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Investigation of physical education teachers' first aid response with vignette technique

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ABSTRACT

In the study, the aim is to determine the effects of the application of first aid training lessons on sports injuries. The group of the study was determined by the simple random sampling method included in the random sampling technique and consists of 20 physical education teachers who are still on duty in the 2020-2021 academic year. All of the physical education teachers are experienced teachers who have taken first aid lessons in undergraduate education. Vignette technique, one of the qualitative research methods, was used in the research. With the technique in question, teachers were asked to express their opinions following the first aid scenarios. The interviews were made over the phone and recorded with the consent of the participants. Content analysis was used in the study, and the validity and reliability of the data were provided. The opinions received from the participants were examined and themes were created by the content analysis and given with direct quotations. The opinions of the participants were interpreted by comparing with the findings of the experts in the field in accordance with the vignette technique. According to the results of the study, it was determined that physical education teachers gave similar answers to expert opinions about all scenarios. However, the accuracy rates of these answers vary with the scenarios. Therefore, it was determined that teachers' first aid knowledge varies, in some cases, they behave closely to expert opinions, and in some others, they move away from expert opinions. It has been observed that this situation resembles similar studies in the literature. When the mentioned results are compared with the literature; it is recommended that first aid training be sustainable and implementation techniques are continuously improved.

Keywords: Physical education teacher, first aid, vignette technique, education.

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INTRODUCTION

First aid training

The concept of "first aid" is expressed by educational institutions as behaviour that should be demonstrated in emergencies based on scientific data and clinical criteria. These behaviours include proven knowledge and skills and life-saving techniques and have a very important place in the concept of education (Holding et al., 2017; Pellegrino et al., 2017). The goals that are at the centre of first aid techniques can be counted as; protecting life, preventing adverse situations of injuries, and promoting recovery (O'Toole-Baker et al., 2017). It is seen inevitable for people to encounter accidents and diseases in all kinds of environments and at various periods of life in the world. Examples of such accidents are various home accidents, accidents due to lack of body coordination that can be seen in elderly individuals, or low awareness of the danger that may occur due to the developmental and behavioural characteristics of children. Such examples can be seen as one of the most important reasons for the emergence of the concept of first aid. However, common diseases and people in need of care may also need to benefit from these services (Arli and Yildirim, 2017). Taking a look at the factors that affect the accidents and injuries in question, we can list the schools or playgrounds that do not take the safety precautions,

especially for children. Of course, situations such as dealing with mobile phones in an uncontrolled way can be considered as factors that can distract children. However, appealing parts of these factors can be used in first aid training planning and can be included in training programs (Ekaprasetia et al., 2018). For example, the smartphones they use can be included in their first aid training. According to studies (Bánfai et al., 2018; Ekaprasetia, et al., 2018; Holding et al., 2017) that emphasize that first aid training increases the chance of survival in events of injury or illness, the frequency and quality of these trainings vary worldwide. However, it is thought that these trainings, which are recommended to be started at an early age, especially in schools, may bring more beneficial results in the future. Because this educational process which starts with children can provide motivation gain by also providing knowledge and skill transfer (Bánfai et al., 2018). Today, we can see that first aid trainers work on different teaching systems by using technology. Considering that people can access various courses more easily with online learning methods, the scope of such pieces of training can be expanded and simplified by both face-to-face training and online methods (Oliver et al., 2019).

The fact that first aid training starts at an early age and that serious efforts are made on this issue is due to the fact that these trainings have a life-saving role in emergencies (Bakke et al., 2017; Holding et al., 2017). Especially in the event of an accident or emergency, the moment of the incident and the time spent during the hospital intervention is extremely critical for the patient. For this reason, the behaviour of the people at the scene is extremely vital because many fatal situations that may occur can be prevented with early responses before hospital assistance (Holding et al., 2017). Getting first aid training provides an important advantage in such adverse situations compared to people who have not received training. Because attaining such skills at an early age increases the frequency of practice and the level of experience, and as a result of early response, may minimize the deaths and disabilities that may occur (Bakke et al., 2017). Being aware of such positive results is important for educational institutions to show the necessary importance to first aid lessons and to develop a quality application. However, giving training only to certain people will reduce the effectiveness of this issue. For this reason, it may be considered necessary to make a wide education plan on first aid (Bakke et al., 2016). One of the most important advantages of wide education planning on first aid is that more people learn the technique and support each other. Especially, that people from different disciplines work together as a team can also provide a multiple and effective response opportunity in case of a probable accident or injury (O'Toole-Baker et al., 2017). Training programs developed on first aid not only provide results such as protecting public health or being successful in early response but also play a role in improving the fragility policies of countries. The concept of fragility mentioned here can be thought of as; civilians, responders, limited medical supplies, or access to healthcare facilities (Gordon et al., 2019). Local governments, while working on fragility policies, focus on such risk factors and related management strategies. Risk factors, on the other hand, are an organizational approach and concern issues related to education. Having first aid knowledge about injuries or disabilities, especially for teachers, facilitates the management of such risk factors (Eze et al., 2015; Li et al., 2012). Therefore, it is possible to say that first aid training has not only health-related consequences but also social and economic ones.

Relationship between first aid training and sports injuries

The so-called sports injuries include physical injuries that usually occur during physical activity, whether amateur or professional. These types of injuries are mostly repeated mechanical stresses and impacts during training or competitions, as well as sprains, crushes, and similar situations due to high physiological training and competition load. This type of injury can be repeated many times, additionally, lead to more severe situations where the person comes to the point of quitting sports (Jangra, 2019). Sports injuries can lead the athlete to negative situations such as loss of time, reluctance to activity, enervation, and continuous medical support. This kind of loss of time is directly proportional to the frequency and severity of the injuries experienced by the athlete. Therefore, in order to define sports injuries more accurately, it may be necessary to follow the mentioned criteria (Patel et al., 2017).

