementers are the experts in the area related to the workshop. Almost all of the teachers (26, 96.3%) completely concur that they received feedback, were corrected and were inspired to gain knowledge and respond to enquiries. Nearly all teachers (25, 92.6%) emphasise that complete event organisation contributed to the successful completion of the workshop.

The majority of teachers, 22 (81.5%), responded that their institution informed them about the workshop, while 3 (11.1%) learnt about it *via* the seminar catalogue and 2 (7.4%) from their colleagues (question 11). Regarding the quality of the workshop (question 12), 23 (85.2%) participants believe that over 80% of the total workshop time was devoted to meaningful and beneficial learning activities. Table 3 provides data for each category.

Table 3. *The distribution of teachers' responses regarding the amount of time spent on the workshop's valuable learning activities*

TIME %	FREQUENCIES	PERCENTAGE
0%	0	0%
1-19%	0	0%
20-39%	1	3.7%
40-59%	2	7.4%
60-79%	1	3.7%
80-99%	12	44.5%
100%	11	40.7%

Finally, all teachers who participated in this study would recommend the first-aid workshop to the co-worker (question 13). However, almost none of the teachers placed written feedback (26, 96.3%), and only one of them emphasised the outstanding quality of the workshop.

Discussion and Conclusion

This study revealed the pre-service and in-service teachers' attitudes towards the content, practices, and realisation of first-aid workshop. Enhanced theoretical knowledge and augmentation of participants' practical knowledge and skills were also confirmed. Most of the participants had no competency, but after practising the most important first-aid procedures, their skills increased (to moderate), what has been previously observed by numerous studies (Calandrim et al., 2017; León-Guereño et al., 2023; Reveruzzi et al., 2016; Tse et al., 2023; Vermonden et al., 2023). 'Hands-on' involvement demonstrated participants' abilities on these particular topics and, importantly, indicated some of the activities that need to be taken in order to improve their first-aid competencies. This is certainly important if it is known that even adults well trained in basic first-aid programmes should undergo skills and knowledge retesting and reviewing every three years (U.S. Department of Labor Occupational Safety and Health Administration, 2006).

Qualitative analysis revealed that participants were able to provide first-aid on the workshop related topics demonstrating it frontally via the 'hands-on' activities. So, along with the theoretical approach, it was essential for participants to receive the practical demonstrations, which is in accordance with previous studies (Reveruzzi et al., 2016; Tíscar-González et al., 2019). Furthermore, qualitative analysis of the answers obtained through the feedback comments, led to conclusions that the workshop exhibited extraordinary quality and practical applicability, as well as outstanding competencies of the implementers. This feedback is crucial since OSHA recommends that first-aid workshops and training programmes should be periodically reviewed and renewed with up-to-date techniques and knowledge (U.S. Department of Labor Occupational Safety and Health Administration, 2006). In line with this is the statement that teachers' knowledge and skills should be refreshed regularly (Vermonden et al., 2023; Zinckernagel et al., 2016). A comprehensive Norwegian study revealed that although first-aid has been included in school curricula since the early 1960s, there are still shortcomings such as an insufficiently specific curriculum, poorly covered crucial topics (CPR), a lack of equipment (CPR mannequins), and a lack of first-aid training for teachers (Bakke et

al., 2017). In the present era of modern and advanced technologies, virtual reality offers simulation, control and practice of first-aid, with prompt feedback (Yu et al., 2026).

