

# Comparative Analysis of Knowledge, Attitude and Practices of First Aid among Private and Public School Teachers of Karachi

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## Abstract

**Objective:** This study assesses first-aid facilities within school premises and assessment of teachers on first aid training. The objective was to assess and compare the first aid knowledge, attitude and practice among teachers from both public and private sector of some schools in Karachi.

**Methods:** The study was cross-sectional and was conducted from March 2018 to September 2019. All participants were included after the informed consent and all of them were full-time teachers from both public and private sector schools. All of them were below 70 years and had minimum one year experience at least. Data was collected through the questionnaire method.

**Results:** Total 384 teachers were included, out of which, 106 were from the public sector and 278 from the private sector. Also, 53% of public and 54% of private- sector teachers had performed first aid in their professional life. Only 27% of public and 40% private teachers think that they are able to handle emergency situations and have enough first aid knowledge. Out of all the teachers participated in, only 27% of public sector teachers think that they have sufficient knowledge regarding first aid, that they can handle emergency situation on their own. On the other hand, 40% of private-sector teachers have enough first aid knowledge to handle emergency cases on their own in schools.

**Conclusion:** Knowledge and attitude regarding first aid training and management is unsatisfactory among the teachers at schools in Karachi. Public sector school teachers have a poor understanding of knowledge and practice of first aid as compared to the private sector. Although not enough but private sector schools do recognize the importance of first aid training more than public sector schools.

**Keywords:** first aid, private school, public school, teachers.

**IRB:** Approved by the Ethical Review Committee of Bahria University Medical and Dental College. Ref# ERC22-2019. Dated: 24<sup>th</sup> July 2019.

**Citation:** Shahid F, Alyea A, Ashraf M, Ayaz A. Comparative Analysis of Knowledge, Attitude and Practices of First Aid among Private and Public School Teachers of Karachi [Online]. *Annals ASH & KMDC*; 28(1)

(ASH & KMDC 28(1):29;2023)

## Introduction

First aid is the initial medical care that is given as soon as possible after one is hurt in an accident or suddenly becomes ill. First aid knowledge could be life-saving for unexpected injuries and illnesses<sup>1</sup>. Vasilopoulos et al reported that when teachers were asked about first aid knowledge 65.1% of teachers gave wrong answers about aid

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**Date of Submission:** 17th November 2022

**Date of Acceptance:** 27th Feb 2023

treatment in epistaxis and 63.5% of teachers gave wrong answers regarding bee sting<sup>2</sup>. Teachers are usually the first ones to witness and handle the accidental injuries of children during school timings. It was evaluated that 11.6% of accidental injuries occurred during physical activity and 28.1 % of injuries occurred in which physical activities are contributing factors<sup>3</sup>. Approximately 20% of children with history of allergy had experienced their first episode in school environment<sup>3</sup>. Out of total accidental injuries that resulted from or during physical activity almost 20 % of these injuries were witnessed during school timing. Stomach pain was most frequently encountered medical emergency in schools, first aid kit was found in some schools but its contents were not enough in any of them<sup>4</sup>.

School teachers assume responsibilities not only as educators but also as caregivers who must guarantee the safety and well-being of children while at school. In case of any accidents, teachers are usually the first bystanders, which would increase their responsibilities regarding provision of first aid measures to the injured student. As the school health team members may not be available all the time, the teacher is often forced to assume some of their roles. Therefore, teachers should be well-versed in first aid knowledge and skill. However, they may tend to act correctly when faced with incidents of burns, bruises, and fractures, but in case of life-threatening situations, only few would be able to provide the appropriate first aid<sup>5</sup>.

