Determining the Basic First-Aid Knowledge Levels of the Class Teachers Working In the City Center of Agri

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Abstract
The objective of this study is to determine the basic first-aid knowledge levels of the class teachers working in the City Center of Agri. The sampling of the study conducted during the school year 2015-2016 consists of 134 class teachers assigned on a volunteer basis and working in 14 different schools located in the city center of Agri. In this quantitatively-conducted study, the data were collected by using a questionnaire form on the basic first-aid knowledge level, and these data were analyzed by using percentages, frequencies and SPSS program. During the study, the mean basic first-aid knowledge levels of the teachers were determined as 11.58 over 20, and it was ascertained that the knowledge levels of the teachers dropped down as their professional working periods extended. Including applied first-aid courses in all the departments of the Faculties of Education as well as organizing in-service trainings and seminars relative to the subject are among the recommendations of this study.

Keywords: class teachers, first-aid knowledge level, agri

INTRODUCTION
In the First-Aid Regulations of the Ministry of Health that was released in the Official Gazette, first aid is defined as: “Unmedicated practices in the case of any accident or situation endangering one’s life, which are performed on the scene of the incident with the help of the tools and materials available at the time without seeking for medical supplies so as to rescue one’s life and to be able to prevent the case in question from getting worse until the assistance of health officers (paramedics) is ensured” (URL-1, 2015).

Inadequate and inaccurate practices performed with respect to first aid, on the other hand, are one of the major problems in Turkey (Bozkurt, 1999). While a simple first aid attempt made accurately just in time can be life saving, a small but a vitally important intervention performed improperly may cost people’s lives or may even lead to irreversible impairments (Ağralı, 2002). Therefore, there is the need for trained and educated individuals to perform these principles in a conscious manner. For this reason, according to the first aid regulations put into effect after having been released in the Official Gazette dated May 22th, 2002 and numbered 24762, which was arranged by The Directorate of Basic Health Services of the Ministry of Health, 20 individuals from all the institutions and 10 individuals from risky workplaces were obliged to receive first aid education and training (URL-2, 2015).

School age known as childhood and adolescence periods is the period of primary and secondary education that comprises the ages between 7-14 when health problems such as growth and development, hearing and vision disorders as well as psychological problems are frequently seen (Beyazova, 1991). In terms of childhood injuries, home accidents are a matter of importance in the first four years, whereas school accidents become prominent after the age of four (Stacey et al., 1999; Güvercin, 2004; Rogmans, 2009). Any sort of accident, disease and injuries that occur at schools have an effect on the health status of students in terms of physical, psychological and social aspects by disturbing their balance and lead to diseases, impairments and deaths as well as imposing material burden on families and the society. Accidents being the final link of improper behaviours and negligences are avoidable and preventable incidents thanks to the measures to be taken beforehand (Ayvaz et al., 2003). On the other hand, schools are the environments where a large crowd of students and personnel groups live en masse, and unless necessary precautions are taken, undesirable accidents and impairments can be experienced in these places (Kingma & Henk-Jan, 2000). These points mentioned above bring into the forefront the first aid-practitioner characteristics of the teachers employed in our schools that embody within themselves many more individuals than the number of the employed staff specified in the Legislation. Performing the initial intervention essential in the case of the accidents taking place at schools or in the case of an emergency that occurs due to a current disease of students is primarily the job of the health personnel present on the scene of the accident. However, nurses are in charge in a very few number of schools in our country. In many schools, notably in the state schools in particular, teachers who are also
the members of the health team at schools are responsible for this task, as well. Gained through human-based education and training, first aid intervention is a practice that requires knowledge and allows for no failure whatsoever. Although the initial responsibility in terms of student health pertains to the family, the key person out of the family circle is the teacher in terms of student health. Teachers are the first individuals to aid a student in case of an accident or an injury that may occur in the school. Thus, the first aid knowledge levels the teachers have are of great importance. That’s why, there are studies in the literature that investigate the first aid knowledge levels of the teachers from different branches (Ağralı, 2002; Uşaklı & Cengiz, 2001; Dinçer et al., 2007; Genç, 2009; Şahin, 2011; Sönmez et al., 2014).

