ORIGINAL RESEARCH

Primary teachers' first aid management of children's school day accidents: Video-assisted teaching method versus lecture method

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ABSTRACT

Background: First aid is the initial care for ill and injured. It helps to urgently manage the health problems of school age children. Therefore, teaching first aids should be compulsory in all schools through advanced methods of teaching strategies. Aim: the current study was conducted to determine the effect of video assisted teaching method versus traditional lecture on primary teachers' knowledge and skills regarding first aids management of children's school day accidents.
Methods: A Comparative research design was used for this study. Sample: simple random sample of 200 primary school teachers was included. Settings: the study was carried out at four primary schools in Shebin-Elkom town and ELShohadaa town, Menoufia Governorate. Tools: two tools were used for data collection. Tool one: teachers' knowledge questionnaire: it consisted of two parts. (a) A structured: socio-demographic questionnaire to obtain demographic data of the studied subjects; (b) Structured knowledge questionnaire regarding first aids measures. Tool two: five points Likert- scale structured performance check list was used to assess degree of improvement in primary school teachers' management skills regarding first aids for children' school day accidents after utilization of Video-assisted teaching method versus Lecture Method.
Results: The study showed a statistical significant improvement in total knowledge score of primary school teachers undergoing video-assisted teaching method regarding first aids of children' school day accidents (28.68 ± 3.77) compared to teachers undergoing traditional lecture (12.77 ± 5.00). Also, there was statistical significant improvement in management skills of primary school teachers undergoing video-assisted teaching method (28.68 ± 3.77) compared to teachers undergoing traditional lecture.
Conclusions: Utilization of video-assisted teaching method was succeeded in achieving significant improvements in the primary school teachers' knowledge and skills regarding first aid of children's school day accidents compared to traditional lecture method. Recommendations: importantly utilizing video-assisted teaching strategy in teaching first aid to promote children's health and improve knowledge and management skills of their caregivers.

Key Words: First aid, Video-assisted teaching method, Traditional lecture

1. INTRODUCTION

Children injuries are growing global public health problems. Thousands of children die each year from injuries or violence, and millions suffer the consequences of non-fatal injuries.[1] In Egypt, 2009, more than 746,000 injured cases were registered in to the Ministry of Health hospitals. Around 38% of

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all injuries occur among children and young adults less than 20 years of age. Furthermore, more than 20,000 people lose their life due to injuries every year, accounting for nearly 1 out of every 10 deaths globally.[2] The most common injuries, whether intentional or non-intentional, include road traffic injuries, drowning, falls, suicide and homicide. Injuries are one of the most leading causes of childhood death and significantly contribute to cause childhood morbidity, long-term disability, and increase healthcare costs in most industrialized countries.[3] Early and appropriate treatment of such emergencies can help reduce morbidity and mortality through first aid measures.[4]

Studies have been emphasized that administering appropriate first aid to students soon after the injuries or unexpected illnesses can be lifesaving. In that case proficient and skillful first aid mangers are a priority. Thus, teachers must acquire urgent first aid training through more advanced teaching strategy to keep students' safe and healthy throughout the school day.[5]

1.1 Literature review

Although the epidemiology of childhood injuries has been well studied in many developed countries, there are still only a few studies done on parental and teachers' knowledge and skills concerning childhood injury.[1] Recent studies have been emphasized that administering appropriate first aid to students soon after the injuries will save their lives and promote their health. Early and appropriate treatment of such emergencies can help reduce morbidity and mortality.[4] In that case proficient and skillful first aid mangers are a priority. Consequently, teachers must acquire first aid training programs based on an illustrating proper teaching methods.[5, 6]

