

# SCAMPER-based First Aid Training: Effect on Students' Knowledge and Innovation-Oriented Attitudes

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## Abstract

**Aim:** This study aimed to evaluate the impact of the SCAMPER technique in first aid training on students' first aid awareness, development of safe-behavioral practices, and innovative product design thinking.

**Materials and Methods:** The study was conducted at Konya BİLSEM with 122 systematically sampled students, divided into two groups: one receiving traditional first aid training and the other instructed using the interactive SCAMPER technique. Pre- and post-training questionnaires assessed knowledge levels, anxiety about intervention, and attitudes toward equipment design. The traditional group was trained via classical presentations, while the SCAMPER group received training through interactive, creative exercises.

**Results:** Both groups showed a significant increase in first aid knowledge, adoption of safe-behavioral practices, and willingness to design first aid equipment after the training ( $p<0.001$ ). The inclination to design innovative equipment was significantly higher in the SCAMPER group compared to the traditional group ( $p<0.001$ ). Additionally, the majority of students expressed a desire for further first aid education (62.3%). SCAMPER-based training was associated with stronger innovation-oriented attitudes toward equipment design and interactive participation.

**Conclusion:** First aid education utilizing the SCAMPER technique is as effective as traditional methods in enhancing knowledge and fostering safe-behavioral practices, while offering additional benefits in stimulating innovative thinking regarding equipment design. Early first aid education incorporating SCAMPER is recommended to improve public health awareness and expand the reach of first aid practices within the community.

**Keywords:** Emergency medicine, first aid, education, educational models, innovativeness, early intervention, child behavior, experimental study

## Introduction

First aid refers to the immediate care provided until medical staff arrive in unexpected events, accidents, acute health problems, or when encountering a life-threatening situation. The primary purpose of first aid is to eliminate danger, prevent the person's health from deteriorating further, and facilitate recovery. The most important distinction between first aid, emergency treatment, or emergency care and professional or emergency medical services is that "although first aid can often be delivered with minimal or improvised resources, the availability and appropriate use of basic first aid equipment may enhance safety and effectiveness in bleeding control." The timely and proficient administration of first aid using the correct techniques significantly contributes to the reduction of death and morbidity. Competent individuals are

required for this. (1,2). Well-structured training programs are also necessary for individuals who are proficient in first aid practices.

There are different procedures for first aid training in various countries (3). Providing first aid training from an early age should be considered a strategic step for public health, not only for societal response within the emergency response system and the inclusion of the youngest individuals in this response, but also for the purpose of establishing safe-related behaviors behavioral. Therefore, including first aid lessons in the curriculum from elementary school onward, and repeating them in high school and university years, is beneficial in many ways (4). Because first aid is a need that can arise for every individual, initially in life-threatening situations, and sometimes in situations posing a smaller health risk. In addition, first aid application may be



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needed by anyone in the community, at any time, starting with the person themselves or their loved ones. Additionally, school is an environment where incidents requiring first aid are frequent, and these trainings can also raise awareness about accident prevention. Additionally, it will be easier to periodically repeat first aid training in formal education (5,6). In addition to this, although first aid doesn't require medical equipment, recognizing first aid materials is also an added benefit of these trainings. The creation of personal first aid kits in areas such as homes and vehicles, and the availability of first aid bags or cabinets in public spaces, are encouraged. Sometimes, however, this is a legal requirement (7-10). The advantage this brings is an increase in safe, hygienic, fast, accurate, and effective intervention. The basic principle regarding first aid supplies is that they should be easy to apply and readily available. However, these principles also highlight the need for ergonomic first aid supplies. This situation should not be overlooked in first aid training, and information about first aid equipment should also be provided (11,12).