When we look at the frequency of sports injuries, they are generally; anterior cruciate ligament damage and meniscus problems in the knee, edema related to the shoulder joint and attached muscles, ankle sprain, and elbow damage (Carbone and Rodeo, 2017). These types of problems are mostly caused by the excessive use and capacity of those joints. As a result of injury, problems such as pain, excessive sensitivity, and loss of function in the relevant joint may arise due to tearing or different types of damage (Maffulli et al., 2013). Most of the mentioned injuries are due to shoulder joint injuries. The excessive use of these joints which play an active role in many branches has led to the spread of these injuries over time (Enger et al., 2019).

Sports injuries can negatively affect people's participation in physical activity. For sports organizations that advise people to be constantly active in daily life and lead a healthy life, such situations will have a negative impact because participation in physical activity is a kind of public health protection policy for local authorities (Perera et al., 2019). One of the most important

conditions in preventing sports injuries is to create a safe physical activity environment and to increase participation. Safe physical activity conditions require strategies such as determining injury mechanisms for preventing injuries, establishing preventive measures, and evaluating and implementing these measures (Gamage et al., 2019; Impellizzeri et al., 2020). These strategies require experts in the field to collaborate using their expertise to achieve the common goal of preventing injuries. In this case, the experts needed may need to be a trainer, manager, educator, or a similar person (Impellizzeri et al., 2020).

First aid training can be seen as an important force for the forming and training of the needed experts. Even in some impairment and injury situations occurring in schools, the willingness of teachers who receive first aid training to act immediately shows the importance of this issue (Al-Kubaisy et al., 2019). Not only in schools but even in normal living conditions, it may be necessary to give first aid to someone suddenly, and at this point, people who have had this training can act in a practical way and take the necessary life-saving measures before medical assistance arrives, which can significantly change the living conditions of the ones in need of help (Amro and Qtait, 2017; Das et al., 2020). These examples show that first aid training should be shown sensitivity regardless of the conditions, whether inside or outside of sports. In particular, the policies of a large sports organization such as the International Olympic Committee (IOC) on the protection of athletes, prevention of injuries, and elimination of physical activity deprivation, regardless of professional or amateur conditions, can give an idea to the trainers about the importance of these trainings (Mountjoy et al., 2018). It is known that similar policies are also taken by local authorities in many countries, and disability preventive measures and healthy living goals are set in this direction. First aid training can help the relapsing process of injuries by increasing immediate reaction to sports accidents. This situation supports life by making a serious difference in emergency medical care, especially for issues related to choking, breathing, or circulation. For this reason, whether you are a professional athlete or not, first aid trainings in schools can help prevent disabilities and serious injuries by accelerating sudden response in different physical activities (Das et al., 2020). Of course, although the concept of first aid should not be seen as limited to early response, the features of sports equipment such as mouthguards, helmets, and gloves should be well known. This will increase the quality and applicability of training (Trabelsi et al., 2019).

Aim of the research

In the study, it was aimed to determine the effects of the application of first aid training courses on sports injuries. Vignette technique, one of the qualitative research methods, was used in the research. The technique in question is a short description of scenarios that aim to identify values, perceptions, impressions, and responses that will reveal accepted social norms (Azman and Mahadhir, 2017). These scenarios consist of stimuli that selectively depict the elements of reality to which participants are invited to respond. What is important here is to enable the discovery of perceptions, attitudes, and behaviours through scenarios (Given, 2008: 918).

METHODOLOGY

Model of the research

The qualitative method, one of the scientific research techniques, was used in the research. Qualitative research: Instead of re-analysing previously used information, it is seen as a research method that provides an in-depth study area, which allows to rediscover an existing problem, focus on the different perspectives of the participants, and transfers existing facts as they are without changing them (Creswell, 2013: 46-61; Patton, 2002: 690; Popay et al., 1998).

The vignette technique, one of the qualitative research methods, was used in the study. The vignette technique is defined as "short stories about hypothetical characters in which the interviewee is invited to respond to the situation under investigation in certain circumstances" (Finch, 1987). Hill (1997) explained this technique as written or illustrated short stories aimed at revealing possible scenarios and answers. Vignettes can also act as a stimulus to generate a reaction, discussion, or idea from the participants (Finch, 1987). Concrete examples of people and behaviours from which the participants can offer comments or ideas (Hazel, 1995) can easily be seen in the vignette technique. Researchers have to consider the nature of the research subject, the participants, the level and timing of interest during vignette development (Hughes and Huby, 2004). Vignette scenarios should also be created convincingly and realistically following the subject under investigation (Finch, 1987; Hughes and Huby, 2004). Schoenberg and Ravdal (2000) stated that with the vignette technique, a consistent, impersonal frame of reference that allows participants to think beyond their personal situation would be provided. With this technique, individuals who can refer to important points in perception, belief, and attitude studies have the freedom to express themselves easily with stories about the situations and structures under investigation (Hughes, 1998: 381-400). Hughes and Huby (2004) saw the uncertainty at the end of the story in the vignette scenarios as a good opportunity to explore the reasons behind the respondent's response. Accordingly, instead of trying to provide all the details in a scenario, if participants feel that a scenario lacks detail, they are

asked to do their best by highlighting the assumptions that led them to that conclusion. In this way, the design in the vignette was used as an opportunity to further explore both the lack of detail and the perceptions and reactions of the participants.

Another important feature of the vignette technique is the development of the story which is to be created and how it is structured. In qualitative research, it can be said that the vignette technique is superior to other techniques as it is applied to a smaller sample group and enables a more detailed and in-depth examination. Vignette technique in the literature has been used in many spheres such as developmental psychology, business, school psychology, marketing, social and experimental psychology, sociology, anthropology, psychology, and educational research (Schoenberg and Ravdal, 2000; Wallander, 2009; Jones and Aronson, 1973; Turhan et al., 2014; Howie et al., 2012; Baudson and Preckel, 2013; Herskovits, 1950; Yaraş, 2019; Macpherson and Veatch, 2010; Bozkurt and Sözer, 2018; McCarron and Stewart, 2011).

