

Knowledge, Attitude and Practice Towards First Aid Among Kindergarten Teachers of Jimma Town, South West, Ethiopia, 2017

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Abstract

Background: Injury is the leading cause of death in 1-14-year-old in several countries and one in five injuries happen in the schools. Children, therefore, are an important target population that may need first aid interventions. Kindergartens teacher has crucial role in caring for children, supervision and prevention of health hazards. They should be well trained on first aid and emergency control to save children lives. Hence, there is lack of study on knowledge, attitude and practice of first aid in study area.

Methods: Institutional based cross-sectional study design was carried out in Jimma town from April 23-29/2017. Systematic sampling technique method was used to select a total of 152 participants. Data was collected by using pre-tested and structured questionnaire by trained data collectors and then coded and entered to Epi data 3.5.1 and exported to SPSS version 21 for cleaning and analysis. Descriptive statistics like frequency table and graphs were used for data presentation

Result: A total of 141 subjects were participated with a response rate of 93%. Out of the total study, 44% were knowledgeable and 34.8% have positive attitude. Injuries mentioned by respondents that need first aid were 47(33.3%) bleeding, 33(23.4%) fracture, 26(18.4%) nose bleeding, 18(12.8%) epilepsy, 15(10.6%) and 2(1.4%) back and neck injury. Regarding their practical aspect it was 19.9%.

Conclusion: teachers had poor knowledge, poor practice and negative attitude towards first aid in the studied area. So, all concerned bodies should collaborate to create awareness about first aid, its importance and application.

Keywords: knowledge; practice, attitude, kindergarten, first aid.

Background

First aid is an initial action aimed at helping people in suffer or at risk of death and that may be performed by any individual, not only by health professionals. It is applied to injured or ill persons in any health threatening settings in order to save life; prevent degradation of the situation quickly and temporarily with minimal or no medical equipment outside the health care setup before the care provided by the health professional [1-3].

First aid can be provided in all the areas like schools, household, workplace, and recreational areas etc [4].

Intentional (i.e., violent or self-inflicted) and unintentional (i.e., accidental) injuries claim more than 5.8 million lives or 10% of global fatalities annually, making them one of the leading causes of death and morbidity [5]. Many millions of non-fatal events result in life-long disabilities, physically and psychologically, and increase years of life lost due to premature mortality, impacting also their families and their economies as a whole [6].

School is a major place where situations of urgency and emergency occur. It consists in an environment in which injuries may affect students, and the teacher has a significant chance to be present and act during a situation. However, teachers' education-oriented training leads them to have lack self-confidence and qualification to perform first aid procedure [7].

Children (age 0-14) make up about 25 percent of the world's population today and represent up to 31 percent of low and middle-income country (LMIC) populations. The most frequent causes of school related injuries requiring hospitalization are falls; playground equipment related injuries and sports activities; Injury is the leading cause of death in 1-14-year old in a number of countries and one in five injuries happen in school. Children, therefore, are an important target population that may need first aid interventions [8-10].

According to the National safety council's report, on the location at which injuries occur, it was reported that 57% was school related injuries occurred in the school building, school playground or while going or coming back from the school and only 43% were non-school injuries and occurred either at home or in public places [11].

Kindergartens teacher has crucial role in caring for children, supervision and prevention of health hazards. They should be well trained on first aid and emergency control to save children lives and the first aider should have adequate knowledge and skills about what is he doing and be encouraging and reassuring to the victims [12]. So, the purpose of this study is to assess knowledge, attitude and practice of first aid among kindergarten teachers.

Methods

Study Setting

The study was conducted in Jimma town, which is one of the towns in the Oromiya region located 352 kilo meters away from Addis Ababa with estimated total population of 120, 960 of which female accounts 60,136 according to 2007 census. Its weather condition is Woinadega and its annual average rainfall 1200mm and it is located greater than 1400-meter altitude above sea level.

In the city there are four health centers and two hospitals. The town has 26 kindergarten schools and currently there are 231 teachers working in those schools. The study was conducted from April 23 — 29/2017GC.

Study Design

Institutional based cross-sectional study design was carried-out.

Study subjects

This study was confined to teachers working in kindergarten. Those teachers working in selected kindergarten schools and had willingness to participate regardless of their year of experience were recruited. However, teachers who are sick and on annual leave during data collection time were excluded.