In addition to traditional training methods, many new methods are being continuously tested and the results discussed regarding how first aid training will be delivered and the techniques to be used, utilizing the possibilities offered by technology. While the advancement of technology provides different opportunities for teaching and learning information, it also increases accessibility to knowledge (13). In addition to the goal of ensuring an adequate level of effectiveness in first aid training, it is expected to create the safe-behavioral practices, reduce avoidance of intervention during an event, and decrease nervousness or hesitant behavior. Another important topic that is perhaps overlooked in first aid training is the importance of training methods that also increase awareness of the introduction and use of first aid kits. This will increase the importance these individuals place on first aid kits, and will increase the attention given to having personal first aid kits or first aid supplies in public areas such as workplaces and schools. It will also facilitate the development of ergonomic, effective, and easy-to-use kits. In such an educational method, the components of brainstorming and interactive participation still maintain their importance, although certain limitations have been reported (14-16). When examining educational methods, the SCAMPER technique, first proposed by Alex Osborn and developed by Robert F. Eberle, is one of the techniques used to facilitate creative thinking. This technique is named after the acronym of the steps: Substitute, Combine, Adapt, Modify/magnify/minify, Put to other uses, Eliminate, Reverse or rearrange. The advantage of the SCAMPER technique is that it provides an interactive learning environment by conducting brainstorming through specific steps, and prevents the topic

from reaching a deadlock or from always revolving around the same ideas (17).

Within this context, the importance of first aid lessons in formal education for the development of first aid awareness, effective practices, and a safe-behavioral practices becomes evident. This topic is of particular interest from a medical perspective, including school health (18,19). In addition to this, another goal of the first aid training should be to develop ideas for the design of innovative products that can be used in the field of first aid and healthcare, which also relate to the field of medical engineering. This study aims to investigate the change in first aid awareness, safe-behavioral practices, and innovative product design opinions regarding first aid areas and kits after training using the SCAMPER technique.

## Materials and Methods

### Study Design

The study was planned as an educational intervention study and examined how first aid awareness, safe-behavioral practices for bleeding, and innovative product design thinking in the field of first aid changed among groups when first aid training was delivered to two groups using the traditional method and the SCAMPER technique. The study was carried out at a Konya BİLSEM. In Türkiye, BİLSEM's are state-affiliated institutions where gifted students receive additional lessons in their areas of talent, alongside their formal education. This setting was selected due to the potential of students to engage in creative and innovation-oriented learning activities and this research could be more valuable in this regard for selected groups. According to the sample size calculation performed with the G\* Power program for the research (test: Student's t test, effect size= 0.5 and  $p < 0.05$  and 85% power), it was found that a total of 118 people were needed for the two groups. The aim was to recruit 120 cases, with 60 for Group 1 and 60 for Group 2.

Permission was obtained from the KTO Karatay University Ethics Committee for Non-Pharmaceutical and Medical Device Research (decision number 2024/015, date: 31.10.2024) for the research. Administrative leave was obtained from the institutions. Students' parents were informed with the help of the school administration and consent was obtained from the families. The trainings were held between 01.11.2024 and 30.11.2024.

### Systematic Sampling and Student Selection

The systematic sampling method was used for sample selection. The complete list of BİLSEM students has been received. From this list, high school seniors and first and second-grade students were removed due to test anxiety and the intensity of their

programs, with the aim of preventing potential disagreements in reading and comprehension and reducing group heterogeneity. Then, planning was done to ensure an equal number of students were taken from each class. After registered students were ranked using student numbers for systematic sampling, at least 60 people were selected based on a random number table. Later, new students were selected in the same way to replace those who could not obtain permission from their parents or did not wish to participate. Group heterogeneity emerged during the election due to the internal dynamics of the center where the study was conducted. For students admitted to the center, there was a different number of students each year. Additionally, the lack of mandatory attendance at this center led to some students not participating and being unable to obtain permission from their families. To reduce group heterogeneity, students who scored high on the pre-test, those who received first aid training as part of the program, and students with a first-degree relative who is a healthcare worker were excluded from the study. Considering that the sample size calculated based on the two students' strong desire to participate in the education exceeded 5% of the total, both groups were increased to 61 people.