Yet, among these abovementioned ones, there has been no conducted study putting forward the basic first aid knowledge levels of mostly the newly-assigned teachers who have had to struggle with a number of problems while trying to practise their profession in Ağrı, one of the cities located in the easternmost part of our country (Erdemir, 2007). Starting from this point, this study was conducted for the purpose of determining the basic first aid knowledge levels of the class teachers working in the City Center of Ağrı.

METHOD
This study was conducted quantitatively during the period, Autumn 2015-2016.

SAMPLING
This study was conducted along with 134 class teachers consisting of 58 male and 76 female individuals selected on a volunteer basis and working in 14 primary education schools in the City Center of Ağrı.

DATA COLLECTING TOOLS
During the study period, the data were collected through the use of a questionnaire on basic first aid knowledge levels, which was re-arranged by the researcher by making use of the literature. In the process of preparing the questionnaire, the involved literature was reviewed in the first place (Ağralı, 2002; Uşaklı & Cengiz 2001; Ateş, 2005; Dinçer et al., 2007; Genç 2009; Şahin, 2011; Sönmez et al., 2014), and the questions to be used within the questionnaire in line with the purpose of the study were specified. Except second and third questions all of the items of Basic First Aid Knowledge Level Test which was used in this study as a data collection tool were taken from the study conducted by (Sönmez et al., 2014). The second and the third questions in Basic First Aid Knowledge Level Test were added by the researchers. The study data were collected through the Questionnaire Form on Basic First Aid Knowledge Level (QFBFKL) consisting of two sections. The first section of the questionnaire comprises questions along with the demographic characteristics of the teachers. In the second section, on the other hand, there are 20 questions, one of which is about filling in the blanks, and 19 of which are multiple choice questions. While preparing the second section of the questionnaire, the situations to be encountered by the class teachers at school, which require first aid, and their basic first aid knowledge levels were taken into consideration.

The prepared questions were analyzed by the specialists providing first aid courses on undergraduate/bachelor’s level, and hence, the necessary corrections were made.

The pilot scheme of the questionnaire form to be used during the research was performed on 102 class teachers, and Cronbach’s Alpha coefficient of the questionnaire was determined as 0.71 (Table 1) According to Kalaycı (2005), if Cronbach’s Alpha coefficient is 0.60 ≤ α < 0.80 , then the scale is quite reliable.

Table 1. Reliability Table

<table>
<thead>
<tr>
<th>Reliability Table</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.712</td>
</tr>
</tbody>
</table>

DATA ANALYSIS
The dependent variable of the research is QFBFKL Score. No QFBFKL scoring used for collecting data was performed for the first section, whereas each correct answer in the second section was evaluated over 1 point, each incorrect answer was zero and the highest score was determined as 20.

The data obtained from the study were analyzed by using SPSS 22.0 package program. In the analysis of the data; whether or not the data obtained through Kolmogorov-Smirnov test were in compliance with the normal distribution of the data was evaluated in the first place. While the groups were being compared due to the fact that the data were not in compliance with the normal distribution, the non-normal Kruskal-Wallis variance analysis and Mann-Whitney U test were benefited from. For the statistical significance, the value was accepted as p<0.05. In order to determine what group the difference in question stemmed from in the event that significance was found in Kruskal-Wallis test, Whitney U test was performed, in which case the value for the statistical significance was received as p<0.0271.

The comparison of the class teachers’ QFBFKL Scores in terms of gender, on the other hand, was performed through the independent t-test (p<0.05).
FINDINGS
The findings obtained from this study conducted for the purpose of determining the basic first aid knowledge levels of the class teachers working in the City Center of Agrı are given in this section. In Table 2 are the demographic characteristics of the teachers, their QFBFKL scores and the analysis results included.