Video modeling is a strategy involving the use of videos to provide modeling of targeted skills.[7] Video technology is used in clinical instruction for acquisition of technical skills and training staff in emergency procedures like resuscitation, tracheal intubations and other emergency medical situations that require urgent first aid management. Also, video conferencing plays an important role in educational process.[8] Further, video materials provide a unique opportunity to present, teach, and internalize authentic information, linguistic, cultural, and visual about the target subject. Because these materials can be edited for presentation, they are also excellent venues for focusing our learners' attention on specific details and for creating exercise materials based on the video itself. In short, judicious use of this material can substantially increase the quantity and quality of time spent on task with the emphasis on knowledge and skills for effective practice.[7] Teaching by videos has many benefits for the learners as it makes them more familiar with the nature

of the skills. Also, while doing practical, there remains no necessity for explaining except educating precautions. This method proves more useful if the learners are told before that they are going to do practical re-demonstration of the previously learned skills.[8] Consequently, the present study aimed to assess the effect of video assisted teaching method versus traditional lecture on primary teachers' knowledge and skills regarding first aids management of children' school day accidents.

1.2 Aim of the study

To assess the effect of video assisted teaching method versus traditional lecture on primary teachers' knowledge and skills regarding first aids management of children' school day accidents.

1.3 Research hypothesis

Primary school teachers who receive first aid measures by video assisted teaching method will be knowledgeable and skilful in the management of children' school day accidents compared to who exposed to traditional lecture.

2. METHODS

2.1 Design

A Comparative research design was utilized.

2.2 Settings

The study was conducted in four primary schools at Menoufia Governerate:

(1) El-Ahmadia primary school
(2) El-Sayida- Kadiga primary school
(3) El-Shaheed Abdel Moneim Riad primary school
(4) El-Shohadaa primary school.

Technique of school selection: All names of the primary schools at Menoufia governorate were put in a bowl then randomly drawing out four of them was done.

2.3 Participants

A simple random sample of 200 primary school teachers was utilized. All names of the teachers at every primary school were put also in a bowl, and then randomly drawing out a number of 50 teachers from each school of the previously mentioned settings was done.

Sample size

From population size 7,000 (number of teachers of primary schools at Menoufia Governorate), a sample size was calculated by using Epi Info[TM] 7 technique rendered 200 participants as a sample for this study at two sided confidence level 95%, power 80%, margin of error accepted 5% and 20%

response distribution rate for planned program on knowledge and skills regarding first aid in selected conditions among primary school teachers according to 9 Maloti.[9]

In terms of the numbers that selected above, the sample size n and margin of error E are given by

$$x = Z(^c/_{100})^2 r (100\text{-}r)$$

$$n = {^{Nx}}/_{[(N\text{-}1)E^2 + x]}$$

$$E = \sqrt{{^{(N\text{-}n)x}}/_{n(N\text{-}1)}}$$

Where *N* is the population size, *r* is the fraction of responses that you are interested in, and *Z*(c/100) is the critical value for the confidence level.

2.4 Data collection tools

The researcher developed the data collection tools after extensive review of the literature related to first aid measures and using video assisted teaching method in management of children's school day accidents *vs.* traditional lecture. It included two constructed tools.

Tool one: C Teachers' knowledge questionnaire: It consisted of two parts:

Part one: A structured: socio-demographic questionnaire to obtain demographic data of the studied subjects.

Part two: Structured knowledge questionnaire regarding first aids measures. It consisted of questionnaire related to first aids of wounds and injuries, bleeding of the gums, epistaxis, foreign body of the eye and ear, chocking, cardiopulmonary resuscitation, *etc*.

Tool two: Five points Likert- scale structured performance check list was used to assess degree of improvement in primary school teachers' management skills regarding first aids for children' school day accidents after utilization of Video-assisted teaching method versus Lecture Method. It included 37 items that divided into 5 major headlines: teacher management of wounds, teacher management of epistaxis, teacher management of fracture, teacher management of choking, and cardio pulmonary resuscitation.

2.5 Reliability of the tools

Reliability was applied by the researcher for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar conditions on one or more occasions. Answers from repeated testing were compared (Test-re-test reliability = 0.7).

2.6 Validity of the tools

They were tested for content validity by jury of five experts in the filed of Community Health Nursing and Pediatric Spe-

cialty to ascertain relevance and completeness.