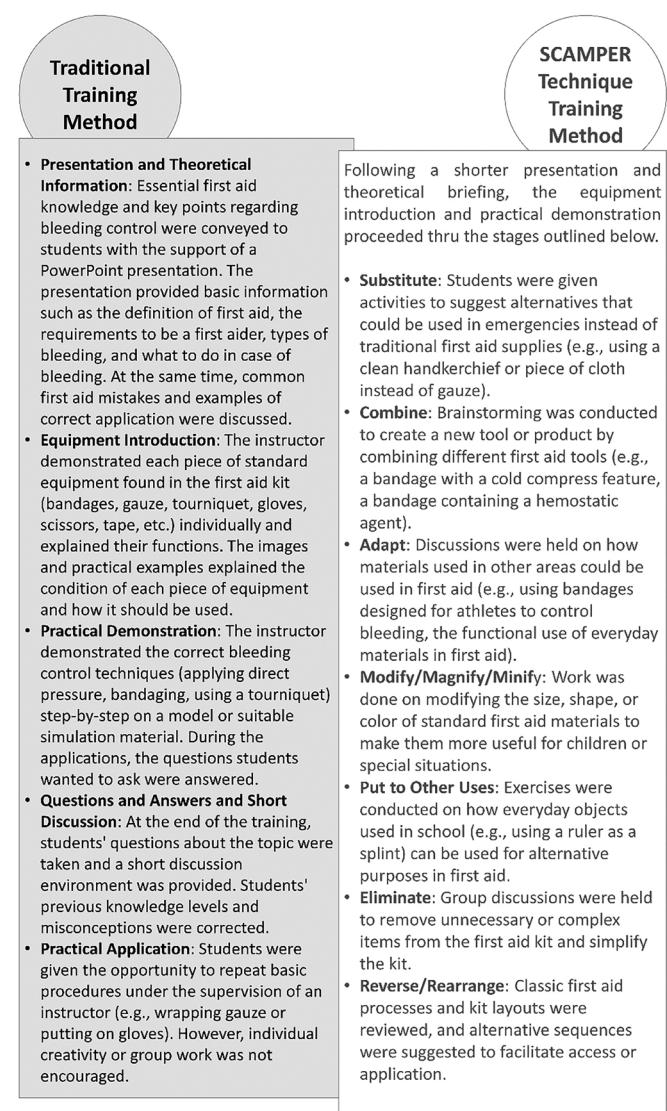
## Education and Evaluation

Before the training, participants were asked questions such as, "Would you like to be a first responder?" and "Would you be worried if you encountered a person with bleeding who needed first aid?", and "Would you consider designing first aid equipment that could be used for bleeding patients?" In addition to this, a 15-question survey was administered, including a socio-demographic data. The questionnaire was developed by the authors through a literature review and reviewed for content validity by three experts in the field. However, no further psychometric testing (e.g., construct validity, reliability analysis) was conducted. The expected answer in the survey was coded as "1" point, while other answers were coded as "0" points. First aid awareness training was provided to the first group in groups of 20-20-21 people, using the classic presentation technique (first aid awareness training through PowerPoint and projector, equipment introduction, and practical applications), lasting 45 minutes. The training included an introduction to first aid equipment that can be used with the safe first aid behavior model in case of bleeding. The second group was taught using the SCAMPER technique in groups of 20-20-21 people each (first aid awareness training content, equipment introduction, and practical applications via PowerPoint and projector) (Figure 1). In both methods, the trainers covered the same topics in the same amount of time and by the same instructor. After the training, the 15-question survey was administered again,

and the question "Would you like to receive more first aid training?" was also asked.

## Statistical Analysis

The data obtained from the study results were analyzed using the Statistical Packages for the Social Sciences (SPSS) 18.0 Windows software package (SPSS Inc., Chicago, IL, US). When presenting the data, descriptive analyzes provided frequency data as numbers and percentages, while continuous numerical data were presented as mean  $\pm$  standard deviation or median values. The normal distribution of the data was examined using the Shapiro-Wilk and Kolmogorov-Smirnov tests. The chi-square test



Changes in knowledge levels were tracked by administering the same questionnaires and information measurement tools before and after.

**Figure 1.** Implementation phases and illustrative examples of the traditional training method and the SCAMPER technique training method in first aid education

was used for comparing categorical data, the Wilcoxon test for comparing numerical data, and the Mann-Whitney U test. The Bonferroni correction was used to identify significant groups in the chi-square test with multiple eyes. Jamovi (version 2.6.26) software was used to determine effect sizes and CIs.

The level of statistical significance for all tests was considered to be  $p<0.05$ .