When the table is analyzed, it is seen that 56.7% (N=76) out of 134 class teachers who took part in this research are female, whereas 43.3% of them (N=58) are male. During the research, it was ascertained that QFBFKL scores of male teachers proved to be 11.65, while these scores were 11.58 for female teachers. In the independent t-test performed, no significant difference was found between male and female teachers in terms of the basic first aid knowledge score (p<0.441).

The mean age of the teachers was 33.38 (at least 22, and 63 at most), and it was also determined that 42.5% of them were at the age of 20-29, whereas 39.6% were aged between 30-39 and 17.9% were aged 40 and above. The mean professional working period was 9.29 (at least 1–45 at most), and it was ascertained that 38.1% of them (n=51) had been working for 0-5 years, whereas 30.6% (n=43) had been working for 6-10 years.

Table 2. The Relationship between Some of the Characteristics of Teachers and the Basic First Aid Knowledge Level Scores

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>%</th>
<th>Basic First Aid Knowledge Level Scores</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean ±Standard Deviation</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>56.7</td>
<td>11.58±1.58</td>
<td>0.441**</td>
</tr>
<tr>
<td>Male</td>
<td>58</td>
<td>43.3</td>
<td>11.65±1.60</td>
<td></td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged between 20-29</td>
<td>57</td>
<td>42.5</td>
<td>12.96±2.69</td>
<td></td>
</tr>
<tr>
<td>Aged between 30-39</td>
<td>53</td>
<td>39.5</td>
<td>11.74±2.38</td>
<td>0.532*</td>
</tr>
<tr>
<td>Aged between 40 and above</td>
<td>24</td>
<td>17.9</td>
<td>11.28±2.54</td>
<td></td>
</tr>
<tr>
<td>Professional Working Period</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5 years</td>
<td>51</td>
<td>38.1</td>
<td>11.96±2.47</td>
<td>0.021*</td>
</tr>
<tr>
<td>6-10 years</td>
<td>41</td>
<td>30.6</td>
<td>10.85±2.13</td>
<td></td>
</tr>
<tr>
<td>11 years and above</td>
<td>42</td>
<td>31.3</td>
<td>10.76±2.29</td>
<td></td>
</tr>
<tr>
<td>Status of Being Trained in the First Aid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>65</td>
<td>48.5</td>
<td>11.56±1.58</td>
<td>0.013†</td>
</tr>
<tr>
<td>No</td>
<td>69</td>
<td>51.5</td>
<td>11.49±1.51</td>
<td></td>
</tr>
<tr>
<td>Perception of First Aid Knowledge Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>66</td>
<td>49.3</td>
<td>11.86±1.66</td>
<td>0.001†</td>
</tr>
<tr>
<td>Average</td>
<td>68</td>
<td>50.7</td>
<td>11.61±1.50</td>
<td></td>
</tr>
<tr>
<td>Experiencing a situation before that required first aid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>62</td>
<td>46.3</td>
<td>11.46±1.52</td>
<td>0.432†</td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>53.7</td>
<td>11.54±1.78</td>
<td></td>
</tr>
</tbody>
</table>

Within the scope of this research, the mean QFBFKL score of the class teachers were determined to be 11.58. When Table 2 is analyzed, the highest QFBFKL score is seen to be at the age range of 12.96 and 20-29. When the teachers' ages and QFBFKL scores were reviewed, it was determined that there was a relationship in a negative direction and that the score dropped down as the age increased (Table 2). During the analyses performed by using Kruskal Wallis test, it was ascertained that the difference between the class teachers' ages and their QFBFKL scores was statistically insignificant (p<0.532). On the other hand, when the relationship between the class teachers’ professional working periods and their QFBFKL scores is analyzed, it can be seen in Table 2 that there was a relationship in a negative way once again and that the knowledge level went down as the professional working period extended. However, it was determined through Kruskal Wallis test that this difference was statistically significant (p<0.021).

