


Awareness and Perception of Cardiopulmonary Resuscitation (CPR) among Young Adolescents in Riyadh: A Cross-Sectional Study

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ABSTRACT

Cardiopulmonary Resuscitation (CPR) is a critical medical emergency procedure that should be known by as many people as possible. This research was conducted on young adolescents to discover their awareness and perception.

The study process involved using a questionnaire-based approach to 180 students visiting a primary care center in Riyadh. The following parts were included in the survey, the participant's basic characteristics, knowledge about CPR, and perception of CPR. The questions about understanding and perception of the CPR procedure were delivered to the participants and their feedback was recorded.

Out of the 180 participants, the majority (73.4%) were aware of the Cardiopulmonary Resuscitation procedure. A minority of 40.8% could comfortably provide the correct sequence of procedures when conducting CPR as indicated by the American Heart Association, the other 59.2% either had no idea of the process or got the sequence wrong.

The study revealed that a majority of the participants had never attempted CPR; some had never been in situations where CPR was performed. The closest they came to help the victim was calling for help. Comparing the student's views revealed that those with prior training were more willing to attempt the procedure on a victim than those without training. The students, therefore, need instruction on how to administer CPR at their early educational stages to raise awareness.

Keywords:

CPR, Critical care, Emergency, Procedure, Fibroids, Perception

Introduction

Cardiopulmonary Resuscitation (CPR) refers to the care provided to patients who are experiencing respiratory arrest, cardiac arrest, or airway obstruction [1]. Medical emergency training is an important aspect that should be emphasized among societies as it can save many lives. There is, however, minimum training on Cardiopulmonary Resuscitation (CPR) in some countries like Saudi Arabia, especially for young youths. This implies that professional healthcare personnel does most emergency services. Thus, there is a need to teach CPR to young adults.

Timely and efficient CPR procedure enhances the chances of survival. An obstacle to achieving higher survival was due to low confidence which proved to make people hesitant in cases where the procedure is necessary [2]. The latter is a result of inadequate training, especially in Asian countries like Pakistan [3]. Similarly, poor knowledge of CPR has also been shown by undergraduate students in South India [4]. The few classes incorporated in the curriculum are insufficient to guarantee extensive awareness in the Asian countries named above.

Therefore, there is a need for additional training in the medical emergency services area. Studies on CPR help to identify the training needs as well as the objectives of the courses. Therefore, this study was conducted to determine the knowledge of CPR and perceptions among young youths visiting a primary care center located in the northern area of Riyadh, Saudi Arabia.

Methodology

Sample

This cross-sectional study is questionnaire-based. 180 students in 9th, 10th and 11th grades were considered in the research. The assumption was that at least half of the sample size would be familiar with the term Cardiopulmonary Resuscitation (CPR). The selected students were asked all the questions prepared by the researchers on the topic and the associated answers were recorded for later analysis during their routine visit to the primary care center.

Development of a Study Instrument and Pre-Testing

An anonymous semi-structured questionnaire was designed to help in the collection of information in the following areas: the participant's basic characteristics, knowledge about CPR, and perception of CPR.

The questions were formulated based on the guidelines

provided by the American Heart Association. Some of the questions contained in the final questionnaire included the following: essential procedures for CPR; actions taken after witnessing the collapse of a victim; reasons for the hesitation of CPR victims; reasons for not attending CPR training.

Data Collection

Before commencing the research, the researcher obtained permission from the Committee of Institutional Ethics. The parents of participants granted the researchers permission to interview their young youth. The research purpose was clearly explained to all the participants. The procedure was voluntary whereby those who did not wish to take part were asked to indicate their reasons on the questionnaires. A maximum of thirty minutes was allocated to each respondent, after which their answers were reviewed and analyzed.

Data Analysis

Information gathered from the questionnaires was analyzed with the use of SPSS version 20 software. The percentiles were calculated for the overall perceptions and various awareness categories. Comparisons of the participants who had prior

training in CPR and those without were conducted to draw appropriate conclusions.

Results

A total of 180 participants from different levels of education were recorded. 73.4% of the total number of participants were aware of what CPR was about. A minority of 40.8% could comfortably provide the correct sequence of procedures when conducting CPR, the other 59.2% either had no idea of the process or got the sequence wrong. However, only a small percentage of the participants (21.6%) had undergone medical emergency care services training. Out of the 21.6% who had training, only a handful had tried to perform CPR in real life. Most of the participants (85.9%) had never even found themselves in circumstances where an individual needed CPR. Approximately all the students knew the emergency help phone number. A comparison of the students indicated that those with prior training responded to the victims faster than those without training. However, the training was not 100% helpful since some of them were not comfortable or confident in performing CPR. (Table 1).