## Results

The participants had a median age of 14 years, with a minimum age of 10 and a maximum age of 16. Of the participants, 62 (50.8%) were in primary and middle school, whereas 60 (49.2%) were in high school. The gender distribution consisted of 56% males (n=68) and 44% females (n=54). Of the participants, 73.8% (n=90) reported that they had not previously received first aid training. In response to the question, "Do you have sufficient knowledge about intervening in bleeding?" 82% of participants (n=100) indicated a lack of knowledge. Table 1 presents the changes in first aid knowledge levels following training, concerns regarding the application of first aid, and considerations for the design of first aid equipment and innovative products. The analysis revealed statistically significant differences in responses to the question "Do you have knowledge about first aid products/equipment that can be used in bleeding patients?" before and after the training ( $p<0.001$ ,  $X^2=133.954$ ). The observed difference originated from the group that responded affirmatively, the

group that responded partially, and the group that responded negatively. The responses to the inquiry, "Would you consider designing first aid equipment for use on bleeding patients?" exhibited statistically significant differences pre- and post-training ( $p<0.001$ ,  $X^2=66.705$ ). A notable distinction emerged among the group that affirmed, the group that expressed uncertainty, and the group that denied.

The pre-training score of participants in the group trained with general first aid techniques was  $6.13\pm1.88$ , while the post-training score was determined to be  $10.07\pm1.67$ . It was found that the score for Safe Behavior and First Aid Awareness after the training was statistically significantly higher than before the training ( $p<0.001$ , effect size= 1.00). The data for the pre- and post-training comparison results are presented in Table 2.

It was found that the average of the scores participants received from the questionnaire administered before and after the training given using the SCAMPER technique was  $6.16\pm2.07$  before the training and  $10.89\pm1.69$  after the training. It was found that the score for Safe Behavior and First Aid Awareness after the training was statistically significantly higher than before the training ( $p<0.001$ , effect size= 1.00). The data for the pre- and post-training comparison results are presented in Table 3.

In the subgroup analyses for primary and secondary school students and high school students, the pre-training survey score was  $5.85\pm2.14$  for the primary and secondary school group, but the score for the high school group was  $6.21\pm2.01$ . The mean

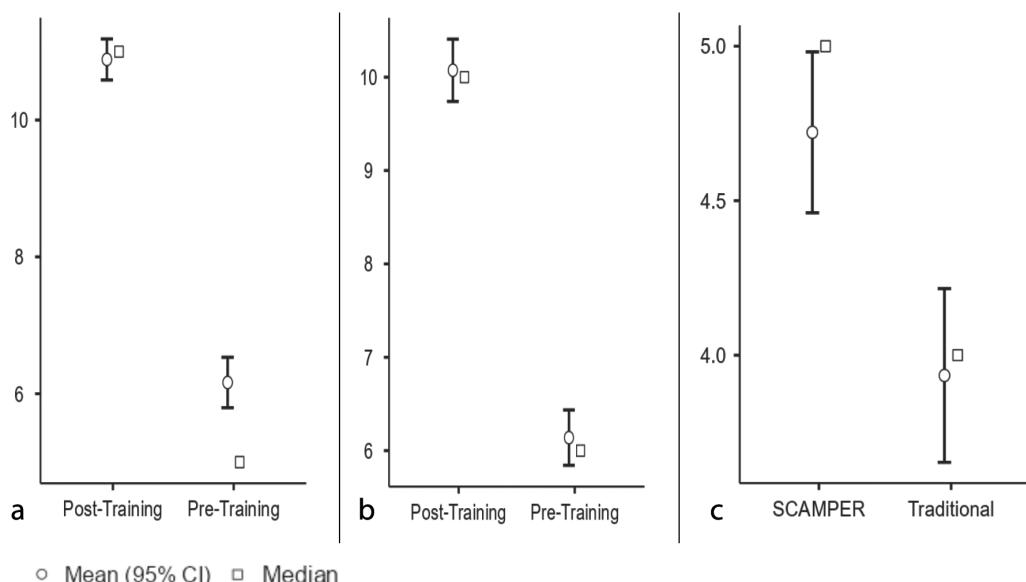
**Table 1. Changes in Safe-Behavioral Practices and First Aid Awareness in Bleeding Before and After Training with Traditional First Aid Techniques (n=61)**