It was ascertained during the research that 68 of the class teachers in question had considered themselves at an average level in terms of the perception of basic first aid knowledge level, whereas 66 of them considered themselves to be good in this matter (Table 2). When the relationship between the teachers’ QFBFKL scores and their perception of basic first aid knowledge levels were analyzed through Mann Whitney-U test, the difference between them was determined to be significant (p<0.001). It was also ascertained that QFBFKL scores of the teachers who had evaluated their first aid knowledge as good proved to be significantly higher than QFBFKL scores of those who had evaluated themselves as being on the average. Separately, during the research, QFBFKL scores of the class teachers who had received first aid training proved to be higher than the scores of those who received no training in first aid. In the performed analyses, this difference was found to be significant in favour of those that received first aid training (p<0.013). On the other hand, when reviewed in terms of the status of having previously experienced an emergency case requiring first aid, it is, again, seen in Table 3 that QFBFKL scores of the teachers who encountered such a situation and those who did not showed no significant difference.

In Table 3 presented below, the distribution, percentages and frequencies as to the answers given by the class teachers to the questions included in the second section of QFBFKL have been shown.
Table 3. The Distribution of the Questions on Basic First Aid Knowledge Levels included in the Second Section of QFBFKL and the Answers Given by the Teachers with respect to the Subject

<table>
<thead>
<tr>
<th>QFBFKL (Questionnaire Form on Basic First Aid Knowledge Level) Second Section Questions</th>
<th>Score Value</th>
<th>Distribution of the Given Answers N=134</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In Turkey, the phone number ……must be called to send the casualty/patient to the nearest health institution. 112</td>
<td>1</td>
<td>123</td>
<td>91.79</td>
</tr>
</tbody>
</table>
| 2. What is First Aid?  
a. An attempt performed by administering medications at the scene of the incident.  
b. An intervention performed by a physician at the hospital.  
c. An unmedicated attempt performed at the scene of the incident so as to prevent the patient/casualty’s condition from getting worse. | 0 0 1 | 2 0 132 | 1.50 98.50 |
| 3. Who is the first- aider?  
a. S/he is the health officer.  
b. Individual (s) trained in First Aid. | 0 1 | 7 127 | 5.23 94.77 |
| 4. How is it evaluated whether or not there is any respiration in a child?  
a. Through watch, listen and feel method.  
b. By checking the pulse.  
c. By checking the body temperature  
d. By asking whether s/he feels alright or not  
e. I do not know. | 1 0 0 0 0 | 114 16 2 0 1 | 85.07 11.94 2.23 0.00 0.76 |
| 5. What attempt do you perform in the first place on the child whose consciousness is open but who cannot cough (who swallowed a foreign substance) due to a complete blockage in the airway?  
a. I move behind his back and apply pressure on his abdominal region.  
b. I apply a cardiac massage.  
c. I make her/him lie face-down and stroke on her/his back.  
d. I make her/him lie on her/his back.  
e. I do not know. | 0 0 0 0 0 | 24 1 9 | 17.95 0.76 6.65 0.00 0.00 |
| 6. Which of the following is true with respect to animal bites and insect stings?  
a. In the case of dog bites, the injured area must be washed with soap and cold water for at least 5 minutes.  
b. In bee and scorpion stings, the injured area must be treated with hot application.  
c. If the animal bite is around head and neck areas, tourniquet is performed around the wound.  
d. In snake bites, the wound is cut with the help of a knife, the venom is sucked and spitted out.  
e. I do not know. | 1 0 0 0 0 | 41 0 0 0 0 | 30.89 0.00 0.00 0.00 0.00 |
| 7. What must be done in the first place in the case of the burns that occur as the result of spilled hot water?  
a. Ice is applied on the wounded area.  
b. It must be kept under tap water running for at least 5-10 minutes.  
c. Burn cream must be applied immediately on the wounded area.  
d. Yoghurt or tooth paste must be applied on the wounded area.  
e. I do not know. | 0 0 0 0 0 | 41 5 48 14 | 30.59 4.76 35.82 10.44 0.00 |
| Evaluate the following statements in terms of their accuracy or inaccuracy.  
8. In the case of a fracture; if the tips of the fractured bone have protruded, they must be pushed back inside.  
a. True  
b. False  
c. I do not know. | 0 0 0 | 4 113 17 | 3.00 84.32 12.68 |
| 9. A child who has drunk some cleaning agent similar to bleach or detergent must immediately be made to vomit.  
a. True  
b. False  
c. I do not know. | 0 1 0 | 69 47 0 | 51.49 35.08 0.00 |
| 10. A child undergoing a head trauma must be tried to be kept awake.  
a. True  
b. False  
c. I do not know. | 0 0 0 | 127 7 0 | 97.77 5.23 0.00 |
| 11. A fainted child must be laid down on her/his back on a smooth surface and her/his feet must be lifted up.  
a. True  
b. False  
c. I do not know. | 0 0 0 | 81 23 0 | 60.44 17.18 0.00 |
| 12. To understand whether a child who has been wounded due to falling down has a fracture or not, the organ suffering from pain is forced to move.  
a. True  
b. False  
c. I do not know. | 0 0 0 | 116 14 4 | 86.56 10.44 3.00 |
| 13. No direct contact must be made with a child undergoing an electric shock.  
a. True  
b. False  
c. I do not know. | 0 0 0 | 120 10 0 | 89.55 10.45 0.00 |
As seen in Table 3, it was determined that 91.79% of the class teachers who had participated in the research had given the correct answer in the first question as to the number to be called for the purpose of sending the casualty/patient to the nearest health institution, whereas 8,21% of them failed to write down the essential number or even wrote it wrong. The question with the lowest percentage for answering correctly within the questionnaire form is the 12th question related to the attempt to be made in the case of an injury. The false statement, “To understand whether a child who has been wounded due to falling down has a fracture or not, the organ suffering from pain is forced to move” was evaluated as false by only 10,44% of the class teachers, whereas it was evaluated as true by 86,56%. In the same way, the 6th and 7th questions regarding the first aid to be performed in the wake of animal bites and insect stings, and the burns that occur as the result of spilled hot water are the questions answered correctly at the lowest percentage, 30,59% and 30,89%.