It was evaluated that 77.5% of teachers had encountered in school timing that required immediate attention and only 12.5% school teachers had pretty good first aid knowledge and 10 % of school teachers know nothing about general first aid treatment<sup>6</sup>. It was also evaluated that more than 70% of accidental injuries were witnessed in boys of 10-14 years of age which indicated greater involvement of boys in physical work, approximately one-half of accidents involved cuts and about quarter results from fractures. Head, Arms, and Knees were the most common sites of the body involved in injuries<sup>7</sup>. It was calculated that one third of teachers had absolutely no knowledge regarding first aid treatment required during accidental incidents encountered in schools and 40% of teachers had zero experience regarding CPR and have never given CPR in their whole professional life although 17% of teachers said that they had experienced at least one severe accidental injury in their professional life<sup>8</sup>. In recent years strategies have been designed to meet the need for first aid training among school teachers and making them able to handle such incidents in a better way<sup>9</sup>. Children and teenagers of age group seventeen and younger may experience maximum number of injuries per year that causes children and their families to suffer from emotional and financial crises and also cause academic loss. It was also found that children skipped almost 10 million days due to these inju-

ries which also meant that if we considered a total of 100 students among them approximately 22 skipped school per day due to injuries experienced in school timing<sup>10</sup>. In the playground, children suffered from different types of injuries ranging from minor ones like cuts and abrasions and though serious ones were also witnessed, for example brain injuries and broken bones. Children also suffered injuries from swings and jumping ropes. Sports injuries that were encountered most of the time by high school students included joint pain, joint dislocation, muscle pain, ligament sprains, breaking of bones, concussions, loss of body fluid causing dehydration and heatstroke.

The main reason that we took up this research as our task is that it was a much neglected topic in Pakistan<sup>8</sup> whereas it had immense importance worldwide<sup>8</sup> hence, we wanted to highlight the attention that the issue needed. Basically accident or something that could happen anywhere anytime especially in schools this meant that the responsible and authorized personnel should have adequate training in first-aid management so that initial treatment could be given time to avoid any severe loss or mishaps that may happen. The objective of the study was to assess first aid knowledge, attitude and practice among teachers belonging to both public and private sector schools and to compare this knowledge, attitude and practice between private and public school teachers.

### Materials and Methods

The study design was cross-sectional and was conducted from March 2018 to September 2019. Non-probability convenient sampling technique was used to recruit the participants of the study. All participants have given informed consent and all of them are full-time teachers from both public and private sector schools.

All of them have ages from 18- 60 and have a minimum of one year experience at least. Data was collected through structural interview-based questionnaire method attached in annexure I and derived from the validated questionnaire from<sup>11</sup>.

The study setting was different schools chosen randomly including public and private sectors. The private sectors schools were Bahria college Sabir SRE, Aisha Bhawani School, St. Joseph convent school, St. Patrick convent school, Clifton public school whereas the public sector schools that were selected KDA boys/girls secondary high school, Government Girls /Boys Primary school (Sachal goth), Government boys/girls primary school (race club), New Grammar government boys secondary school. The sample size was 384 calculated through Epi-info calculator taking an estimate of 50% of first aid knowledge among teachers, with level of confidence of 95% and absolute precision of 5%.

Inclusion Criteria was minimum 1 year experience in teaching in a school. Exclusion Criteria Ages below 18 and above 60 years old. The data was analyzed using SPSS software version 22. All the quantitative variables were analyzed into mean and standard deviation values and qualitative variables as frequency and percentages.

**Results**

The response rate of our study was 100%. There were around total 384 teachers who participated in the questionnaire. Out of 348 teachers who participated in this research 97(25.2%) were from the public sector and 268(75.8%) were from the private sector. From those, 278 were females and 39 were males. Most of them were from age 30 to 45.