2.7 Data collection

Data was collected at the end first of August 2013 to 25 November 2014. An official letters were issued from the Faculty of Nursing Menofia University, and send to the directors of all the selected schools after explanation of the aim of the study to get their permission.

2.8 Ethical consideration

A written consent was obtained from teachers to participate in the study. During the initial interview the purpose of the study was explained. Participants were assured that all information would be confidential and their participation in the study was voluntary without any costs and they have the right to refuse to participate in the study. Also, a written approval was obtained from an ethic committee at faculty of nursing, Menoufia University, Egypt.

2.9 Pilot study

The pilot study was conducted on 20 primary school teachers who were excluded from the total sample size. Based on the findings of the pilot study, the necessarily modifications were done accordingly and some items were added, such as the first aid measures related to fracture, gum bleeding and insects bites.

2.10 Procedure of data collection

Implementation of the program

This study hypothesized that Primary school teachers who receive first aid measures by video assisted teaching method will be knowledgeable and skilful in the management of children' school day accidents compared to who exposed to traditional lecture. This was achieved through 12 specific sessions with a number of six sessions for each group (25 subjects) to present the first aid measures for management of common accidents for primary school children by traditional lecture for the first group and through video assisted teaching strategy for the second group in every school setting.

Primarily, the purpose of the study was explained and the subjects' consent to participate was obtained. Also, they were informed about the schedule time and place of training. According to schools' schedule time participants in each school (50 subjects) were divided into two equal groups. Structured sessions about first aid management of children's school day accidents through video teaching strategy Vs traditional lecture were implemented three times weekly with a total number of 6 sessions for each group (25 subjects) within two weeks to assume 16 weeks for all subjects in the four selected settings.

In each school the first group (25 subjects) was given a traditional lecture about first aid management of common accidents of children during school day for two weeks. Also, they were given a learning booklet containing the same knowledge. The second group (25subjects) was given also the same information by video assisted teaching method and the same learning booklet within the second two weeks. The subjects asked to fill the structured knowledge questionnaire regarding first aids measures of common children injuries for about 30 minutes, and 45 minutes for each participant to be observed for re-demonstration of all the procedures that were involved in the observational checklists after utilization of the two teaching methods at the last two sessions consequentially.

Presentation using traditional lecture related items of first aids through data-show: The researcher presented a lecture related to first aid of children common injuries during their school day by a traditional lecture for the first group. The researcher asked the subjects to re-demonstrated procedures as they taught through the lecture.

Presentation of High-Definition videos related items of first aids: The researcher presented videos via the researcher's lab top through data-show for the second group only. Also, the researcher asked the subjects to re-demonstrated procedures as they seen via videos demonstration. The researcher gave copies of the procedures on CDs to the teachers at the end of the data collection.

High-Definition videos were adopted from different internet sites. The content of videos included the following: One video about management of fracture (3 minutes, 11 seconds).[10] two videos about management of choking (1 minute, 26 seconds)[11] and (1 minute, 8 seconds).[12] One video about management of burn (7 minutes, 39 seconds).[13] One video about management of epistaxis (1 minute, 39 seconds).[14] Two videos about artificial respiration and cardio pulmonary resuscitation (1 minute, 13 seconds)[15] and (1 minutes).[16]

2.11 Statistical analysis

The data was collected and entered into the personal computer. Statistical analysis was done using Statistical Package for Social Science (SPSS/version 20) Quantitative data were expressed as mean & standard deviation (X ± SD) and analyzed by applying student t test for comparison of two groups of normally distributed variables and two groups of not normally distributed variables by applying Mann-Whitney Test. Qualitative data were expressed as number and percentage. P-value at .05 was used to determine level of significance.

- P-value > .05 considered statistically non-significant.

- P-value ≤ .05 considered statistically significant.
- P-value ≤ .001 considered highly statistically significant.