The questions with the highest percentage of answering correctly within the questionnaire form, however, are concerned with the definition of the first aid and the first aid to be performed in the case of a head trauma, which are included in the 2nd and 20th questions. During the research, it was determined that these two questions were the ones answered correctly by the class teachers at the highest percentage, 98,50% and 97,77%. The highest percentage of the statement, “I do not know”, on the other hand, belongs to the 6th and 15th questions related to the first aid to be performed in the wake of animal bites-insect stings (32,83%) and in the case of falling off from high places (30,59%).

**RESULT AND DISCUSSION**

This study was conducted for the purpose of determining the basic first aid knowledge levels of the class teachers working in the City Center of Ağrı. Within the scope of the research, no significant difference was found between male and female class teachers in terms of their basic primary education knowledge scores (p<0,441). This outcome matches up with the results of the research carried out by Uşaklı & Çengiz, (2001) and Özyürek et al. (2013). There are also studies found in the literature in which female (Nayir, 2011; Dinçer, 2000; Seri nken, 2011; Eğlence et al.2007) or male teachers (Genc,2009) have been more successful in terms of their first aid knowledge levels. It was ascertained in the research that the basic first aid knowledge levels of the class teachers statistically decreased as their professional working periods extended, which may be due to the fact that the knowledge the teachers had as to first aid was forgotten in time. While it was stated by Sönmez et al. (2014), Nayir et al., (2011) and Başer et al., (2007) that the first aid knowledge levels of teachers dropped down as their working periods extended, Genc(2009), in his study, reported that the first aid knowledge scores of high school teachers aged between 31-40 proved to be higher than the
scores of those aged 21-30. During the research, the first aid knowledge of the teachers who had evaluated themselves as good in terms of their perception of basic first aid knowledge levels was found to be statistically higher than those who had evaluated themselves as average in terms of their first aid knowledge (p>0.001). Separately, it was ascertained that the class teachers who had received first aid training had more knowledge on first aid practices with a statistically higher percentage than those who did not receive this training (p>0.013), which can be explained through the fact that 82.1% of the class teachers who had taken part in the research were at the age of 20-39, whereas 42.5% of them were at the age range of 20-29.