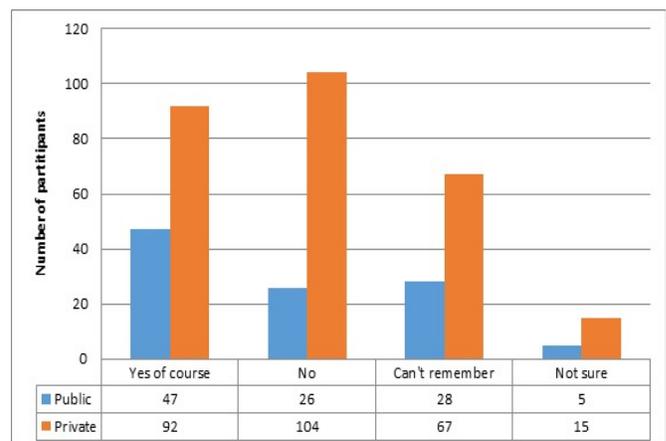
Teachers participated had minimum experience of 1 year and a maximum of 30 years. The table 1 shows that out of 384 teachers, 209 (54.4%) claimed that they have performed first aid in their professional life, out of them 152 (72.3%) belonged to private and only 48 (27.2%) belong to public sector. 131(34.5%) have had never faced this situation. Fifty three percent of public sector and 54% of private sector have performed first aid in their professional life. According to figure 2 out of 348, only 139 (36.1%) remembered medical emergency number at the moment, 130 (33.2%) had no idea and remaining 111 (29.3%) were not sure about the number or could not recall it at the moment. 28(29.1-

%) of the public sector and 88 (33.4%) of private sector had remembered medical emergency number at the moment.

In table 2 it is clearly depicted that from total 384, 128 (33%) believed that their school has enough first aid facilities to cater emergency situations. Twenty two percent (85) believed that they do not, and 37% (145) believed that they have but need improve. Fifteen (16.5%) of public and 104 (39.4%) of private school teachers believed that their school has enough first aid facilities to handle emergency situations. According to the chart shown in figure 3 out of all the teachers participated in only 26 (27.9%) of public sector teachers thought that they had sufficient knowledge regarding first aid, that they could handle emergency situation on their own. On the other hand, 114 (40.8%) of private-sector teachers had enough first aid knowledge to handle emergency cases on their own in schools.

**Table 1.** Provision of first aid training in professional life (n=384)

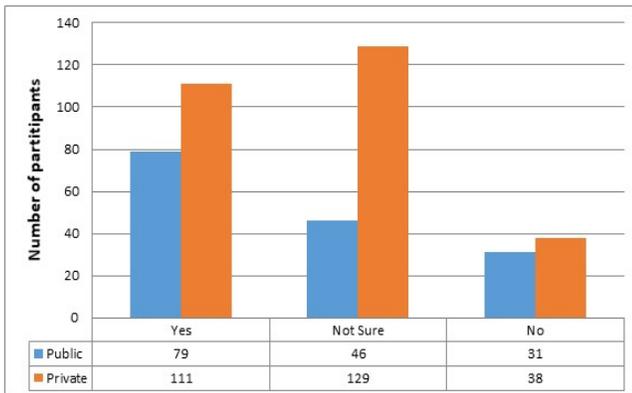
		Have you ever performed first aid in your professional life?				
		Yes of course	No	May be	Don't Remember	
Type of School	Public	57	35	6	8	106
	Private	152	96	22	8	278
Total		209	131	28	16	384



**Fig 2.** Recalling of medical emergency number among private and public sector (n=384)

**Table 2.** Availability of first aid facilities at schools to handle emergency cases (384)

		Do you think that your school has enough first aid facilities to handle emergency cases?				Total
		Yes, we have	No, we don't	We have but need improvement	No idea	
Type of School	Public	9	43	39	6	97
	Private	108	42	106	20	276
	Total	117	85	145	26	373



**Fig 3.** Knowledge of teachers regarding first aid among private and public sectors (n=384)

**Discussion**

School going children constitute a major part of the gross population of Pakistan and across the world. Due to curiosity, increased mobility and lack of experience, children are vulnerable to injuries and accidents<sup>12</sup>. Apart from teaching, teachers are a pivotal character for children because they supervise and care for their health related issues. School teachers act as the guardians of the students so they need to be equipped with the adequate knowledge regarding first aid practices<sup>13</sup>. In the present study, attempt was made to assess the first-aid facilities in schools and preparedness of the teachers and staff to handle medical emergencies.