	Pre-training		Pre-training		p	
	n	%	n	%		
Would you like to be a first responder?	Yes	60	49.2	78	63.9	<b>p=0.02</b> $X^2=5.404$
	No	62	50.8	44	36.1	
Do you know how to get a first aid certificate?	Yes	8	6.6	118	96.7	<b>p&lt;0.001</b> $X^2=198.504$
	No	114	93.4	4	3.3	
Do you know the conditions for being a first aider or who is called a first aider?	Yes	6	4.9	118	96.7	<b>p&lt;0.001</b> $X^2=205.695$
	No	116	95.1	4	3.3	
Would you be concerned if you encountered someone who was bleeding and needed first aid?	Never	12	9.8	18	14.8	$p=0.108$ $X^2=6.076$
	Rarely	46	37.7	56	45.9	
	Often	50	41.0	42	34.4	
	Always	14	11.5	6	4.9	
Do you have any information about first aid products/equipment that can be used for bleeding patients?	Yes	16	13.0	106	86.9	<b>p&lt;0.001</b> $X^2=133.954$
	Partially	72	59.0	14	11.5	
	No	34	27.9	2	1.6	
Would you consider designing first aid equipment that could be used on bleeding patients?	Yes	16	13.1	78	63.9	<b>p&lt;0.001</b> $X^2=66.705$
	No idea	38	31.2	14	11.5	
	No	68	55.7	30	24.6	

post-training survey score rose to  $9.72 \pm 2.98$  for primary and secondary school pupils trained using the traditional technique, and to  $10.88 \pm 1.68$  for those trained with the SCAMPER technique. The average post-training survey score for high school students rose to  $10.55 \pm 2.98$  for those trained using the traditional method, and to  $10.88 \pm 1.69$  for those trained with the SCAMPER technique. No statistically significant difference was observed among the post-test scores of the primary, secondary, and high school groups following training using the SCAMPER approach ( $p=0.44$ ,  $U=1709.0$ ).

After the training, it was determined that 62.3% ( $n=76$ ) of the participants answered "Yes" to the question "Would you like to take more first aid lessons or training?" A statistically significant

difference was found between the idea of designing equipment and the increased demand for first aid training. Those considering designing new first aid equipment had a significantly higher demand for first aid lessons compared to other groups. Training provided using the SCAMPER technique (mean=  $4.72 \pm 1.47$ ) was statistically significantly associated with a greater inclination toward new equipment design compared to training provided using the traditional technique (mean=  $3.93 \pm 1.58$ ) [ $p<0.001$ ,  $U=3178$ , mean difference= 1, 95% confidence interval (CI)= 1.00-1.50, effect size= 0.552]. Descriptive plots showing the changes in pre- and post-training survey scores with the training technique and the comparison of the two training techniques on these changes are presented in Figure 2.



**Figure 2.** Descriptive plots. (a) Pre-test and post-test comparison of the SCAMPER technique. (b) Pre-test and post-test comparison of the traditional technique. (c) Comparison of the impact of SCAMPER and Traditional techniques on the idea of developing new first aid equipment, CI: Confidence interval

**Table 2. Change in Safe Behaviors and First Aid Awareness in Bleeding Before and After Training with Traditional First Aid Techniques (n=61)**

	Questionnaire score			p	Mean difference	95% CI	Effect size
	Mean $\pm$ SD	Median	Q <sup>1</sup> -Q <sup>3</sup>				
Pre-training	$6.13 \pm 1.88$	5	5-7	$p<0.001$			
Post-training	$10.07 \pm 1.67$	10	8-11	$W=7381$	4.00	3.50-4.50	1.00

CI: Confident interval, SD: Standard deviation, Q: Quartile, W: Wilcoxon test, SE difference= 0.143

**Table 3. Pre- and Post-Training Changes in Safe Behaviors and First Aid Awareness in Bleeding Using the SCAMPER Technique (n=61)**