3. RESULTS

Table 1 showed distribution of sociodemographic characteristics of the studied sample. It was noticed that, most of the subjects 36.0% and 37.0% who undergone first aid by lecture and video assisted teaching method consequently were in age group 30-35 years old. The mean age (SD) was 30.93 (5.10). In relation to sex, the majority of the subjects 62.0% and 49.0% were male. Concerning their marital status, 83.0% and 71.0% consequently were married. Also, it was estimated that, 66.0% and 60.0% of the studied sample had higher education. Regarding years of experience, 33.0% and 45.0% of the subjects had experienced less than one year in primary education. Unfortunately, the majority of the subjects who trained on first aid by lecture method and video assisted teaching method (88.0%) and (91%) respectively did not attend any previous training courses about first aid.

Table 2 illustrated mean, mean percentage and SD of knowledge variables concerning first aid for selected children's accidents through lecture method Vs video assisted teaching methods. It was observed that, the mean knowledge score of lecture method was (12.77 ± 5.00) compared to (28.68 ± 3.77) of video-assisted teaching method. Also, there was highly statistical significant improvement in all knowledge variables of primary school teachers who receive first aids by video-assisted teaching method where $P < .001$.

Table 3 clarified frequency and percentage distribution of knowledge variables concerning first aid for selected children's accidents through lecture method *vs.* video assisted teaching methods. It was oblivious that, the percentage distribution of total knowledge score of primary school teachers who receive first aids by lecture method Vs video-assisted teaching method was (67.0% poor, 33.0% fair, and 0.0% good) compared to (4.0% poor, 54.0% fair and 42% good) respectively. A highly statistical significant improvement in all knowledge variables of primary school teachers who receive first aids by video-assisted teaching method was noticed where $P < .001$.

Table 4 showed the distribution of total practice score of the studied sample regarding first aid of children's school day accidents. The present study clarified that, there was statistical significant improvement in total practice score of the studied group who undergone Video-assisted teaching method Compared to the studied group who undergone lecture method regarding first aid of common students' school day accidents.

Table 1. Sociodemographic characteristics of the studied sample (n = 200)

Sociodemographic characteristics	Lecture method (n = 100)		Video-assisted teaching method (n = 100)		Statistics
	No.	%	No.	%	
Age (years):					
20 < 25	8	8.0	11	11.0	$\chi^2 = 0.66$
25 < 30	32	32.0	29	29.0	$P = .88$
30 < 35	36	36.0	37	37.0	NS
35 and above	24	24.0	23	23.0	
Range	22.00-45.00		21.00-40.00		$T = 0.24$
Mean ± SD	31.09 ± 4.11		30.93 ± 5.10		$P = 0.81$
					NS
Sex:					$\chi^2 = 2.92$
Male	62	62.0	49	49.0	$P = .09$
Female	38	38.0	51	51.0	NS
Level of education:					
Medium degree	27	27.0	31	31.0	$\chi^2 = 0.96$
Associated degree	66	66.0	60	60.0	$P = .81$
High education	4	4.0	6	6.0	NS
Post graduate studies	3	3.0	3	3.0	
Years of experience:					
< 1 year	33	33.0	45	45.0	$\chi^2 = 3.73$
1-5 years	38	38.0	27	27.0	$P = .15$
5-10 years	29	29.0	28	28.0	NS
Attending training courses on first aid:					$\chi^2 = 0.21$
Yes	12	12.0	9	9.0	$P = .64$
No	88	88.0	91	91.0	NS

Note. NS: $P > .05$

Table 2. Mean, mean percentage and SD of knowledge variables concerning first aid for selected children's accidents through lecture method *vs.* video assisted teaching methods

