

Original Research Article

## Investigation of First Aid Knowledge Level of University Students and the Factors Affecting This

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Received: 01/09/2015

Revised: 25/11/2015

Accepted: 01/12/2015

### ABSTRACT

**Introduction/Aim:** First aid is a drug-free application which is performed on the ground with the existing tools and equipment without seeking for medical equipment until the aid of medical personnel is provided with the aim of saving a person's life or preventing the deterioration of the situation in any case of disease, accident or danger of life.

**Method:** This study is a descriptive study carried out to determine the first aid knowledge level of university students. The sampling of the study consisted of 192 students who were receiving training in 3<sup>rd</sup> and 4<sup>th</sup> grade in the Department of Nursing and Classroom Teaching Department. Evaluation of data was performed in SPSS 17.0 environment by using number, percentage. As parametric test ANOVA and t test, as nonparametric test Kruskal-Wallis were used.

**Findings:** 53.1% of the students were at the age of 21 and below, and 46.9% of the students were at the age of 22 and over 69.8% of the students were composed of female students, and 30.2% of the students were composed of male students. 42.7% of the students were composed of students from the faculty of education, and 57.3% of them were composed of nursing students. Also, while 45.8% of the students were 3<sup>rd</sup> grade students, 54.2% of them were 4<sup>th</sup> grade student.

**Results and Suggestions:** Although there was not a significant difference at the knowledge level of first aid according to gender and department, there was significant high point average of first aid in the upper class compared to sub-class. Also, the point average of first aid did not vary by the place where the family lived, maternal education, paternal education and the state of receiving first aid training.

**Key Words:** First Aid, university students.

### INTRODUCTION

First aid is a drug-free application which is performed on the ground with the existing tools and equipment without seeking for medical equipment until the aid of medical personnel is provided with the aim of saving a person's life or preventing the deterioration of the situation in any case of disease, accident or danger of life. Accident means the events causing unexpected injuries and loss of life and property at an unexpected time. Also,

natural disasters are unavoidable events which are beyond human power occurring at unexpected times like the accidents. When you say accident, traffic accidents, home accidents and occupational accidents come to mind at the most. The fact that people who received first-aid training respond to the casualties in both accidents and natural disasters allows accident victims to be saved with minimum damage. <sup>[1]</sup>

First aider refers to the person who, in accordance with the aim specified in the description of first aid, received first aider certificate by taking at least "Basic First Aid Course" and who performs drug-free applications to the patient or casualty without seeking for medical equipment. [2] Those who will perform first aid should have knowledge about first aid and who have become skillful in this regard. Those who received first-aid training have the necessary knowledge and skills to ensure the continuation of the vital signs of a patient or injured they respond, to prevent the deterioration of the situation and to facilitate healing. [3]

First aid applications performed consciously may be lifesaving and play an important role in the prevention mutilations and in the shortening of the healing process. Unconscious responses performed by those who don't have first aid training may result in serious disabilities and death. As well as the simple applications to be performed in any emergency situation, avoiding some dangerous behaviors is important in saving the person's life. It is possible to reduce losses arising from accidents by 20% with first aid applications to be performed consciously. [4, 5]

Doctor, medical personnel, medical tools and equipments are not needed for first aid. Anyone who knows the first aid principles can perform this by benefiting from environmental opportunities. However, it is important to make a good distinction that whether these rules are correctly known or not. First aid course is compulsory in institutions providing health trainings, however, the fact that to what extent is this course effective and how students taking this course evaluate themselves in terms of applying first aid ability are important. In the faculty of education which is a department that will educate students after graduation, this course is given only to students of classroom teaching department. The levels

of knowledge about first aid are limited due to the lack of the researches carried out for both departments. This situation formed a determining factor in carrying out our study. The study planned for the reasons explained above was carried out to determine the first aid knowledge level of the students.

## **MATERIALS AND METHODS**

**Research Type:** The research was carried out as descriptive.

**Research Time:** This study was carried out between the dates of September 2014 - December 2014.

**Population and Sampling:** 120 nursing students who were receiving training in 3<sup>rd</sup> and 4<sup>th</sup> grade in the Department of Nursing in Health High School and 90 students who were receiving training in 3<sup>rd</sup> and 4<sup>th</sup> grade in the Classroom Teaching Department in Faculty of Education formed the population of the study. All students were included in the scope of the study. The sampling of the study was composed of 192 students as there were students who did not want to participate in the study or who did not completely fill out the questionnaire forms.

**Data Collection:** Data of the study were collected at the end of 2014- 2015 academic year fall semester. Researchers were excluded from the data collection phase for the security of data collection phase (students' states of being under the influence or feeling under pressure etc.), and data were collected by the instructors who were known by the students and who had no concern with this study.

**Data Collection Tools:** In the data collection phase of the study, sociodemographic attributes questionnaire form and "first aid knowledge level survey" was used.