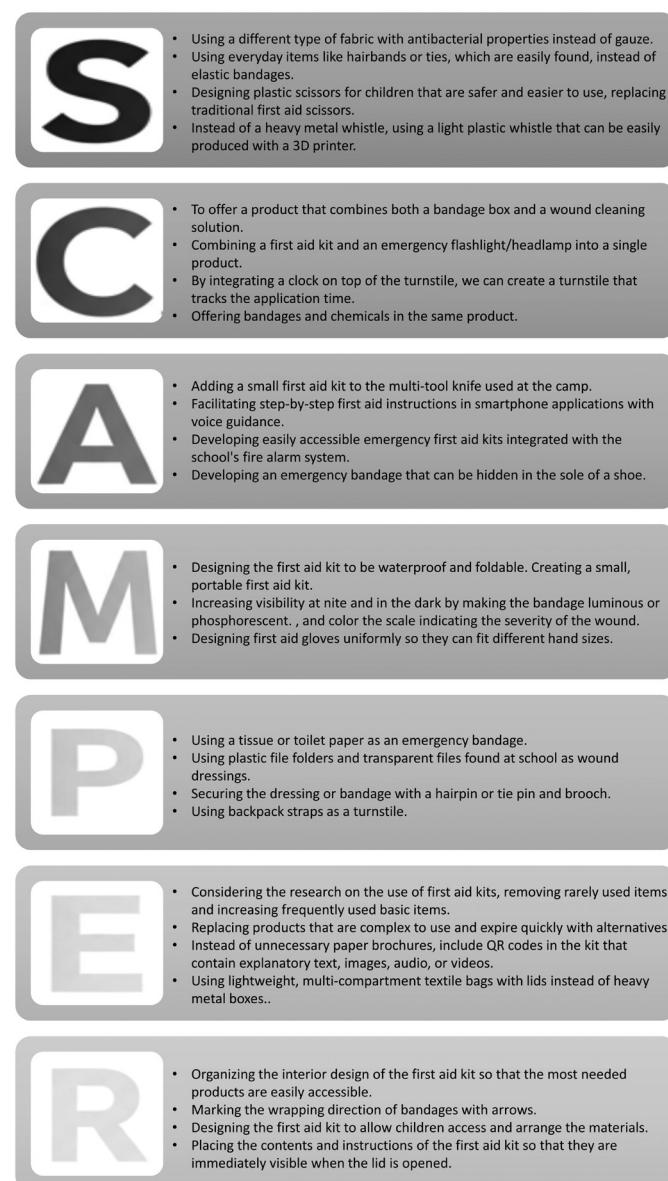
	Questionnaire score			p	Mean difference	95% CI	Effect size
	Mean $\pm$ SD	Median	Q <sup>1</sup> -Q <sup>3</sup>				
Pre-training	$6.16 \pm 2.07$	5	5-8	$p<0.001$			
Post-training	$10.89 \pm 1.69$	11	9-12	$W=7503$	4.50	4.50-5.00	1.00

CI: Confident interval, SD: Standard deviation, Q: Quartile, W: Wilcoxon test, SE difference= 0.133

Figure 3 present's several participants' concepts on the development and innovation of first aid products, generated throughout the training utilising the SCAMPER technique.

## Discussion

According to the findings of this study, the training provided using traditional and SCAMPER techniques had a positive impact on increasing students' first aid awareness and ensuring safe behavior in bleeding situations. In the development of the idea of designing new equipment, the SCAMPER technique was found to be more effective.



**Figure 3.** Summary of ideas generated by participants during training using the SCAMPER technique, organized by stage

Studies on first aid knowledge levels emphasize the importance of starting first aid training at the primary school level, and even at the kindergarten level. It is reported that starting education at an early age also increases the expected benefits of first aid training repeated in later years (20,21). According to the results obtained in this study, 73.8% of primary-middle school and high school students stated that they had not received first aid training before, and 82.0% answered "no" to the question "Do you have sufficient knowledge about intervening in bleeding?" This situation not only highlights the lack of first aid training at an early age but also reveals the need for efforts in this area. Studies conducted in other countries regarding the pre-graduation first aid knowledge level also report being below the desired level, highlighting the need to work on this issue and provide training on first aid practices during education. It is known that in some countries, these trainings are offered with certification (22-24). Regarding first aid, there is an age limit in Türkiye. It is conceivable that similar practices may exist in other countries for legal reasons. Encouraging students to develop a positive attitude toward first aid and practice may be more important than the certificate program. However, a registration and tracking system can be established to ensure that all students receive similar training in this regard. It is also a fact that these awareness, understanding, and knowledge-raising practices for students will not provide the desired benefit to society without the participation of teachers and family support.