Sample size determination

A sample size of 152 was determined by using a single population proportion formula with the following assumptions: since there is no local data for the value of p , prevalence of 50% is taken. D is the expected margin of error (5%), Z , the standard score corresponding to a 95% confidence interval and α , the risk of rejecting the null hypothesis (0.05) and 5 % non-response rate. Since the population of teachers in the town are less than ten thousand (231) the finite correction formula was used.

Sampling technique

The entire Kindergarten of Jimma town was taken. The sample size for each Kindergarten was determined proportionally. To reach the study unit systematic sampling technique was used in the kindergarten. The sampling interval was determined by dividing the total number of teachers in all kindergarten in the specific Kindergarten to the allocated sample size (N/n) which is two. The first teacher was selected randomly.

Data Collection Instrument/Procedures

Data was collected by using pretested, structured self-administered questionnaire which consists of socio-demographic information, knowledge questions, Attitude and Practice of kindergarten teachers on first aid by reviewing related literatures in English version. Data was collected by trained three diploma nurses and one supervisor after being briefed on the purpose of the study and on how to fill adequate information on the questionnaire.

Data Analysis

The collected data were first checked manually for completeness, missed values, unlikely responses and then coded, entered using Epi data version 3.5.1. Then cleaned and analyzed using SPSS version 21. Descriptive statistics were computed to determine frequencies and summary statistics (mean, standard deviation, and percentage) to describe the study population in relation to socio-demographic and other relevant variables. Data was presented using tables, graphs and figures.

Data Quality Control

The data collection tool was translated into local language, Oromifa by experts and was translated back to English by another person to ensure consistency and accuracy.

Training was given to both the data collectors and supervisors for one day on the purpose of the study, data collection tools and procedure, handling ethical issues and maintaining confidentiality and privacy. Each supervisor and Principal investigator were supervised data collectors and checked all the filled questionnaires for completion, clarity and consistency on daily bases. The questionnaire was pre tested on 5% of calculated sample size out the study area before two weeks of the main data collection. The validity of the tool was also approved by experts.

Operational Definitions

Knowledgeable: - Participant who has scored mean and above mean for knowledge questions.

Not knowledgeable: - Participant who has scored below mean for knowledge questions.

Positive attitude: - kindergarten teachers those responded correctly mean and above mean for attitude questions.

Negative attitude: - kindergarten teachers those responded below mean for attitude questions.

Practice of first aid: - in this study practice is the self-reported activities for emergency cases by kindergarten teachers.

Good practice: -participants who has scored mean and above of the practice questions.

Poor practice: - participants who has scored below mean of the practice questions.

Ethical Consideration

Ethical clearance was obtained from the institutional Review Board (IRB) of Jimma University, institute of Health. Official letter was written from school of Nursing and Midwifery. Other necessary permission was gain from Jimma town education bureau. Written and verbal consent was obtained from each participant after thorough explanation of the purpose and the procedures of the study. Participation in the study was on a voluntary base. All responses were kept confidential and anonymous.

Result

Socio-Demographic Characteristics of The Respondents

Among the total of 152 respondents, 141 are completed the questionnaire making the response rate of 93%. All of respondents were females. Forty-eight (34.0%) of the respondent fall in the age group between 20-24 years. Majority of the respondent 81(57.4%) were certified by educational level and serving less than five years were 71 (50.4 %). Eighty-four (59.6%) of respondents were married, 56 (39.7%) of participants were Oromo and 58(41.1%) orthodox religion follower. (See Table 1).

Variable	Response	Frequency	Percent
	20-24	48	34
	25-29	44	31.2
Age of respondents	30-34	35	24.8
	>=35	14	9.9
	Total	141	100
	certificate	81	57.4
	diploma	51	36.2
Educational level	degree	9	6.4
	Total	141	100
	married	84	59.6
	Single	50	35.5
Marital status	divorced	4	2.8
	widowed	3	2.1
	Total	141	100
	Oromo	56	39.7
	Kefa	27	19.1
	Tigre	27	19.1
	Amhara	26	18.4
Ethnicity	Other [¥]	5	3.5
	Total	141	100
	Protestant	34	24.1
	Orthodox	58	41.1
Religion	Muslim	39	27.7
	Catholic	8	5.7
	Other*	2	1.4
	Total	141	100
	<5yrs	71	50.4
	5-10yrs	57	40.4
Service year	10-15yrs	11	7.8
	>15yrs	2	1.4
	Total	141	100
Key: ¥ = Gurage, yem and wolaita * = johva			

Table 1: Socio demographic characteristics of kindergarten teachers in Jimma town, south west Ethiopia, GC 2017.