Study group

The study group of the study was determined by the simple random sampling method included in the random sampling and consists of 20 physical education teachers who are still on duty in the 2020-2021 academic year. Simple random sampling is a basic sampling type that is often used as a sampling technique for a sampling method itself or as a building block for more complex sampling methods (Meng, 2013). Simple random sampling is seen as the most common and simplest way of selecting a sample, where every unit in the universe has an equal chance (Singh, 2003: 71). Demographic information regarding the research sample is given in Table 1.

Data collection tool and data collection

In order to collect data in the study, firstly a literature review was carried out on first aid, sports accidents experienced by physical education teachers were searched and eight short stories were created in line with this information. To ensure the scope and validity in the process of creating vignettes, two field experts who have previously conducted similar research on the subject were consulted. The prepared vignettes were firstly applied to three physical education teachers as the pilot step, and as a result of these applications, after corrections were made by considering the opinions of the participants and experts, it was finalized. In the data collection tool of the research, there are three questions including demographic information and eight scenarios prepared in accordance with the purpose of the research.

Due to the restrictions of the coronavirus pandemic, the data were collected via phone calls in order not to put physical education teachers in danger. The phone calls made were recorded upon the consent of the participants, and then the audio recordings were transferred to digital media. Each participant was interviewed for approximately 20 to 30 min. The prepared documents were sent to the participants again, their approvals were obtained and then analysed.

Data analysis

The data obtained from the research were analysed and evaluated using content analysis, which is widely used in the qualitative research method. By analysing the answers given by physical education teachers, the researchers formed themes and included direct quotations by classifying these themes under certain categories. While analysing the study, two experts in first aid were asked to explain in detail what the first aid steps were, until the health teams arrived, to determine and confirm how accurate the first aid responses of physical education teachers were. While analysing, the opinions of the experts and the first aid application of the participant were evaluated together.

Validity and reliability

In order to ensure the validity and reliability of the research; internal and external reliability (consistency and verifiability), internal and external validity (credibility and transferability) must be ensured. Transferability (external validity) refers to the applicability of the findings in similar settings (Lincoln and Guba, 1985: 289-331). For this reason, detailed description strategy was used while analysing. In order to provide a detailed description strategy, direct quotations were given regarding the opinions of physical education teachers participating in the study. One of the basic criteria handled by researchers is internal validity that they try to make their work measure or test what is actually intended (Lincoln and Guba, 1985: 289-331). In the study, all the details of how conceptual categories were reached to ensure internal validity (credibility) were given. While analysing the opinions of physical education teachers about the research, groupings were made according to the similarities of the expressions used. While analysing each participant, the participants were given a code (P1, P2, P3…).

For verifiability (external reliability), the raw data obtained from the research are kept by the researchers so that they can be examined later. Consistency (internal reliability) is related to the consistency and repeatability of the obtained findings (Lincoln and Guba, 1985: 289-331). Consistency in the research carried out, giving

Table 1. Features of the study group.

Variables		z	%
Sex	Female	8	40
	Male	12	60
Duration of Service	1-5 years	8	40
	6-10 years	3	15
	11- 15 years	3	15
	16 years and above	6	30
Having taken a first aid training	Yes	5	25
	No	15	75

details such as the research environment and the duration of the research, means that similar results are achieved when repeated under similar conditions. In addition, expert opinions were also consulted to ensure the consistency of the research. In order to determine whether the answers obtained from the physical education teachers who participated in the study would represent the theme on which they were placed, they were asked to be placed in the appropriate themes so that no answer was left out. Later, comparisons were made between the matches made by researchers and experts. As a result of these comparisons, the number of agreement and disagreement of experts and researchers per category was determined and calculations were made according to the reliability formula proposed by Miles and Huberman (1994). Considering that the reliability can be achieved when the agreement between researchers and experts is 70% and above, a consensus of 91% was achieved in the research-specific reliability. It is seen that this agreement rate is sufficient for the reliability of the study.

RESULTS

In this part of the research, the findings obtained to determine the opinions of physical education teachers in various first aid accidents are presented under eight headings. In the study, it was examined how the participants intervened in the case studies until the medical teams arrived after the 112-emergency service was called.

Findings related to vignette 1

The first vignette related to first aid is created as: "*Physical education teacher Aysel gave the children permission for the free activity they wanted in the remaining time after teaching her lesson. Some male students decided to play football and started playing football on the concrete field. During the game, Kazım, who thinks he is good at football and shows this at every opportunity, rose to the air ball at the same time with his friend and a collision occurred between the two. With the effect of this collision, Kazım could not control himself and fell on his head. Physical education teacher Aysel ran to the student named Kazım. Kazım is unconscious and has trouble breathing."* To the physical education teachers in the study group, the question "***What would you do if you were Aysel teacher?***" was asked and the opinions of the participants are given in Table 2 in line with the statements given.