*Sociodemographic attributes questionnaire form:* It is a form examining the demographic attributes of the students prepared by the researchers.

*First aid knowledge level survey:* It is a questionnaire form prepared by a first aid

trainer who had studies in the field of first aid and who had formal certificate in order to determine the students' first aid knowledge levels by scanning the literature.

**Statistical analysis:** Evaluation of data was performed in SPSS 17.0 environment by using number, percentage. As parametric test ANOVA and t test, as

nonparametric test Kruskal-Wallis were used.

**Ethical Aspects of the Research:** In this study, ethics committee approval from ArtvinÇoruh University, written consent from the institutions in which the study was carried out and the informed consent from the participants were received.

## FINDINGS

**Table 1.** Some characteristics of students, the first aid knowledge point averages according to these characteristics and the difference between these point averages

		n	%	Average	Standard Deviation	Significance
*Age	Aged 21 and below	102	53.1	20.99	0.436	t= -3.716
	Aged 22 and above	90	46.9	23.06	0.332	p= 0.009
Gender	Female	134	69.8	22.12	0.315	t= 0.861
	Male	58	30.2	21.58	0.616	p= 0.079
Department	Education faculty students	82	42.7	21.62	0.414	t= -1.355
	Nursing department	110	57.3	22.41	0.378	p= 0.122
*Grade	3 <sup>rd</sup> grade	88	45.8	20.12	0.454	t= -6.469
	4 <sup>th</sup> grade	104	54.2	23.52	0.292	p= 0.001

\* p<0.05

53.1% of the students were at the age of 21 and below group and the first aid knowledge point average of this group was  $20.99 \pm 0.4$ , and 46.9% of the students at the age of 22 and above group and their point average was  $23.06 \pm 0.3$ . The difference between these points were found statistically significant ( $p < 0.05$ ). According to these findings, first aid knowledge points of the students at the age of 22 and above were significantly higher than the points of the student at the age of 21 and below. While 69.8% of the students were female students, 30.2% of the students were male students, and the first aid knowledge points of these groups were  $22.12 \pm 0.3$  and  $21.58 \pm 0.6$  points respectively, and the difference was not statistically significant ( $p > 0.05$ ). While

42.7% of the students were from the faculty of education, 57.3% of the students were nursing students. First aid knowledge point averages of the faculty of education students was  $21.62 \pm 0.4$  point. Although this point average was  $22.41 \pm 0.3$  for nursing students, the difference was observed to be statistically insignificant ( $p > 0.05$ ). Also, 45.8% of them were 3<sup>rd</sup> grade students, and 54.2% of them were 4<sup>th</sup> grade students. The first aid knowledge point averages of these students were  $20.12 \pm 0.4$  and  $23.52 \pm 0.2$  respectively, and this difference between two groups was found significant ( $p < 0.05$ ). According to this finding, 4<sup>th</sup> grade students had significantly higher first-aid knowledge compared to 3<sup>rd</sup> grade students.

**Table 2.** Some demographic characteristics of the students and the first aid knowledge point averages according to these demographic characteristics and the difference between these point averages

The place where the family lived	Province	99	51.6	22.46	0.340	F= 1.930 p= 0.148
	District	59	30.7	21.18	0.564	
	Village	34	17.7	21.85	0.827	
Maternal education	Illiterate	25	13.0	21.28	0.724	KW= 2.463 p= 0.292
	Literate-Elementary School	121	63.0	22.11	0.376	
	Secondary school and above	46	24.0	21.95	0.564	
Paternal education	Illiterate	9	4.7	23.11	0.512	KW= 0.270 p= 0.874
	Literate-Elementary School	86	44.8	21.86	0.472	
	Secondary school and above	97	50.5	21.94	0.384	
The state of receiving first aid training	Those who received	96	50.0	22.47	0.376	t= 1.801
	Those who did not receive	96	50.0	21.44	0.431	p= 0.073

51.6% of the students were living in the province and their first aid point average was  $22.46 \pm 0.3$ , 30.7% of them were living in the district and their point average was  $21.18 \pm 0.5$ , and 17.7% of them were living in the village and their point average was  $21.85 \pm 0.8$ , and the difference between these point averages was not statistically significant ( $p > 0.05$ ). When analyzed the maternal education, the ratio of those whose mothers were illiterate was 13.0% and the first aid point average was  $21.28 \pm 0.7$  points, the ratio of those whose mothers were literate or at the level of elementary school was 63.0% and the point average was  $22.11 \pm 0.3$  points, and the ratio of those whose mothers were at the level of secondary school and above was 24.0% and the point average was  $21.95 \pm 0.5$ , and the difference between these groups was not found significant ( $p > 0.05$ ). The ratio of the students whose fathers were illiterate was 4.7% and the first aid point average of this group was  $23.11 \pm 0.5$  points, the ratio of those whose fathers were literate or at the level of elementary school was 44.8% and the point average was  $21.86 \pm 0.4$  points, and the ratio of those whose fathers were at the level of secondary school and above was 50.5% and the point average was  $21.94 \pm 0.3$ , and the difference between these groups was not statistically significant ( $p > 0.05$ ). While 50% of the students who received first aid training had separately first aid trainings and their first aid point average was  $22.47 \pm 0.3$ , 50% of the students did not receive first aid training and their first aid point average was  $21.44 \pm 0.4$ , and the difference between these groups could not be found significant ( $p > 0.05$ ).