According to a quantitative analysis, 87.8% of students and 85.2% of teachers strongly agree that planned activities were completed. Subsequent analysis revealed that around 80% of pre-service and in-service teachers believe that workshop approach guarantees learning and professional growth and that attending the workshop would help them improve their own work. Moreover, the overwhelming majority of all participants (over 90% in both groups) strongly agree that they received feedback, were corrected and were inspired to gain knowledge and respond to enquiries. Nearly all students and teachers (95.1% and 92.6%, respectively) strongly approve that researchers are the experts in the area related to the workshop. Almost all of the participants emphasise excellent working conditions regarding space, equipment and technical support during workshop realisation, while around 80% of them think that activities were held according to the timetable, which all contributed to the successful completion of the workshop. All of the above can be considered as the reasons why teachers and students have a generally positive attitude towards the implemented training. According to a recent systematic review and meta-analysis, the successful implementation of school-based first-aid training is dependent on training qualities as well as contextual aspects, with teachers being an important factor (Sadjadi et al., 2025). Finally, all pre-service and in-service teachers who participated in this study would recommend the first-aid workshop to the colleague, which is another indicator of their positive experience gained during the training. Hence, these workshop's landmarks indicate the necessity of making the educational milieu safer and more equitable for prompt reaction in sudden and challenging health situations. There is an estimation that 15% of the population well trained in CPR could significantly reduce the cardiac arrest-related deaths (Kuvaki & Özbilgin, 2018). Therefore, first-aid trained teachers and trainee teachers are capable of transferring knowledge and skills, contributing to a growing number of people trained in first-aid, what is a prerequisite towards that desired percentage in the entire population (Bohn et al., 2013; Böttiger et al., 2017).

The study observed a difference between pre-service and in-service teachers in an open-type question, when almost half of the students highlighted the excellent quality of the workshop, its practical applicability and the competence of the implementers, whereas only one in-service teacher placed a similar comment. A possible reason for obtaining such a difference between two groups may be in the fact that students are less likely to participate in activities of this type as part of their regular educational process at the university. On the contrary, practicing teachers are more likely to be engaged in this type of training at various seminars, organised as part of lifelong professional development. Hence, teachers were already familiar with this approach and had no need to further elaborate on it, while for students it is a completely new experience, and to a greater extent they perceive its quality, practical applicability and the competence of the educators (Cao et al., 2018; Fengqin, 2012; Maksymchuk et al., 2020; Sutoi et al., 2025). In addition, 80-99% of the total workshop time was spent on meaningful and valuable learning activities for the majority of in-service teachers, while it is the same for just over half of the pre-service students. This is in line with previous observations that teachers at different levels vary in what they know and what they report regarding the quantity and quality of first-aid training (Bakke et al., 2017; Yuk et al., 2017).

The most striking difference between these two groups of participants was observed around the statement related to their prior knowledge and expertise. Only 34.2% of students strongly agreed that implementers of the workshop took into consideration their experience and knowledge while creating workshop activities. On the contrary, 77.8% of

the participating teachers exhibited the same attitude. Moreover, some students (9.76%) expressed strong disagreement with this statement, which has not been observed for their more experienced colleagues. This result may be a consequence of the fact that teachers generally have more knowledge and experience in the field of conducted activities, in comparison to their younger colleagues, who are still studying and are just in the process of intensive learning and forming the basis for their professional path as a teacher (Arli & Yildirim, 2017; Cao et al., 2018; Maksymchuk et al., 2020).

The implementation of the goals of this training is not only reflected in the readiness of the participants to put the learned skills into their practice immediately, but also to raise awareness of the importance of knowing these skills in everyday life. Regarding the educational policy, it would be ideal if these skills could be incorporated into the curricula for the teachers' education, and furthermore, for their lifelong education. The main limitation of this study is the small sample size that may have limited generalizability. Also, since participants provide subjective answers, there is a risk of the self-report bias and answers that may be only socially desirable, and not necessarily accurate. Therefore, we used anonymous surveys and the participants were encouraged to give honest feedback.

In conclusion, this study elucidates the post-workshop attitudes and self-evaluated abilities of pre-service teachers and in-service professionals, and contributes to the limited body of evidence on this subject. Based on the findings, workshops on various first-aid themes could be recommended due to their favourable effects on improving participants' attitudes regarding the lectured topics. Additionally, results revealed that performed activities were suitable for the improvement of their knowledge and competencies. Faculties that educate future teachers are responsible for finding ways to enable proper health education of the students as well as adequate support for lifelong learning and/or education of professionals involved in education, especially concerning the importance of their profession.

Conclusion of the Ethics Committee

The study was conducted in accordance with the article 151 of the Law on the Foundations of the Education System ("Official Gazette of the Republic of Serbia", No. 88/2017, 27/2018 – other laws, 10/2019, 6/2020, 129/2021, and 92/2023) and in compliance with the Personal Data Protection Act ("Official Gazette of the Republic of Serbia", No. 87/2018). All collected data are anonymous, used exclusively for scientific purposes.

There is no conflict of interest.

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