Physical education teachers participating in the study stated different opinions about vignette 1 while performing the first response, such as checking breathing, checking the tongue, and tilting the head. According to the expert opinion on this subject, first of all, the consciousness of the person should be checked, and s/he should be kept in a supine position (neutral position). It should not be allowed to rotate or bend, the places that come into contact should be supported with something soft, breath control should be provided, and the medical team should be expected to come. Below are some quotations of the participants' views on vignette 1:

- *"At first, in such traumas, head collisions, the kind of events we call the tongue running into the throat and swallowing the tongue happen a lot. At first, I'd check if his tongue got into his throat and whether he swallowed it. In the meantime, of course, since we cannot be 100% helpful in such traumas, I'd make someone call an ambulance or call it myself. Meanwhile, I'd try to tell him to stay with us to restore his consciousness, that is, I try to tell him to keep his consciousness open. Yes, so as not to be silent. I've also read somewhere, I do not know exactly whether it is true, but I'd keep his eyes open, so I'd try to ensure that he is not buried in darkness. I'd wait for the emergency service to arrive " P1*
- *"I would not move the student; I would call 112." P19*
- *"I would put him in a position enabling him to breathe comfortably, put on a neck collar if possible, and call an*

Table 2. Themes resulting from vignette 1 analysis.

Teacher	f
Check breathing	8
Check the tongue	7
Tilt the head	5
Make him speak	4
Do nothing	4
Check the consciousness	3
Apply ABC method	2
Make him keep his eyes open	1
Check the pulse	1
Give cardiac massage if no pulse	1
Intervention to open his mouth if closed	1
Cushion if there is bleeding in the head	1
Putting into shock position	1
Putting into coma position	1
Put on a neck collar	1

ambulance." P15
- "I would dismiss the students and lay Kazım in coma position right there since the ground on which he fell was flat. Then, I would inform 112 Emergency. Until the teams arrive, I would do breathe control and consciousness control." P13
- "Kazım has a risk of death. First of all, I would call 112 Ambulance. Then, if there are clothes that will prevent Kazım from breathing more easily, I'd remove them. I'd tell the crowd forming around to clear out. Of course, in the meantime, I would check it considering the possibility of Kazım getting his tongue in his throat. Then, I would put him in shock position. I would also like the school administration to be informed." P9

When the quotations and expert opinions of the participants were evaluated, it was determined that only 25 to 30% of the teachers' responses were correct.

Findings related to vignette 2

The second vignette related to first aid is created as: *"Physical education teacher Halil is on guard at the schoolyard. During the watch, he wanders around the yard to keep students calm. while the student was talking to one of the students, a student who quickly exited the school door lost his balance and fell down the stairs. Physical education teacher Halil who rushed to him saw that the student had an abnormality in his right arm and that its shape was deformed"*. To the physical education teachers in the study group, the question "***What would you do if you were Halil teacher?***" was asked and the opinions of the participants in line with the statements given are shown in Table 3.

Physical education teachers participating in the study

Table 3. Themes resulting from Vignette 2 analysis.

Teacher	f
Fixing the arm	13
Putting on air splint	5
Make him wait without doing anything	3
Ensuring the safety	3
Psychological support	3
Applying cold	2
Joint dislocation	1
Fracture	1
Do medical dressing	1
Do tourniquet	1
Cover with a clean cloth if it is an open wound	1
Check the pulse	1

stated different opinions about the vignette 2 during the first response, such as fixing the arm, splinting, and ensuring safety. According to the expert opinion on this subject, one has to check the pulse, check the skin colour, and never move the person. Without changing the position of the arm, it should be examined with a hard object like cardboard-wood in a way that there is a lower and an upper joint. The wound should be covered with a clean cloth, the detected area should be taken to rest in a way that the discovered area stays above, and the person should be kept warm and the health teams should be waited for. Below are some quotations from the participants' views on vignette 2:

- "I'd call 112. I would ask for medical help. If there is an open fracture; I'd cover the wound with a clean cloth before analysis. I'd determine the fractured area with the help of a hard object like cardboard or wood in a way that it covers one lower and one upper joint. I'd leave the detected area to rest by holding it up. I frequently check the pulse and the colour of the skin in the fractured area. I'd try to move the fractured area." P16
- "First of all, I'd calm the student down. Then, I would have him sit in a suitable place to relax. I would inform the school administration and family in case of a broken arm. In the meantime, I'd apply cold to the arm." P9
- "I would tell the security to call the ambulance. I'd check if there is a problem elsewhere. If there is no problem in the head or feet, I would take the student to a safe place without moving his arm, or safely wait for the ambulance to arrive where he is..." P17
- "First of all, I would make sure he doesn't move his arm. Of course, since I think of the situation of the arm completely hypothetically, if there is a serious problem in the arm, it is necessary to inform the medical teams before moving it; I would call an emergency ambulance. Apart from that, I'd mostly try to provide psychological support to calm the child down if there is no other problem. Because I do not have enough knowledge as it

is now a matter of medical response, I'd try to keep the child calm there and ensure that the medical teams arrive as soon as possible." P4
- "If I had a piece of cloth with me, I would do a tourniquet to the arm on which he fell and wait until first aid arrives." P8

When the quotations and expert opinions of the participants were evaluated, it was determined that only 25 to 30% of the teachers' responses were correct.

Findings related to vignette 3

The third vignette related to first aid is created as; *"Mr. Seçkin, the physical education teacher, told the students to run a few laps to warm up before starting the lesson. After the students got in line and started running, student Merve suddenly fell to the ground while running the second round. Merve suddenly yelled, her body stiffened, her jaw locked, and foam started coming out of her mouth. Seçkin teacher ran to Merve".* To the physical education teachers in the study group, the question "***What would you do if you were Seçkin teacher?***" was asked and the opinions of the participants in line with the statements given are shown in Table 4.