Knowledge variables	Maximum score	Mean	Mean percentage	SD
General Information about the child first aid:				
L.M	5	2.13	42.6	1.13
VAT.M	5	3.91	78.2	0.82
P value **	< .001			
First aid on wound and injury:				
L.M	14	4.95	35.4	1.59
VAT.M	14	9.07	64.8	1.35
P value*	< .001			
First aid for gum bleeding & epistaxis:				
L.M	4	0.72	18	0.73
VAT.M	4	2.40	60.0	0.65
P value**	< .001			
First aid for cases of fainting:				
LM	2	0.77	38.5	0.81
VATM	2	1.38	69.0	0.52
P value**	< .001			
First aid for epilepsy:				
LM	2	0.50	25.0	0.59
VATM	2	1.67	83.5	0.49
P value**	< .001			
Cardiopulmonary arrest:				
LM	2	0.61	30.5	0.64
VATM	2	1.36	68.0	0.73
P value**	< .001			
First aid for the case of Fracture:				
LM	1	0.25	25.0	0.43
VATM	1	0.80	80.0	0.40
P value**	< .001			
First aid for choking case:				
LM	1	0.23	23.0	0.42
VATM	1	0.79	79.0	0.40
P value**	< .001			
Total knowledge score:				
L.M	41	12.77	31.1	5.00
VAT.M	41	28.68	70.0	3.77
P value**	< .001			

Note. L.M= Lecture Method; VAT.M= Video-assisted teaching method

Table 3. Frequency and percentage distribution of knowledge variables concerning first aid for selected children's accidents through lecture method *vs.* video assisted teaching methods

Knowledge variables	Poor (< 40%)		Fair (40-<80%)		Good (> 80%)	
	No.	%	No.	%	No.	%
General Information about first aid measures:						
L.M	54	54.0	40	40.0	6	6.0
VAT.M	5	5.0	24	24.0	71	71.0
P value	< .001					
First aid on wound and injury:						
LM	68	68.0	32	32.0	0	0.0
VATM	4	4.0	52	52.0	44	44.0
P value	< .001					
First aid for gum bleeding & epistaxis:						
L.M	86	86.0	13	13.0	1	1.0
VAT.M	9	9.0	42	42.0	49	49.0
P value	< .001					
First aid for cases of fainting:						
LM	47	47.0	29	29.0	24	24.0
VATM	2	2.0	58	58.0	40	40.0
P value	< .001					
First aid for epilepsy:						
L.M	55	55.0	40	40.0	5	5.0
VAT.M	1	1.0	31	31.0	68	68.0
P value	< .001					
First aid for cardiopulmonary resuscitation:						
L.M	49	49.0	42	42.0	9	9.0
VAT.M	15	15.0	38	38.0	47	47.0
P value	< .001					
First aid for the case of fracture:						
L.M	75	75.0	0	0.0	25	25.0
VAT.M	20	20.0	0	0.0	80	80.0
P value	< .001					
First aid for choking case:						
L.M	77	77.0	0	0.0	23	23.0
VAT.M	21	21.0	0	0.0	79	79.0
P value	< .001					
Total knowledge level:						
L.M	67	67.0	33	33.0	0	0.0
VAT.M	4	4.0	54	54.0	42	42.0
P value	< .001					

Note. Analysis using χ² test

Table 4. Distribution of total practice score of the studied sample regarding first aid management of selected students' school day accidents