Table 1: Characteristics of the respondents, their level of knowledge and attitudes towards CPR

Item	Answer	%
Level of education	9 th Grade	0.42
	10 th Grade	0.37
	11 th Grade	0.21
What do you think “Cardiopulmonary resuscitation” means?	To rub chest	0
	To compress chest strongly	73.4
	To open the chest wall and to rub heart directly	1.3
	To open the chest wall and compress heart directly	8.3
	Have no idea	16.9
Which of the following do you think is the most important procedure for Cardiopulmonary Resuscitation (CPR)?	To compress chest strongly	30.2
	Artificial breathing	10.4
	Both compress chest strongly and artificial breathing	40.8
	Have no idea	18.6
Have you witnessed collapses of other persons? If you have, who?	My family	2.6
	My friends or acquaintances	3.8
	Strangers	3.8
	Have never witnessed	89.7
What actions did you take when you witnessed collapse of other persons?	Attempted CPR	1.3
	Called for ambulance	3.8
	Called for people or telephoned	3.8
	Only watched or left	5.1
	Have never witnessed	85.9
If you witness collapses, what actions will you take?	Attempt CPR	38.5
	Call for ambulance	44.9
	Call for people or telephone	11.5
	Only watched or left	5.1
Have you ever trained in cardiopulmonary resuscitation?	Yes	21.6
	No	78.4

How much time do you think the delay of CPR can be permissible for its effectiveness?	1 min	21.8
	5 min	24.4
	10 min	10.3
	30 min	2.6
	Have no idea	41
How much do you think CPR provided by lay people is effective?	Very effective	34.6
	Moderately effective	24.4
	Little effective	10.3
	Not effective	1.3
	Have no idea	43.6
How prevalent do you think CPR by lay people is in Saudi Arabia?	Very prevalent	11.5
	Moderately prevalent	3.8
	Little prevalent	26.9
	Not prevalent	12.1
	Have no idea	43.6
How much do you think CPR by lay people is necessary to be prevalent?	Very necessary	44.9
	Moderately necessary	37.2
	Little necessary	7.7
	Not necessary	10.3

Discussion

The sample size of 180 students, including 73.4% knowing Cardiopulmonary Resuscitation, was considered adequate for the study. The study did not include specific aspects of CPR like indicators, situation response, and signs that CPR was successful because the literature examined lacked such data. For instance, the report from South India lacked specific information on the components mentioned above [5]. Moreover, the study sample used in the reports is different from that used in this research. Despite the fact that the majority were aware of CPR, a lack of proper knowledge of the indicators contributes to hesitation when the circumstance arises. Similarly, a lack of knowledge on whether the resuscitation was successful reduces confidence in those willing to perform CPR. According to reports on Switzerland, only 48.1% could provide the correct answers to the questions asked in this study [6]. Similarly, a lack of adequate knowledge has been reported in Poland and India [4-7]. Therefore, it can be concluded that knowledge used in this study based on these reports about situation response and indicators of successful CPR is mere commonsense or guesswork. Lack of CPR knowledge reflects the truth in most societies.

Most of the participants were not confident or comfortable with performing the procedure. This perception is a result of a lack of training in medical emergency care services. Low training levels have been indicated in many regions, including Europe, Pakistan, India, and Poland. However, a comparison of the students showed that training only accounts for knowledge acquisition, and it does not guarantee improvement in students' confidence.

The effect is a non-favorable perception of the matter. Training is only effective when it is done repetitively. This is because skills in CPR fade away with time [8]. People who were taught

the procedure a long time ago may tend to hesitate before performing CPR. To prevent this situation, the education system needs to introduce CPR training in the early stages of the curriculum [9].

A questionnaire-based study is always prone to bias from the respondents. Furthermore, guesswork could have been applied when examining the knowledge and perceptions about CPR in this study. Therefore, the results obtained in the research may give a general idea of the matter [10].

Conclusion

In conclusion, the students need training on all components of Cardiopulmonary Resuscitation. The training should be incorporated in the early stages of the curriculum. Repetitive training should also be emphasized to boost confidence in people wishing to perform the procedure. Finally, both private and government medical sectors should increase awareness on the matter by sponsoring seminars that teach the advantages of knowing CPR.

Conflict of Interest

We have no known conflict of interest to disclose.

Consent to Publish

The consent was taken from the patient.

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