The physical education teachers participating in the research, while intervening with vignette 3, expressed opinions such as the possibility of epileptic seizures, rotating the student on her side, and the necessity of controlling the tongue. According to the expert opinion on this subject, the person should be laid in a safe place, if the patient lies on her back, she should be turned sideways for her not to swallow her saliva, and objects that may harm the person must be removed. If the mouth is closed, one should not interfere; if it is open, anything that can be used at that moment should be placed in the mouth to avoid biting the tongue, but hard objects should not be left in the mouth as they may break the teeth. The arm and the leg should not be restricted if in motion. It should be checked if there is an epilepsy card on the patient, and the medical teams should be expected. Some of the quotations of the participants' opinions about vignette 3 are given below:

- "When people go into shock, they usually show these symptoms, or they are epileptic, but in a shock, there is no fainting out of nowhere. Something must happen to them. Here, because the person falls while running, she is 90% epileptic. She has a seizure for 5 to 10 min and then returns to normal. During this process, there is a possibility that the person suffocates because the jaw is locked and the foam coming out of her mouth may fill her throat. And we have difficulty in pulling the tongue forward, again because the jaw is locked. I say here, I'd find a pen or something that prevents the jaw from locking, pull the tongue, and then lay the person on her side again. And, in here, I will have done everything there is to be done, there is no need for medical support because the person is already known to be epileptic, and I am taking the necessary measures." P5
- "She's probably having an epileptic seizure. In such cases, I would wait for the seizure to pass by simply putting something soft under the head where the student fell in order to release the energy created in her body. This is because intervention leads to more critical errors. I would check the surroundings and inform the school administration and her family." P9
- "I couldn't have done anything because I've never come across with such a case." P7
- "She probably had an epileptic seizure. To keep the windpipe open, I'd keep her mouth open with something like a pencil or a wallet; it will probably pass after 10 or 15 minutes." P18

Table 4. Themes resulting from vignette 3 analysis.

Teacher	f
Epileptic seizure	11
Rotate the body to the side	7
Check the tongue	6
Ensure safety	5
Do nothing	5
Unlock the jaw	3
Check breathing	3
Do not call emergency service	3
Ensure head-jaw position	1
Put a clean cloth in the mouth	1

When the quotations and expert opinions of the participants were evaluated, it was determined that 30 to 35% of the teachers' responses were correct.

Findings related to vignette 4

The fourth vignette related to first aid is created as; *"When Ms. Mehtap, the physical education teacher, passes to the yard after the break is over, she sees two students fighting over the ball. Even though she calls out to the students, she cannot make her voice heard because she is far away. Meanwhile, the fight between the two students intensifies and one of the students punches his friend in the face. Mehtap teacher, who goes to the scene, sees that his student Mert's face is covered in blood. The fist coming to Mert's nose has distorted the shape of the nose and his nose is bleeding terribly"*. To the physical education teachers in the study group, the question "***What would you do if you were Mehtap teacher?***" was asked and the opinions of the participants in line with the statements given are shown in Table 5.

While the physical education teachers participating in

Table 5. Themes revealed as a result of data analysis of vignette 4.

Teacher	f
Cushion	18
Cold Application	6
Detecting nasal bone fracture	5
Tilting one's head forward	5
Unable to do something	1

the study made the first intervention about the vignette 4; they stated opinions such as cushion, cold application and fracture detection. According to the expert opinion on this subject, the person should be seated upright, his head should be tilted forward, and the nose wings should be pinched for 5 min. S/he should be told to breathe through the mouth and blow his/her nose. If the bleeding does not stop, a tampon should be applied with a cloth and this tampon should be applied inside the nose. The healthcare team should be expected to come while applying ice. Below are some quotations of the participants' views on vignette 4:

- "I would make tampons to prevent nose bleeding; I would wait for the ambulance." P19
- "The student with a broken nasal bone. At that time, I would try to stop the bleeding with the tampon by being still careful not to spoil the form of the nose, and we would wait for the nearest health team to come. " P1
- "I would tell the security to call the ambulance. If there is only a nosebleed, I wait for the student to tilt his head forward and the bleeding to cease. I would apply ice and wait for the ambulance to arrive." P17
- "I would want the student to squeeze the nose with his/her thumb and forefinger without upholding head, but not excessively, as it will probably require medical intervention." P9
- "I would tamp the injured student with a t-shirt or similar item I could find around and wait for the ambulance to arrive." P12

When the quotations and expert opinions of the participants were evaluated, it was determined that the first aid intervention of 25 to 30% of the teachers was correct.

Findings related to vignette 5

The fifth vignette on first aid is created as; *"The door of the physical education teacher Erva, who is on duty at the school's boarding house, is knocked on the door while the teacher is getting ready and going to the cafeteria to have breakfast. Erva opens the door and sees his student shouting and screaming in front of the teacher. She calls the teacher, saying, "My teacher, my friend is dying." Erva teacher, who runs to his student, sees that his student Ayşegül is lying on the floor. Her roommates are shouting and screaming in the dorm. Student Ayşegül lies still on the ground. "Her face is slightly bruised; her eyes are crossed, and she is unconscious."* To the physical education teachers in the study group, "**What would you do if you were Erva teacher?**" was asked, and the opinions of the participants in line with the statements given are shown in Table 6.

While the physical education teachers participating in the research initially made the first intervention about the vignette 5; they expressed opinions such as breath control, cardiac massage, and pulse control. According to the expert opinion on this subject, first of all, it should be tried to talk to the person, to loosen his/her clothes, to look into the mouth and if there is something, to remove it with two fingers. Airway openness should be provided, the head should be pulled back and the chin should be upheld, and the breathing status should be checked for 10 seconds. If not breathing, CPR (basic life support) should be started. Below are some quotations from the participants' views on vignette 5:

- "S/he is out of breath, teacher. I try to open his mouth with my hand so that s/he can breathe, what else could I do? Probably s/he is strained too. I try to open it as much as possible so that oxygen can enter. Of course, we do not know exactly whether s/he had a heart attack or what happened. I don't think I will take the risk of doing CPR, sir. At least I try to make him breathe. If I had a hard time, I would exhale a light breath from his nose, and try to make some pressure on his heart, but it is too risky because I don't know it very well. So, I don't think I can do much. First aid, but it is very risky so I don't think I can dare in this situation." P3
- "Lying still, and slightly bruised face mean that s/he is out of breath, so her/his eyes are crossed, and s/he is not conscious for s/he is out of breath. In this case, if this period is prolonged, it will lead to the death of brain cells, so there is an urgent need to open the airway again, the A-B-C method. I check if his/her tongue slips back. I look at him/her if s/he is breathing easily. After providing comfortable breathing, of course, there is a screaming situation in the dormitory, but I calm people down and tell them to call the emergency, or if they are unable to call, I take them out of the room and intervene and communicate with the emergency at the same time. After s/he start breathing, the consciousness will probably be regained a little bit. Meanwhile, I try to get the student to talk until the emergency teams arrive." P5
- "I would think s/he probably had a heart attack. I would ask my roommates what happened. I would control the person with "look, listen, feel". If there was no pulse, I would apply cardiac massage and artificial respiration. If I remembered correctly, I would do 30 cardiac massages and 2 artificial respirations. I would repeat this. If there was a garment that was tight in the throat, I would take it off Of course, I would want the ambulance to be called in

Table 6. Themes revealed as a result of data analysis of vignette 5.

Teacher	f
Breath Control	16
Cardia Massage	9
Pulse Control	6
Artificial respiration	5
Loosening the clothes	4
Checking consciousness	3
Checking tongue	3
Ensuring the security	2
Applying Heimlich manoeuvre	2
Tilting	2
Head- Chin position	2
Basic Life Support implementation	1
Making him/her cough	1

the meantime." P9
- "I would try to understand what was causing her/him bruising. If his/her jaw is locked, I would open it by squeezing the sides of his/her mouth and check his/her tongue firstly. I would intervene if the tongue got in the throat. If there was an object in his/her throat, I would use the Heimlich manoeuvre while s/he was lying on his back because s/he was unconscious." P13
- "I would check the air vessel. Against the possibility of having a heart attack, I would keep her/his conscious by talking and try to make him/her cough." P18

When the quotations and expert opinions of the participants were evaluated, it was determined that the first aid intervention of 40 to 45% of the teachers was correct.

Findings related to vignette 6

Sixth vignette on first aid is created as; *"After the physical education teacher Songül finished her lesson, she went to the teachers' room at the break time. Ayşe, one of the students, started to eat the fruit from her bag while talking with her friends on the sports field during the break. She started to laugh at her friend's joke while eating her fruit, and suddenly she put her hands on her neck and began to suffer. Her friends asked what was happening, and her hand moved only on his neck, unable to speak and cough. When the students realized that the situation of the student was serious, they immediately called Songül teacher. When Songül teacher came to the scene, "she saw the student turned black on the ground and the movement was almost absent."* To the physical education teachers in the study group, "**What would you do if you were Songül teacher?**" was asked, and the opinions of the participants in line with the statements given are shown in Table 7.

While the physical education teachers participating in the study made the first intervention about the vignette 6; they expressed views such as applying the Heimlich manoeuvre, hitting his/her back and giving a head-chin position. According to the expert opinion on this subject, aspiration should be applied to the person. If the patient is conscious, coughing, head-chin positioning, and Heimlich manoeuvre should be applied. In case of unconsciousness, CPR (basic life support) should be started and should be waited until the healthcare team arrives. Below are some quotations from the participants' views on vignette 6:

- "Here, what the person has eaten probably stuck in the air vessel. Here, breathing is reduced. In such cases, I would go behind the person and try to squeeze the diaphragm under the rib bones with both hands, applying force and trying to remove what stuck in the air vessel. Of course, by the way, I would call the ambulance, and wait for the medical teams to arrive." P4
- "We hit the back, under normal circumstances; this is a situation we might encounter outside of school, not just at the school. In other words, after rubbing the slightly curved back, not completely straight, we hit the back with a gentle tempo and let the thing in his/her throat come in or out. P7
- "Absence of sound indicates that the air vessel is blocked. So, I would hit his back with the palm... If the object did not come out of his/her throat, it was probably the Heimlich manoeuvre, I would get behind the person and pull the person towards myself by pressing my hand on his/her stomach. I would keep trying that." P9
- "I would try to expel the substance from the throat with the Heimlich manoeuvre, while providing urgent access to the health units. If necessary, I would do artificial respiration." P15

When the quotations of the participants and expert opinions were evaluated, it was determined that the first aid intervention of 55 to 60% of the teachers was correct.

Findings related to vignette 7

The seventh vignette on first aid; "Meryem entered the refectory because she was bored in the dormitory. When she realized that there was nobody in the cafeteria, she wanted to look at what was cooked. She accidentally held the large pot full of hot water in order not to fall on the ground when she stumbled, and the pot filled with hot water was poured on Mary. At the dorm, physical education teacher Meltem, who rushed to the kitchen upon the screams of the girl, saw that her student Meryem's legs were scalded with hot water. While she was freezing in a panic and staring at her, Meryem started vomiting." To the physical education teachers in

Table 7. Themes revealed as a result of data analysis of vignette 6.

Teacher	f
Applying Heimlich Manoeuvre	16
Hitting on the back	3
Head-Chin position	1
Taking it out with hands	1
Artificial respiration	1

Table 8. Themes revealed as a result of data analysis of vignette 7.

Teacher	f
Applying cold water	16
Taking the clothes off	7
Covering the burn up with a clean towel	2
Respiratory control	1
Unable to do something	1

the study group, "**What would you do if you were Meltem teacher?**" was asked, and the opinions of the participants in line with the statements given are shown in Table 8.