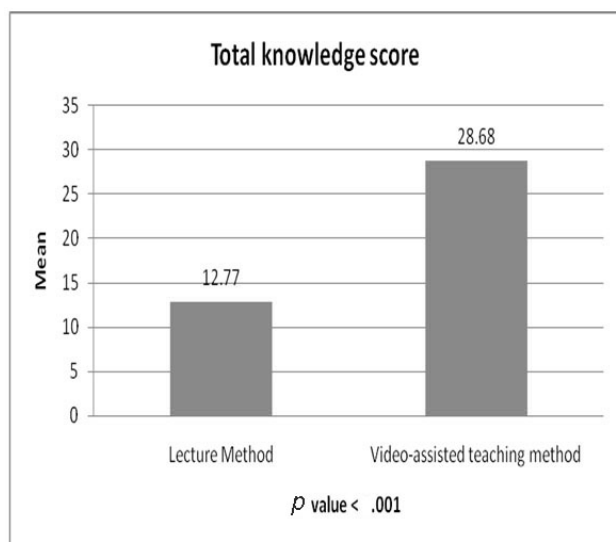| Total practice score of the studied sample	Lecture method (n = 100)	Video-assisted teaching method (n = 100)	Statistics
Wound: (total score = 24)			*t* = 52.61
Range	7.00-11.00	15.00-23.00	*P* < .001
Mean ± SD	8.95 ± 0.88	19.87 ± 1.88	HS
Epistaxis: (total score = 28)			*t* = 40.10
Range	9.00-13.00	17.00-28.00	*P* < .001
Mean ± SD	10.45 ± 0.92	23.88 ± 3.22	HS
Fracture: (total score = 16)			*t* = 51.92
Range	5.00-8.00	10.00-16.00	*P* < .001
Mean ± SD	6.33 ± 0.72	13.82 ± 1.25	HS
Choking: (total score = 48)			*t* = 47.18
Range	14.00-23.00	29.00-46.00	*P* < .001
Mean ± SD	18.28 ± 2.03	38.98 ± 3.89	HS
Cardio pulmonary resuscitation: (total score = 28)			*t* = 43.94
Range	7.00-16.00	18.00-27.00	*P* < .001
Mean ± SD	10.82 ± 1.59	22.89 ± 2.24	HS
Total score of Teachers' Practices: (total score = 144)			*t* = 61.08
Range	46.00-69.00	93.00-135.00	*P* < .001
Mean ± SD	54.83 ± 4.03	119.44 ± 9.78	HS

Note. HS: *P* < .001

Figures 1 showed the distribution of total knowledge score of the studied sample regarding first aid of selected children's conditions by lecture methods *vs.* video-assisted teaching method. The present study clarified that, there was statistical significant improvement in total mean knowledge score of the studied subjects who undergone Video-assisted teaching method (28.68) compared to (12.77) who undergone lecture method regarding first aid of selected children's conditions.

should be well trained on first aid and emergency control to save children lives.[4] Video materials provide a unique opportunity to present, teach, and internalize authentic information, linguistic, cultural, and visual about the target subject.[17] So, the present study aims to assess the effect of a video assisted teaching method versus traditional lecture on primary teachers' knowledge and skills regarding first aids management of children' school day accidents.
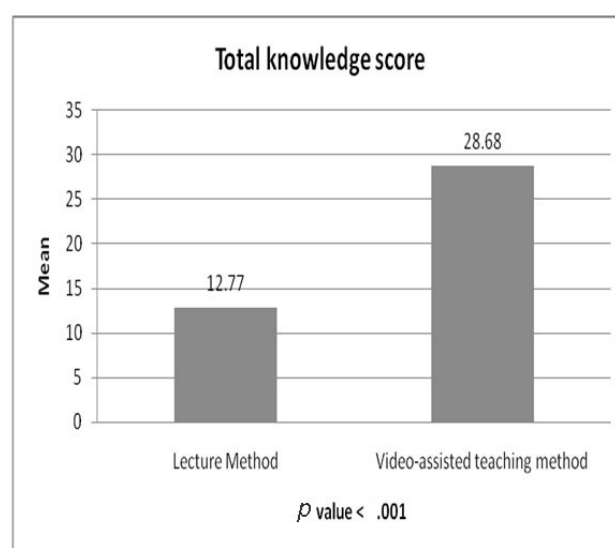

Figure 1. Distribution total knowledge score of the studied sample regarding first aid of selected children's condition by lecture methods *vs.* video-assisted teaching method
HS: P < .001

Figure 2. Distribution total knowledge level of the studied sample regarding first aid of selected children's condition by lecture methods *vs.* video-assisted teaching method
HS: P < .001

Figures 2 indicated the distribution of total knowledge level of the studied sample regarding first aid of selected children's conditions by lecture methods *vs.* video-assisted teaching method. The present study indicated that, more than half of the primary school teachers (67.0%) who undergone lecture method had poor knowledge level compared to (43.0%) who undergone video-assisted teaching method had good knowledge level. There was a highly statistical significant difference was found between lecture method and video-assisted teaching method in improving knowledge level of the studied sample regarding first aid of students' school day accidents where $p = .001$.