Knowledge of Kindergarten Teachers on First Aid

The overall knowledge of kindergarten teacher about first aid was 43.9%. (See figure1).

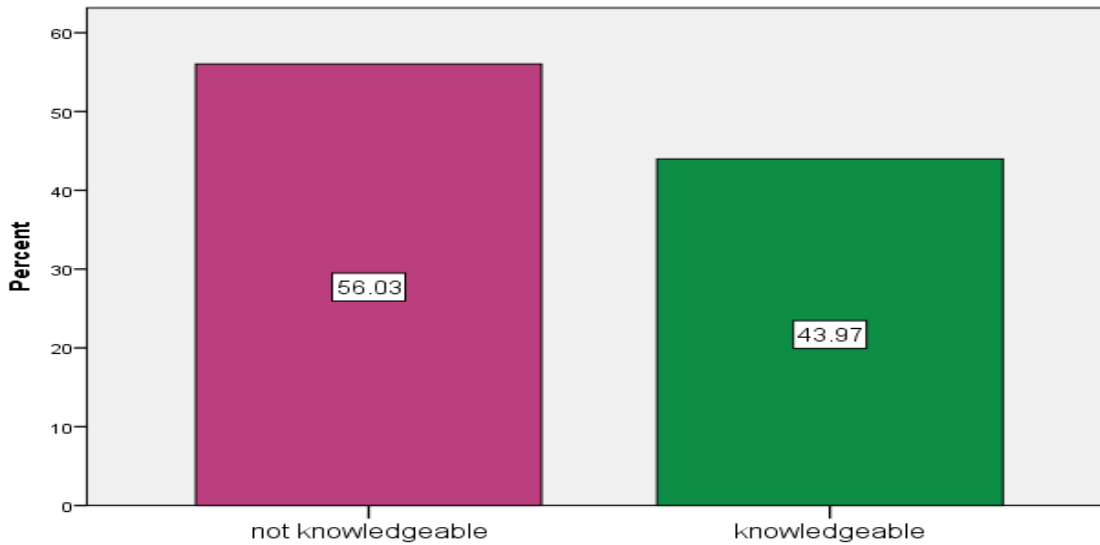


Figure 1: Knowledge level of kindergarten teachers in Jimma town, south west Ethiopia, 2017 GC.

Majority of the respondents 83(82.2%) were know pressing firmly with clean bandage on bleeding part is measure of stop bleeding followed by placing student sitting comfortably with slightly forward and applying uninterrupted pressure by pressing nostrils together is measure for nose bleeding or epistaxis 70(69.3%). (See table 2).

Question	Yes Frequency (%)	No Frequency (%)
First aid measure to stop bleeding from the body	83(82.2%)	18(17.8%)
Giving nothing by mouth is measure of fainting child	53(52.5%)	48(47.5%)
clear air way by placing the child on the side is measures for epileptic	45(44.6%)	56(55.4%)
encircling chest by hands and squeezing is measure for choking child	53(52.5%)	48(47.5%)
avoiding head and neck movement is measure of neck and back injury	40(39.6%)	61(60.4%)
First aid measures for nose bleed/epistaxis	70(69.3%)	31(30.7%)

Table 2: kindergarten teachers answer for specific questions for knowledge assessment in Jimma town, south west Ethiopia, 2017 GC.

Majority of them 52(51.5%) were define first aid as the immediate care given for a victim before arrive health institution, 29(28.7%) a care given in a health institution and 19(18.8%) care given only by health professionals. Among the study participants asked to respond injuries need first aid reported that 47(33.3%) bleeding, 33(23.4%) fracture, 26(18.4%) nose bleeding, 18(12.8%) epilepsys, 15(10.6%) choking and 2(1.4%) were back and neck injury.

Source of Information

One hundred one (71.6%) respondents were heard about first aid. Regarding source of information 37(36.6%) was read from books and 27(26.7%) from media (See figure 2).