While the physical education teachers participating in the study made the first intervention about the vignette 7; they expressed opinions such as applying cold water, removing clothing, and covering the burn up with a clean towel. According to the expert opinion on this subject, first of all, it is necessary to remove the burnt clothing of the person and then remove any objects such as rings, jewellery, watches. It is necessary to keep the burnt area under cold water for at least 20 min and wrap the burn with a clean cloth. Since oedema may occur in the burnt area, health teams should be expected to keep this area above the heart level, not to give anything by mouth because vomiting may occur, and the person should be covered with a blanket because of heat loss. Below are some quotations of the participants' views on vignette 7:

- "First of all, I call 112 (emergency services), his/her clothes may be stuck, I check it, and immediately take his/her clothes off, I take them under cold water and in the meantime, I provide fluid intake." P18
- "I wrap the burnt area with a clean wet cloth and take him/her to the hospital." P14
- "I wouldn't want to be in this incident though. There should be cold water, as far as I know, but I don't know the exact answer. I have no idea." P7
- "You said that hot water was poured on the legs of the girl, so all of her legs were scalded with hot water, so it is a big burn in the story. Already the child has begun to vomit, this is an expression that the surface of the burnt area is very large because it does not always happen in some individuals, but sometimes it causes vomiting as there will be fluid loss when the burnt surface is large. Even if there is no vomiting, since the two leg areas are already a large surface, it is necessary to give water immediately to compensate for the loss of water. Now, first of all, what is on Meryem, the child may be in shorts, if there is no dressing in the area where she is burnt, it is okay, but if there is a dress, it is necessary to cut it immediately because she will be scalded more when the clothes remain. After that, you need to apply cold water immediately, and take it under cold water. In the meantime, it is necessary to call the emergency immediately. Since the area is very large, we do not have much to do with it, probably even holding it in cold water will not relieve the pain of the person, but it will at least relieve it a little more, and as I said before, fluid replenishment is urgently needed due to fluid loss, but there is vomiting." P5

When the quotations and expert opinions of the participants were evaluated, it was concluded that the teachers' first aid interventions regarding this incident were not correct.

Findings related to vignette 8

The eighth and final vignette on first aid is created as; *"Physical education teacher Tuba teacher was appointed as a teacher to a remote village in Mardin. The school where the tuba teacher is appointed does not have a garden where she can teach. She arranged the school garden in her own way and teaches her lessons in this garden. One day during the lesson, the students' ball muffed off the garden and the student jumped from the wall of the garden and chased after the ball. Before the teacher realized what was happening, Tuba heard the scream of her student Deniz. Tuba ran towards Deniz and saw that Deniz was writhing on the ground. There was a huge wound on Deniz's knee cap. "Deniz could not stand while jumping from the garden wall, lost his balance, and fell to the ground. The sharp stone found on the ground came to Deniz's leg and made a deep cut in the kneecap. Tuba teacher noticed that she even saw the kneecap bone."* To the physical education teachers in the study group, "**What would you do if you were Tuba teacher?**" was asked, and the opinions of the participants in line with the statements given are shown in Table 9.

While the physical education teachers participating in the research made the first intervention about the vignette 8; they expressed opinions such as cleaning the wound, applying tampons and binding with a clean cloth. According to the expert opinion on this subject, the person should first be placed on their back and the bleeding area should be evaluated, if there is a contaminated wound, it should be cleaned, the wound should be covered with a clean cloth and if the bleeding does not stop, a second cloth should be applied. If

Table 9. Themes revealed as a result of the data analysis of vignette 8.

Teacher	f
Cleaning the wound	11
Tampon (applying pressure)	10
Binding with a clean cloth	7
Cold application	1
Keeping the bleeding area above	1

necessary, it should be wrapped with a bandage, and the healthcare teams should be waited by positioning the bleeding area above. Below are some quotations of the participants' views on vignette 8:

- "Village school, long distance. I have to do the emergency action myself first. There is an open wound. First, I sterilize the wound, clean it with hydrogen peroxide solution or whatever material is available at that moment. I clean it up. Then if the wound is too large, I lift it up so that it can reduce the blood flow to the wound. Don't let it flow quickly. Then I clean it with tincture of iodine, hydrogen peroxide solution, and wrap it properly with a bandage, either I take it to the hospital myself or wait for the emergency team to come. I decrease the blood flow and I clean it." P6
- "I would ensure him/her to sit where s/he is and stretch his/her foot. If s/he could sit on a high place like a chair, I would make him/her sit on where it is. Then I would clean the wound, wrap it with a clean bandage and make a tampon. I would want him/her to be taken to the nearest health institution." P9
- "While I was intervening open wounds, I would find a clean cloth around and help to stop the bleeding. I could apply cold until the medical teams arrived. There is nothing else to do." P11
- "First of all, I call 112 (emergency services) and calm the student. I clean the cut without touching the wound. I try to stop the bleeding by lifting the knee above the heart level and putting a clean cloth on the wound." P20

When the quotations and expert opinions of the participants were evaluated, it was determined that the first aid intervention of 10 to 15% of the teachers was correct.