4. DISCUSSION

Primary school children constitute a major category of the total population in Egypt and worldwide. They are exposed to injuries and accidents due to curiosity, lack of experience and increased mobility. Day care institutions for these children increased nowadays. The primary school teacher has crucial role in caring for primary school children through supervision and prevention of health hazards. Also, they

The result of the present study covered six main areas as follows: firstly, socio-demographic characteristic of the studied subjects; secondly, mean, mean percentage and SD of knowledge variables of the studied subjects; thirdly, frequency and percentage distribution of knowledge variables of the studied subjects; fourthly, Distribution of total practice score of the studied sample; fifthly, distribution of total knowledge score of the studied sample; lastly, distribution of total knowledge level of the studied sample.

Concerning, distribution of sociodemographic characteristics of the studied sample. In relation to attending training courses on first aid: the present study revealed that, the highest percentage of the studied sample didn't attend any training courses. The result comes in agreement with Maloti[9] who conducted a study to assess effectiveness of structured teaching module on first aid among teachers. He reported that, the minority of teachers had not any exposure to in-service education related to first aid.

Regarding, mean, mean percentage and SD of knowledge variables concerning first aid for selected children's accidents

through lecture method *vs.* video assisted teaching methods of the studied subjects. It was observed that, highly statistical significant difference was found between mean knowledge score of studied subjects who undergone first aid through lecture method *vs.* video-assisted teaching method. Also, there was highly statistical significant improvement in all knowledge variables of primary school teachers who receive first aids by video-assisted teaching method.

This result comes in agreement with Bener *et al.*[18] who conducted a study to assess effectiveness of two teaching strategies (lecture and video presentation) in selected health problems of primary school children's among primary school teachers in Bangalori. The results revealed that, the utilized teaching strategies increased knowledge score of the primary school teachers. Also, his result indicated significant increase in knowledge level of the subjects who undergone video assisted teaching than the subjects who undergone lecture only. The result of the current study was expected because the subjects who receive first aid sessions by video-assisted teaching method acquired knowledge and skills through observation and listening rather than listening only by lecture teaching method.

Also, this finding is similar to what was reported by Nikopoulou & Nikopoulos *et al.*[19] who evaluated the impact of video-based versus traditional lectures on student learning at United Kingdom. The authors reported that all students demonstrated a slight superiority of video-based lectures over traditional ones with remarkable increase of correct responses from an average of 15.5% during baseline to an average of 60% during intervention was recorded for the quizzes that video-based lectures were designed for, irrespectively of the topic. Moreover, a similar finding was reported by Rajesh & Swamy[20] who assessed the effectiveness of video-assisted teaching program on knowledge regarding non-pharmacological pain relieving intervention for children among Indian staff nurses in selected hospital, and reported that the video assisted teaching program was significantly effective in improving the knowledge of the staff nurses regarding non-pharmacological pain relieving intervention for children. Those results may be contributed to prove the best effect of using video technology in teaching.

Further, the finding of the present study is supported by Sunikumari[21] who conducted a study to evaluate the effectiveness of lecture demonstration versus video-assisted teaching on knowledge and practice of breastfeeding technique among primipara in Pune city, India. A comparative study was done on 60 samples. 30 samples received lecture on breast feeding technique and 30 samples are provided video-assisted teaching, after pre-test. On 7 days after posttest was

administered, finding revealed that there is significant difference in knowledge scores between lecture demonstration and video-assisted teaching. Moreover, similar finding was reported by Connolly & colleagues[22] who demonstrated basic life support in schools in Northern Ireland through video-assisted teaching and found that, children showed a highly significant increase in level of knowledge and practice following the well designed training session.