In this study stomachache was reported to be the most common ailment among school children requiring first aid treatment. Various studies have mentioned stomachache as one of the most commonly occurring symptom in children<sup>14,15</sup>. However, Haugland, in his study, based on an analysis of data from a World Health Organization (WHO) cro-

ss-national survey on health behavior in school children, conducted between 1983-1994 reported abdominal pains as the most common symptom in children<sup>16</sup>. Children of growing age are strength for any Nation that's why their safety and health is a matter of great importance. Children spend major time of their day in school. So school and its environment play a major part in their safety. Students are exposed to many dangers and risks in the school environment and encounter injuries<sup>17</sup>. They are totally depending on teachers in to handle emergency situations so proper knowledge and training of teachers to handle such conditions play a vital role in the future of those injuries and mishandling can lead to dangerous outcomes even from trivial injuries<sup>17</sup>.

A similar study was conducted in Karachi in which 209 teachers participated and 72.7% were from the private sector. In this study, stomachache came out to be the most commonly encountered medical emergency in school. This study shows that 68.42% of teachers in our sample size have not received any first aid management training. This also shows that however in some schools first aid facilities are available but they are very much unsatisfactory. Similarly in our study, we also found out that the majority of teachers have major lack of first aid to handle emergency situations on their own and the majority of them admitted that their school does not have sufficient first aid management system as mentioned in the results.

Our study also discusses, comparing private and public school teachers in our sample size in regard to their first aid knowledge and we found out that 40% of private have enough knowledge of handling emergency situations. On the contrary 27% of public school teachers don't possess such knowledge.

Similar study was also conducted in different schools in Karachi 2018<sup>18</sup>, among the participants, 84% were females. Participants had inadequate knowledge of first aid and the attitude towards first aid management was found to be positive and more than 90% of the respondents were ready to

be trained for First Aid management. Data showed unsatisfactory results to manage common childhood injuries at school. Most of participants had poor knowledge regarding the management of epistaxis, choking, fainting, and knocked out tooth. It was concluded from the study that although the overall attitude of the school teachers regarding first aid practices was favorable, levels of knowledge as well as practice of first aid found to be inadequate and many recognized the need for the introduction of the formal first aid training program at the school level<sup>18</sup>.

The results were compared with another study conducted in Saudi Arabia reported that more than half of teachers 62.88% did not attend any training about first aid and 51.26% had poor knowledge, however, 95% had a positive attitude<sup>19</sup>. Another study demonstrated that there was an unsatisfactory level of first aid knowledge among primary school teachers<sup>20</sup>. Another study from Al-Robaiaay indicated that sports teachers had poor knowledge about first aid. In Madinah, 44.76% was the percentage of good first aid knowledge of overall school instructors. They also measured 60.55% of school instructors have a positive attitude toward first aid training<sup>21</sup>.

There are some of the limitations of the research as study includes only 25% of teachers from the public sector which is less as compared to the private sector this is because private schools are easily accessible and approachable as compared to the public sector. More assessment and evaluation in the public sector would have further help in understanding of problem faced by students in public sector schools regarding first aid.

The recommendations of the study are more teachers from the public sector should be included for more reliable results and for better comparison of two sectors. Knowledge and opinion about more emergency situations should be asked for more proper assessment. First aid training and management should be made compulsory in all public and private sector schools. Training programs and seminars should be conducted more frequently. A proper budget should be allocated in public sector

schools from the government for first aid management and teachers should be assessed regularly by the government.

## **Conclusion**

First aid knowledge and training of both private and public sector school teachers is not highly unsatisfactory but knowledge of public sector school teachers in our sample size is comparatively worse. Some of the private sector schools have appropriate facilities to handle emergency cases and some of them even have a doctor or trained medical personnel. This condition is not found in any one of the Public Sector School.

## **Conflict of Interest**

Authors have no conflict of interest and no grant/funding from any organization.

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