In this study, it was found that the level of knowledge about first aid and the conditions for being a first aider significantly increased after the training provided. One of the most striking points is the positive change in the desire to be a first responder. This output not only demonstrates that first aid training should be part of community-based awareness-raising efforts, but also supports studies (2,4,6,20,21,25) that emphasize the importance of providing first aid training at an early age. There is also a continued need for developments in the most accurate first aid training methods for this age group. Because general first aid training and community-based practices are mostly single-session, non-repetitive training. However, research is increasing that suggests user experiences and interaction-focused training methods will be more beneficial for learners in first aid training. Virtual reality, game-based or mobile applications, and many different methods focused on personalization and gamification are still being tested and positive results are being reported (25-27). In this study, an intensive method was used in terms of interaction and interactive communication, and findings were reached that support these results. However, the fact that there was no significant change in the responses to the question of whether they would hesitate to intervene in a bleeding patient after the training indicates that practitioners still have some

hesitation about taking action. In many publications, it is seen that this is a general problem affecting other age groups as well (28-30). Although it is thought that this problem can be somewhat reduced by increasing practical training, and the results indicate the need for new studies on the causes of this situation.

Before training, 13% of students stated they had sufficient knowledge of the equipment that could be used on a bleeding patient and most people thought they didn't have enough knowledge on this topic. This result is also related to the topic discussed in the first paragraph, as it could be an indicator of the lack of early first aid training. Additionally, this could be due to insufficient introduction of the kits during first aid training, or an overemphasis on the "without the need for any materials" aspect of first aid's definition. This is actually a situation that highlights the distinction between first aid and emergency care. However, using a kit or equipment for first aid is beneficial in many ways and is encouraged in many countries. This point should be carefully emphasized during training (10,31,32). It was observed that the group who said they had knowledge about the equipment that could be used on a bleeding patient after the training was statistically significantly larger.

The evaluation of response scores from the 15-question survey presented to participants revealed that both the standard method and the SCAMPER technique resulted in a statistically significant enhancement in students' awareness of first aid and their attitudes towards the safe behaviour model for wounds. This is significant as it demonstrates that the SCAMPER technique is equally effective as traditional methods in first aid awareness training. This serves as evidence that the SCAMPER technique is applicable in first aid training. The absence of a statistically significant difference in the post-training test survey results between the elementary and secondary school age groups and the high school age group indicates that the SCAMPER technique exhibits comparable effectiveness throughout these subgroups.

According to the research results, there was also a significant increase in the participants' thinking about designing new equipment compared to before the training. Regarding increasing students' awareness of designing first aid equipment, the SCAMPER technique was more effective than the traditional method. While research on new equipment in the field of first aid is ongoing, children's first aid practices will likely require more equipment usage than adults. For example, the basic first aid intervention for bleeding is direct pressure (33). It could be difficult for him to apply and maintain this pressure during the period when there is no other savior beside the children, or until the request for help is met. This equipment differentiation will undoubtedly be even more pronounced in critical applications such as basic life support. The accessibility

of first aid kits, the clarity and applicability of instructions during use, are also important issues (34,35). While recommendations for the composition of materials used for children in first aid kits are still ongoing (10), designing equipment for a child first responder might be premature at this point and this could be the subject of another research project. However, first aid training will undoubtedly be very important for raising awareness of accidents and for developing safe behaviors in emergency situations. Also, the idea of designing equipment is undoubtedly an idea that will be used in the future. Therefore, as in this study, using the SCAMPER technique in first aid training for students who could be in the target group in terms of equipment design, and who are considering fields such as engineering or medical engineering, could be beneficial. In addition, using the SCAMPER technique in first aid training can have a positive impact on first aid kit innovation, as it can generate ideas for using everyday materials as first aid tools in other groups as well.