DISCUSSION

In the study, it was aimed to determine the effects of the application of first aid training lessons on sports injuries. For this purpose, the vignette technique was applied to the participants and their application experiences on the scenarios created were tested by examining the expert opinions. All of the physical education teachers participating in the study consist of people who have spent a certain year in their profession and have received first aid training in their undergraduate education. When their answers in this sense were examined, different percentages were determined for each case. It was determined that the physical education teachers, within the scenarios created, expressed their opinions, although not completely, close to the points emphasized by first aid education experts in all events. This situation can be considered as an important indicator of their previous first aid training. Likewise, similar studies in the literature also support this result (Arli and Yildirim, 2017; Oliver et al., 2019; Pellegrino et al., 2017; Taklual et al., 2020). Education subject is examined not only in physical education teachers but also in different occupational groups. For example, in a study examining the first aid knowledge of the personnel working in kindergartens in China, it was observed that the first aid knowledge of experienced paediatric specialists dealing with children was lower than expected (Li et al., 2012). This situation was reflected in the research results and it was suggested that first aid education should continue under certain conditions. Again, in a similar study, it was mentioned that injuries such as falls and collisions are frequently encountered during participation in sports activities, and in this case, it was emphasized that people who have knowledge of anatomy and movement, that is, professional knowledge, can intervene more effectively in such events (Jangra, 2019). In a study on education burden and prevention of injuries, aforementioned professional knowledge was explained in detail, and it was emphasized that strategies and experiences based on professional knowledge are vital in first aid (Impellizzeri et al., 2020). Research also underlines that people associated with sports can effectively cope with physical stress and that in cases of injury, people with such professional knowledge can intervene more accurately. Similar results were obtained in another study examining first aid information for the adult population. The research mentions that although the importance of first aid knowledge is accepted by the authorized circles, the desire to intervene is higher mainly by people who have experience and knowledge on this subject, that is, people with professional knowledge (Holding et al., 2017). The results in the literature are in line with our research results for the fact that physical education teachers received and applied first aid knowledge during their undergraduate education are more competent in terms of professional knowledge and experience.

When similar studies on first aid are examined, it is seen that teachers are the first to respond to accidents and injuries in schools (Eze et al., 2015). The fact that the studies are mostly in this profession group leads us to the conclusion that people with high practitioner positions such as teachers, parents and drivers, or professional groups are associated with being higher first aid practitioners in such cases. However, this result brings us to a point where first aid information and how applicable

this information is in the emergency response part is discussed. At this point, it is seen that similar studies emphasize that teachers with lower first aid knowledge show lower practical skills (Eze et al., 2015). Therefore, the quality and practicality of training gains importance as well as receiving training. In a similar study examining first aid training levels of physical education teachers, this situation was examined, and it was found that physical education teachers gave low percentages about first aid knowledge and application (Essers et al., 2019). For this reason, the aforementioned research suggested that physical education teachers should repeat sport-specific training and first aid knowledge in every two years. Since the continuity of education and its addition to the curriculum will contribute positively to the participation of students in this training and to improve their learning indirectly, it is recommended to make such planning in similar studies (Bánfai et al., 2018; Das et al., 2020; Oliver et al., 2019). According to a similar study conducted in Norway, the curriculum should include first aid training, also the first aid measures to be taught (Bakke, 2017). The research considers this situation important in terms of keeping teachers prepared for possible scenarios. These results obtained from the literature are similar to our own research results. As a matter of fact, although it was seen in our research results that physical education teachers expressed close opinions to expert opinions, it was determined that their percentage was low. At the same time, these results are important in terms of supporting the repetition of training and enhancement of practical applications.

In the interviews in the study, it was determined that physical education teachers gave close opinions to expert opinions in cases such as physical trauma requiring first aid, while they remained a little distant from expert opinions in cases such as burn injury. This situation may be related to the frequency of encountering situations that require first aid. In a similar study, this result was considered, and the participants, who said that first aid training is necessary and should be used in cases of traffic accidents, were determined during the interviews. According to the research, this is due to the fact that the participants receive first aid training especially while receiving a driver's license (Arı et al., 2020). This type of phenomenon can lead to different mistakes. As a matter of fact, in a similar study; it has been determined that people who have received first aid training cannot use this information in all kinds of emergencies. In the study, it was observed that people with insufficient knowledge level considered themselves sufficient and tried to intervene (Kızıl et al., 2018). This situation appears as another result of lack of education. In a study examining sports injuries in physical education classes and the opinions of physical education teachers, it is understood from the opinions of teachers that they do not always feel up-to-date and that they want to improve their first aid training (Uğraş and Akbuğu, 2019). This situation can be seen as significant in terms of expressing the lack of education for teachers. In another study conducted on teachers' first aid knowledge levels, a result was found in the opposite direction to our research results. According to the research results, teachers; while they are quite knowledgeable in injuries such as bleeding, fractures and burns, they have been deemed insufficient in matters of life support (Amro and Qtait, 2017). This situation differs with our research results. In another study on first aid practices in dental trauma injuries, it was found that experienced teachers were more professional in interventions, while newly graduated teachers were more distant to these issues (Tzimpoulas et al., 2020). This situation is important in terms of showing that experienced teachers are more professional and practical, and it overlaps with our research results. In another study on first aid awareness of teachers, it shows that approximately one-third of the teachers participating in the research can take the right precautions in cases of nosebleed injuries. However, this situation is remarkable in terms of showing the differences in the measures taken. Indeed, teachers; although they were knowledgeable about the intervention, used different techniques (Sijbrandij et al., 2020). This situation is similar to our research results. It has been observed that this situation is still not outside of expert opinions, although physical education teachers prefer to use different techniques for similar injuries.

CONCLUSION AND SUGGESTIONS

When the results obtained from the research are supported by the literature, it is seen that first aid training is very important for physical education teachers. This training, having been received in the Faculty of Sport Sciences during the undergraduate period becomes an obligation for teachers to use in their future professional lives. When physical activity is a way of life for young students, it is seen that accidents and injuries may inevitably occur and the practical experiences of the teachers who have received first aid training in this situation are of vital importance for the students. However, the sustainability of education is extremely important at this point. In particular, it is clearly seen in the studies that all injuries and intervention situations should be repeated frequently, not just one type of injuries. The most important evidence of this is that teachers give close to expert opinions while expressing their opinions and show some differences in diagnosis and intervention. This situation is very important in terms of correcting the behaviours of teachers who act contrary to experts' opinion but who think that they are doing the right application. Therefore, this research recommends that the first aid training received in the first years of the undergraduate period should be repeated during the graduation period and that the information should be kept

up to date. At the same time, this type of training can be repeated at different times in the teaching profession with various application tools and it can be ensured that behaviours appropriate to experts' opinion can be performed.

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