Regarding, frequency and percentage distribution of knowledge variables concerning first aid for selected children's accidents through lecture method *vs.* video assisted teaching methods. It was noticed that, the percentage distribution of total knowledge score of primary school teachers who receive first aids by video-assisted teaching method was higher than percentage distribution of total knowledge score of studied subjects who receive first aid through lecture method. Also, there was highly statistical significant improvement in all knowledge variables of primary school teachers who receive first aids through video-assisted teaching method. These finding is supported by Mahmoud & Elsayed[23] who designed and implemented a first aid program using video teaching method for employee's female health colleges at Najran University in Saudi Arabian. The study's authors reported that, there was a significant statistical difference in participants' total knowledge score regarding first aid before and immediately after the implementation of the program (p = .000) and also between immediately after the implementation of the program and after 6 months on follow up (p = .002).

Also, this finding is similar to what was reported by Prabhu[24] who performed a study for a comparison of traditional versus video based teaching on neurological assessment among undergraduate Indian nursing students. He reported that, video based teaching was effective in improving knowledge and skill of undergraduate nursing students on neurological assessment. Indeed, this actually reflect that video teaching material considered one of the best teaching strategies in teaching first aid measures.

As regard to distribution of total practice score of the studied sample regarding first aid management of selected children's school day accidents. The present study clarified that, there was statistical significant improvement in total practice score of the studied group who undergone Video-assisted teaching method compared to the studied group who undergone lecture method regarding first aid of common students' school day accidents. The current result is consistent with Ergenekona[25] who examined teaching basic first-aid skills regarding home accidents of children with autism through video modeling in Turkish primary schools. The author re-

ported that, the first aid skills training package which consists of reading a story, forming a simulation situation related to the target behavior and watching the video about the simulation was found to be effective in teaching basic first-aid skills to children with autism.

In addition, a similar study was conducted by Mehrpour et al.[26] who examined the effect of using a supplemental video teaching tool on enhancing splinting skills between two groups of medical students from three universities hospitals at Tehran and Iran. The study's results revealed that the participants in the educational video group performed substantially better than the students in the traditional teaching group. Moreover, similar finding was reported by Friedman[27] who examined the effect of video-assisted structured teaching on improving aseptic technique skills among two groups of Canadian medical students. The study results demonstrated a significant improvement in aseptic technique of the two studied groups after utilization of video intervention, which reflects, Video teaching has been shown to be a valuable tool in improving performance.

In relation to, distribution of total knowledge score and total knowledge level of the studied sample regarding first aid of selected children's conditions by lecture methods Vs video-assisted teaching method. The present study clarified that, there were statistical significant improvement in total mean knowledge score and total knowledge level of the studied subjects who undergone Video-assisted teaching method. This result supported by Gagiliardi et al.[28] who studied first aid training and emergency care by video methods on 250 public school teachers. The study results indicated that, the majority of the subjects were shown significant improvement in their knowledge score and knowledge level.

Also, the finding of the current study supported by Al Hammad & Salama[29] who evaluated the effectiveness of infant oral health care educational intervention, in the form of a power point and video presentation in King Saudi University in Riyadh city. The authors reported that, the study participants demonstrated greater interest and increased knowledge concerning maintenance of infant oral health through video presentation. The findings of the current study are expected because teaching first aid through visual teaching methods was shown to increase acquisition of information and improve accuracy of skills through utilization of many senses. So, it is approved that, video assisted teaching is more effective than other traditional teaching strategies in improving learners' knowledge and skills.

5. CONCLUSIONS

It was concluded that, there was a statistical significant improvement in total knowledge score, total knowledge level and first aid management skills of primary school teachers undergoing video-assisted teaching method concerning first aid of children's school day accidents. Consequently, utilization of video-assisted teaching method was succeeded in achieving significant improvements in the primary school teachers' knowledge and management skills regarding first aids for children's school day accidents compared to traditional lecture method.

Recommendations

The study recommended to importantly utilizing video-assisted teaching strategy in teaching first aid measures to promote children's health and improve knowledge and skills of their caregivers.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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