Then in this study, though not yet been determined, it can be thought that the basic first aid training received by this young population has not yet been forgotten, considering that they may have received a license through a written examination in quite a recent past. A study conducted by Savaşer (2001) seems to support our opinions on the study. It is stated that the individuals who have just received their researcher’s licences show a statistically significant difference when compared with the other individuals in terms of the first aid knowledge scores. In a study conducted by Ateş (2005), it is reported that according to whether or not they received first aid training, there is a significant difference among the first aid knowledge scores of the teachers working in the primary education schools in favour of those that received training. On the other hand, in the studies of Sönmez et al., (2014) Nayir et al., (2011) and Genç(2009), it is stated that although the mean scores of the teachers that received first aid training are higher than those who did not, the difference between them is statistically insignificant.

In this conducted study, it can be said that the mean basic first aid knowledge scores of the teachers is 11.58 over 20, which also matches up with the involved literature. Sönmez (2014) reported the mean basic first aid knowledge scores of the pre-school teachers throughout Isparta as 11.9 over 20, while Sönmez et al. (2014) reported the mean basic first aid knowledge scores of the teachers working in primary education schools and high schools as 7.29 and 6.79 over 12, respectively. Yet, it is a matter of concern how much of the first aid knowledge of the teachers is practice-oriented.

It was determined that a majority of the class teachers (91.79%) had answered the first question correctly as 112, the number that has to be dialled in order to send the casualty/patient to the nearest health institution; yet, unluckily, 8, 21% of them had failed to write down this number or even had written it wrongly. During the research, it was also ascertained that the teachers had seriously lacked knowledge as to the first aid to be performed in the wake of getting injured due to falling off from high places, being exposed to spilled hot water and suffering from animal bites- insect stings, which are often experienced and encountered in schools. In particular, the false statement, “In snake bites, the wound is cut with the help of a knife, the venom is sucked and spitted out”, was evaluated as true by 30.89% of the teachers in this research. Sönmez (2014) states that this intervention that has no place in first aid practices could be due to the misleading scenes encountered in TV series or movies.

Erkan & Göz (2006) report that the teachers have no adequate knowledge as to the first aid to be performed in the cases of fractures- dislocations, poisonings/intoxications, burns, etc. It is of utmost importance that the child who has fallen off from a high place must definitely be kept stable and the head-neck-chest axis must not be moved improperly by taking into consideration that s/he might have had a spinal injury. However, in our research, it was seen that only 20.9% of the teachers had knowledge of this approach and that a majority of them had answered this question as “’I do not know’”.

SUGGESTIONS

Within the scope of this study, the mean basic first aid knowledge scores of the class teachers working in the City Center of Agri were determined to be 11.58 over 20. Again, within the scope of the study, the theoretical knowledge levels of the teachers with respect to First Aid were specified; yet, to what degree this knowledge was reflected on the first aid practices could not be determined. It is clear that conducting other studies in an applied/practical manner for this subject will eliminate this handicap. Separately, it is considered that applied in-service courses, seminars and conferences to be performed for first aid practices will greatly close the gaps and insufficiency seen in the basic first aid knowledge levels of all the class teachers. In addition, including applied first aid courses in the curriculums of all the departments of the Faculties of Education can also be recommended.

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