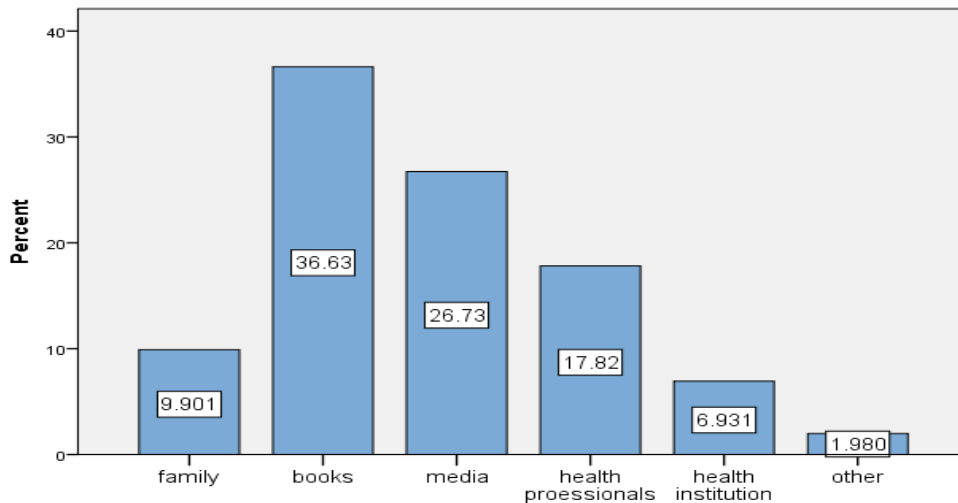


Figure 2: Source of information for first aid to kindergarten teachers in Jimma town, south west Ethiopia, 2017 GC.

Attitude of Kindergarten Teachers on First Aid

Forty-nine (34.75%) of the respondents has negative attitude towards first aid. (See figure 3). Majority of the respondents 62(44.0%) were agree that learning first aid is important for them. Fifty-four (38.3%) of teachers agree that first aid is only effective for adults. From the total respondents 31(22.0%) of them were strongly disagree knowing first aid is not important for schools' teachers and 48(34.0%) agree First aid is not such important to save lives (See table 3).

Attitude questions	Strongly agree N (%)	Agree N (%)	Disagree N (%)	Strongly disagree N (%)
knowing first aid is not important for school teachers	28(19.9%)	42(29.8%)	40(28.4%)	31(22.0%)
It is important for me to learn first aid	44(31.2%)	62(44.0%)	22(15.6%)	13(9.2%)
fair to me to give first aid for victims	37(26.2%)	54(38.3%)	42(29.8%)	8(5.7%)

It is un pleasant for me to give first aid	22(15.6%)	44(31.2%)	45(31.9%)	30(21.3%)
first aid training is important for all student	44(31.2%)	46(32.6%)	37(26.2%)	14(9.9%)
First aid should be given in health care setting	19(13.5%)	56(39.7%)	43(30.5%)	23(16.3%)
First aid is not such important to save lives	20(14.2%)	48(34.0%)	40(28.4%)	33(23.4%)
first aid is only effective for adults	13(9.2%)	54(38.3%)	47(33.3%)	27(19.1%)

Table 3: Attitude of Kindergarten teachers towards first aid in Jimma town, south west Ethiopia, 2017 GC.

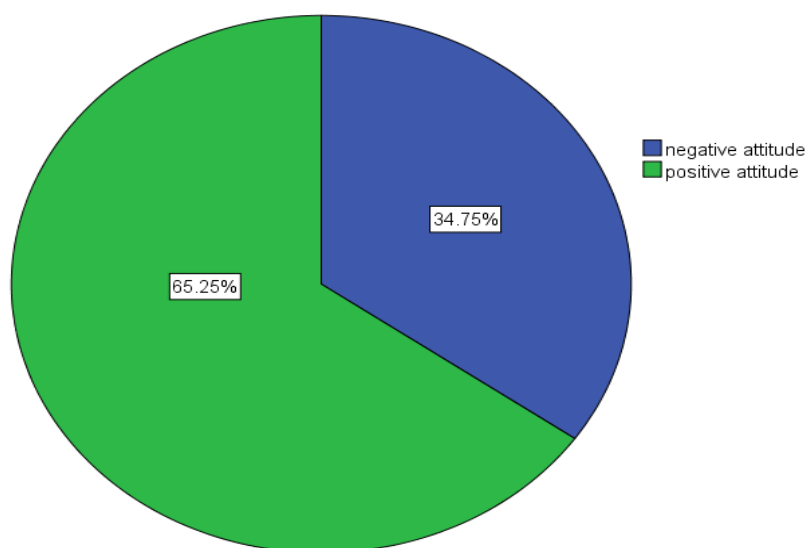


Figure 3: Attitude of respondents towards first aid in Jimma town, south west Ethiopia, 2017 GC.