When examining publications that emphasize the importance of disseminating first aid knowledge within society and reiterate this need, it is evident that research on how to approach this issue is still ongoing. It would not be the correct approach to consider the educational method's subject matter, instructor, environment, and materials independently of the target group. This situation leads us to believe that the expectation of a single and most correct educational method does not reflect reality. The correct training method will also differ depending on the variables. Current discussions and research focus on the impact of technology use and the increasing online methods it will create. In addition, the lack of structured tests that can fully measure the results of first aid training poses a significant problem for researchers in determining the correct training methods for first aid (16,26). The focus of this study is that different first aid methods can yield different results in designing innovative first aid products. In this regard, the SCAMPER technique stands out as an attention-grabbing educational method. Publications related to the development of first aid equipment and kits are not common in the literature. This could be related to the economic and commercial aspects of this issue. The importance of health interventions performed until emergency medical assistance arrives has been highlighted many times. Although these applications focus more on basic life support, there is a need to attract researchers' interest in the topics of first aid and equipment. It is extremely important for school children to acquire the concept of first aid with this awareness for their future perspective. The fact that participants in the study expressed a greater demand for first aid training also indicates that there is a willing party for this, suggesting that this opportunity should not be missed. However, instilling this idea should not be limited to school age. In addition to the idea of facilitating access to

equipment for rescuers from the public, necessary steps should be taken to make basic first aid tools ergonomic and easy to use.

### **Study Limitations**

This study was conducted with a relatively small number of students. Although studies with similar or even smaller sample sizes can be found in the literature, the fact that the study was conducted at only one center requires careful interpretation of the results in terms of generalizability. The study focused on the use of the SCAMPER technique in first aid training. Additionally, since the center where the study was conducted is a school that accepts talented students selected from many different schools, and the class and age distribution were not balanced, more detailed analyzes could not be performed for subgroups (especially by age level). Other reasons for the wide age range of participating students were that groups did not have to come to the center (attendance was optional) and that students came to the center on different days and at different times. This limitation was partially addressed through subgroup analysis, which showed that students in primary, middle, and high school benefited similarly from the SCAMPER technique. In addition, heterogeneity and limited sample size have led to limitations in the interpretation of the findings. However, the pre-test found generally similar levels of first aid knowledge for both groups. In some students, a higher level of awareness was observed, influenced by their families, personal interests, and education. To minimize comment errors, factors such as outliers during sampling and the presence of a healthcare worker in the family were considered exclusion criteria. We believe this can be considered a factor in reducing heterogeneity and contributing to the accurate interpretation of findings.

Another important limitation is that the 15-item questionnaire used in this study was developed by the authors. Although reviewed by field experts, no formal validity or reliability (psychometric) analysis was conducted on the survey. Therefore, the psychometric properties of the survey instrument have not been definitively established, which could affect the generalizability and robustness of the findings. In future studies, it is recommended to use measurement tools with proven validity and reliability and to conduct psychometric evaluations.

### **Conclusion**

This study emphasizes the need of early first aid training with the SCAMPER technique for innovative equipment design and creative thinking. This age group has a poor level of first aid knowledge and awareness, and there is a need to improve this condition in order to strengthen the effectiveness of the emergency response system in their future lives as well as promote public health

awareness and levels. However, the readiness of participating students to receive more first aid classes suggests that this group is receptive to a prospective early first aid training campaign, waiting for a chance, and eager to fill gaps in first aid knowledge. In this study, it was discovered that the SCAMPER technique is as effective as the traditional way in boosting first aid awareness and knowledge levels, as well as in developing a safe behavior model in emergency scenarios. This shows that incorporating this strategy into first aid training is appropriate. Furthermore, the SCAMPER technique, which is well-known for its benefits in brainstorming and interactive learning, can be applied in first aid training and equipment introduction to increase awareness of first aid kits. Furthermore, encouraging students to design first aid equipment and create creative goods in this field can emphasize the benefits of this training method, particularly in certain groups.

### **Ethics**

**Ethics Committee Approval:** Permission was obtained from the KTO Karatay University Ethics Committee for Non-Pharmaceutical and Medical Device Research (decision number 2024/015, date: 31.10.2024) for the research.

**Informed Consent:** Students' parents were informed with the help of the school administration and consent was obtained from the families.

### **Footnotes**

### **Authorship Contributions**

Concept: F.C.T., B.Y., Design: F.C.T., B.Y., Data Collection or Processing: F.C.T., B.Y., Analysis or Interpretation: F.C.T., Literature Search: F.C.T., Writing: F.C.T., B.Y.

**Conflict of Interest:** No conflict of interest was declared by the authors.

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