## DISCUSSION

In the study, some characteristics of students, the first aid knowledge point averages according to these characteristics and the difference between these point averages were compared. The fact that the

ages of the students were above 22 made the first aid knowledge points significantly different. Although there is no study to support this finding in the literature, it was considered that the elder students were from the students who received first aid course due to the fact that they were generally final year students and the first aid course was given during the final year.

While 42.7% of the students participating in the study were from the students of faculty of education, 57.3% of them were nursing students. The points of the nursing students were not statistically significant despite they were high. This situation arose from the status of students regarding the fact that they received first aid training or not. Because nearly half of the students (45.8%) were 3<sup>rd</sup> grade students, and the others were (54.2%) 4<sup>th</sup> grade students. First aid course is given during the 6<sup>th</sup> semester in nursing department and during the 7<sup>th</sup> semester in classroom teaching department. As the data were collected at the end of the 7<sup>th</sup> semester, the students who received the course and the students who did not receive the course were equal for both departments. Therefore, standard was provided between two departments, and no significant difference occurred in terms of education. According to this finding, 4<sup>th</sup> grade students had significantly higher first-aid knowledge compared to 3<sup>rd</sup> grade students. In a study carried out in high school students, a statistically significant difference was found between first aid point averages of the students who received first aid course at secondary school and the first aid point averages of the students who did not receive this course. [6] In another study carried out, 37.7% of the pre-school educators stated that they had received first aid course. It was observed that 55,8% of the educators who stated that they had received first aid course benefited from the courses like driving licence etc., and the duration of first aid training of 53,8% of them was less

than 10 hours. [7] When the curriculums of teacher training schools (faculties of education, faculty of science and letters, fine arts, conservatory, faculties of theology) were analyzed by the researchers on the internet environment, it was observed that a special course for first aid was not included in the curriculums except for classroom teaching and physical education departments. Similarly, in another study, 68.4% of the teachers stated that they had not received training concerning the first aid previously. Some of the teacher stating that they received training received this information from the universities they graduated, and the others received from different places (driving schools, mass media, etc.). [8] The fact that teachers received this training from different places did not provide the standard and left first aid training incomplete. For students of nursing department, first aid course must be given in the lower grades. Because students do not know what to do in case of an emergency in addition to occupational courses they received. In this way, students will be able to associate occupational course with first aid course and the persistence will be increased due to the continuous training.

When looking at the maternal and paternal educations in the study, the fact that mother or father was literate or educated did not constitute a significant difference. In spite of this, in another study, the distribution of first aid points were investigated according to educational statuses of the parents. A statistically significant difference was found between the first aid points according to educational status of the parents, and no difference was seen according to educational status of the mothers. [6]

No significant difference was found when the students who had previously received first aid training in anywhere and also received first aid course were compared with the students who

received just first aid course. The reason for this can be associated with the fact that education should be continuous. Similarly, in the trainings related to BLS (Basic Life Support) of nursing students, although % 55 of the students carried out the application steps wholly and completely after the training, the ratio about those who carried out 3 months later decreased to 7.5%. [9] Also in the study carried out by Baysal et al (2007), the fact that the basic life support training was applied in the first grade of Medical Faculty was observed to be useful by 79% for the students as a result of the end of course feedback forms carried out for 1<sup>th</sup> grade students of Medical Faculty in BLS training and the opinions received from the students. Positive results were obtained to a large extent in feedback forms, and the students asked for the repetition of this application every year. [10]

## CONCLUSION

According to the findings of this study;

- First aid knowledge of the students differed significantly according to age, class and the status of receiving first aid course or not,
- First aid knowledge of the students did not differ according to the department, educational status of mother and father, the place where the family lived and the gender.

The following suggestions were made according to these results;

- Giving first aid course in the lower class to nursing students,
- It was suggested that first aid course must be included also in other departments except for the classroom teaching department of the faculties of education.

## Authors' Contributions

Authors may use the following wordings for this section: “ ‘Author 1’ designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. ‘Author 2’ and ‘Author 3’

managed the analyses of the study. ‘Author 3’ managed the literature search. All authors read and approved the final manuscript.”

#### **Competing Interests**

Authors have declared that no competing interests exist.

#### **Ethical Approval**

Informed written consent was obtained prior to the selection of the students and before data was gathered.

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How to cite this article: İşik E, Kanbay Y, Aslan O et al. Investigation of first aid knowledge level of university students and the factors affecting this. *Int J Health Sci Res*. 2015; 5(12):294-299.

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