Practice of Kindergarten Teachers on First Aid

Out of 141 kindergarten teachers, 71(50.4%) had faced a child with in need of first aid in their school. From respondents those had faced a child in need of first aid, 37(52.1%) of them gave first aid to the victim, 62(44.0%) of them transfer to the hospital 6(8.5%) to police station.

Sixty-two (44.0%) of respondents faced a child with bleeding from his/her nose. Out of Sixty-two who faced child with bleeding from his/her nose, 28(44.4%) placed student sitting comfortably with slightly forward, 18(30.2%) called ambulance, 14(22.2%) applied uninterrupted pressure by pressing nostrils together, 2(3.2%) contacted responsible school authority and parent or legal guardian.

Forty-two (29.8%) had encountered a victim a child with seizure/epilepsy. Twenty-five (59.5%) moved surrounding object to avoid, 10(23.8%) left child for free movement, 6(14.3%) avoid giving any drink/food by mouth, only one person was responding that keep air way clear by placing child by side.

Fifty (35.5%) of them had handled victim faced with choking. Twenty-six (52%) of them stood behind the child encircle the child's chest by hand and squeezed, 14(28%) called ambulance, 5(10%) continued until the object expelled, 5(10%) contacted responsible school authority. The overall practice was poor (19.9%).

Discussion

The findings of this study showed that 44% knowledgeable and 34.8% have positive attitude towards first aid, which is similar with the study done in Turkish [13], USA [14] but, higher than study done in Shanghai, China (3.7%), [13]. this discrepancy may be due to socio-demographic & cultural variation and time gap when the study was done.

Injuries mentioned by respondents that need first aid were 33.3% any kind of bleeding, 23.4% fracture, 18.4% nose bleeding, 12.8% epilepsy, 10.6% and 1.4% back and neck injury. Which is different from study done in Shanghai, China [15], this discrepancy may be due to their economic status and the composition of the population.

In this study 34.8% of the respondents had negative attitude towards first aid, which is lower in study done in Mysore (45.4%) [16], this variation may be due to knowledge and socio-cultural difference between the two populations.

According to this study about 50.4% had faced a child with in need of first aid in their school; 52.1% of them gave first aid to the victim, 44.0% of them transfer to the hospital 8.5% to police station. This is nearly similar with the study done in Tumkur India (60% and 55%) respectively [17].

In this study the overall practice of teachers was (19.9%), which is nearly similar with the study done in Tumkur India 18.6% [17] and lower than a study done in Mysore (45.4%) [16] This discrepancy may be due to educational level and attitudinal variation between study participants.

Conclusion

The findings of this study showed that there was poor knowledge, negative attitude and poor practice of first aid in the studied area. Only 44% knowledgeable and 34.8% have positive attitude towards first aid. Injuries mentioned by respondents that need first aid were bleeding, fracture, and nose bleeding, epilepsy, and back and neck injury.

Declarations

List of Abbreviation

GC: Gregorian calendar, **IRB:** Institutional Review Board, **LMIC:** low and middle-income country, **SPSS:** Statistical Package for Social Science

Ethics Approval and Consent to Participant

Ethical clearance and approval letter to conduct the study was obtained from Jimma University institutional review board and a letter of cooperation was taken from the institute of health to Official letter was written from school of Nursing and Midwifery and Jimma town educational bureau. Written and verbal consent was obtained from each participant after thorough explanation of the purpose.

Consent for Publication

Not applicable.

Availability of Data and Materials

The datasets used and analyzed during the current study are available from the corresponding author on reasonable request. The finding of this research will be freely available to any scientist wishing to use them for non-commercial purposes, without breaching participant confidentiality.

Competing Interests

The authors declare that they have no competing interests.

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The research was not funded.

Authors' Contributions

WA and MM was involved in the conception, design, analysis, interpretation and report writing. TT involved in interpretation, manuscript and report writing. All authors read and approved the final manuscript.

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