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**ATTITUDE TOWARDS CARDIOPULMONARY RESUSCITATION AMONG SOME  
SECONDARY SCHOOL STUDENTS IN RIVERS STATE, NIGERIA**

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**ABSTRACT:** *Just like any other aspect of health education and promotion, the attitude of the community to Cardiopulmonary Resuscitation (CPR) will largely determine how they can benefit from it. This cross-sectional study aimed at assessing the attitude towards Cardiopulmonary Resuscitation among secondary school students in our community. The population for the study was the students in Senior Secondary School I and II in Obio/Akpor Local Government Area of Rivers State, Nigeria. Four hundred (400) students were purposively drawn from four secondary schools in the area and served copies of a validated questionnaire while 372 properly filled ones were returned, giving a response rate of 93%. The data was analyzed using Statistical Package for Social Sciences (SPSS17.0). The findings revealed that 98.8% exhibited positive attitude towards learning CPR among others. It was concluded that this can form a strong basis to introduce the teaching of CPR in their school curriculum so as to prepare them to be effective bystanders in situations of emergency needing CPR.*

**KEYWORDS:** CPR, Attitude, Secondary school students, Nigeria

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## **INTRODUCTION**

Cardiopulmonary Resuscitation (CPR) is a life-saving technique useful in many emergencies, including heart attack or near drowning, in which someone's breathing or heartbeat has stopped. The American Heart Association recommends that everyone – untrained bystanders and medical personnel alike – begin CPR with chest compressions (Mayo Clinic, 2014). It is better to do something than to do nothing at all if you are fearful that your knowledge or abilities aren't 100 percent complete. The difference between one doing something and doing nothing could be someone's life (Mayo Clinic, 2014). Cardiopulmonary resuscitation (CPR) has also been defined as an emergency procedure for manually preserving brain function until further measures to restore spontaneous blood circulation and breathing in a person who is in cardiac arrest. It is indicated in those who are unresponsive with no breathing or abnormal breathing, for example, agonal respiration (Wikipedia, 2014).

According to International Liaison Committee on Resuscitation Guidelines (2001), CPR involves chest compressions at least 5cm (2 in) deep and at a rate of at least 100 per minute to pump blood through the heart and thus the body. The rescuer may provide breaths by exhaling into the subject's mouth or nose or using a device that pushes air into the subject's lungs; externally providing ventilation is termed artificial respiration. Current recommendation place emphasis on high-quality chest compressions over artificial respiration; a simplified CPR method involving chest compressions only is recommended for untrained rescuers. CPR alone is unlikely to restart the heart. Its main purpose is to restore partial flow of oxygenated blood to the brain and heart (Wikipedia, 2014).

Attitude has been defined as manner, disposition, feeling, position, etc, with regard to a person or thing; tendency or orientation, especially of the mind (Wikipedia, 2014). Psychologists have defined attitudes as a learned tendency to evaluate things in a certain way. This can include evaluations of people, issues, objects, or events. Such evaluations are often positive or negative, but they can also be uncertain at times. There are several components of attitudes such as an emotional component (how the object, person, issue or event makes you feel), a cognitive component (your thoughts and beliefs about the subject), and a behavioural component (how the attitude influences your behavior) (Wikipedia, 2014).

Just like any other aspect of health education and promotion, the attitude of the community to this important subject will largely determine how they can benefit from it. To the best of knowledge of the authorship of this work, hitherto, there is no published report on cardiopulmonary resuscitation (CPR) among secondary school students in our community and in Nigeria as a whole. Meanwhile, the International Liaison Committee on Resuscitation (2001) strongly recommended that instruction in CPR should be incorporated as a standard part of the school curriculum. The Committee is of the opinion that this will act as part of the students' preparation for response to medical emergencies both in the school and at home. It is believed that on long term basis, children trained in CPR will contribute significantly to the number of adult trained in any community. It is expected that this will have a direct benefit of increasing the number of people trained to perform CPR thereby increasing the likelihood that a victim of out-of-hospital cardiac arrest (OHCA) will promptly receive CPR. Accordingly, many countries have initiated CPR programmes for school children and much research work has been done to support the justification of CPR in schools (Lotfi, 2007). Lorem, Steen & Wik, (2010) described high school students as ambassadors of CPR. However, the situation is different in Nigeria at present. Therefore, this study aimed at assessing the attitude of some secondary school students in Rivers State of Nigeria as a baseline data.

## **MATERIALS AND METHODS**

A cross sectional design study was conducted among senior secondary school students involving senior secondary school 1 (SS1) and senior secondary school 2 (SS2) students selected from four (4) secondary schools (2 public and 2 private schools) in Rivers State of Nigeria. The responses of the participants were obtained using a self-administered questionnaire having 10 items regarding the attitude of the students to CPR. Four hundred (400) copies of the questionnaire were distributed to the students in the various schools and 372 properly filled copies were returned, giving a response rate of 93%.

The researcher went into the study with one research question and one research hypothesis in mind: What would be the attitude towards CPR among the students? There would be no statistically significant positive attitude towards CPR among the selected students

### **Data Analysis**

At the end of data collection, the returned copies of the questionnaire were organized, tabulated and statistically analyzed using the Statistical Package for Social Sciences (SPSS). Mean with standard deviation, as well as the Student's t-test was used in the analysis with P-value set at 0-05.

### **RESULTS**

As shown in table 1, the result revealed that 98.9% would like to learn CPR, 97.6% would like to teach others after learning, 68.5% would perform mouth-to-mouth ventilation on a stranger, 87.6% would perform CPR on trauma victims, 95.7% on relatives, 86% on elderly victims and 91.4% on a child. In all, their attitude was positive and 91.1% were hopeful about survival of a collapsed victim who received CPR. Close to ninety four percent (94.9%) agreed that it should be taught in Nigerian schools and 96.8% to other citizens.

Table 2 shows the t-test analysis of the attitude towards CPR among the selected secondary school students. From the table, the calculated t-value 191.67 is greater than the t-critical table value of 1.96 at 0.05 significant level. The null hypothesis of no significant positive attitude towards CPR among the selected students is, therefore, rejected, showing that there is significant positive attitude towards CPR among the selected secondary school students.

### **DISCUSSION**

Attitudes are generally positive or negative views of a person, place, thing, or event— this is often referred to as the attitude object. People can also be conflicted or ambivalent toward an object, meaning that they simultaneously possess both positive and negative attitudes toward the item in question. An attitude is also an expression of favor or disfavor toward a person, place, thing, or event (the attitude object). Prominent psychologist Gordon Allport once described attitudes as "the most distinctive and indispensable concept in contemporary social psychology." Attitude can be formed from a person's past and present. Attitude is also measurable and changeable as well as influencing the person's emotion and behaviour. In lay language, attitude may refer to the distinct concept of mood (Wikipedia, 2014). Although an attitude can be defined as a positive or negative evaluation of people, objects, event, activities, ideas, or just about anything in your environment, but there is debate about precise definitions.

Kanstad, Nilsen & Frenndriksen (2011) carried out a study on knowledge and attitude to performing bystander CPR among secondary school students in Norway. The majority (83%) were willing to perform bystander CPR in a given situation with cardiac arrest. However, when presented with realistic hypothetical cardiac arrest scenarios, the option to provide full BLS was less frequently chosen. Most students (86%) supported mandatory BLS training in school, and three out of four wanted to receive additional training. It was concluded that young Norwegians are motivated to perform bystander CPR, but barriers are still seen when more detailed cardiac arrest scenarios are

presented. By providing students with good quality BLS training in school, the upcoming generation in Norway may strengthen the first part of the chain of survival in OHCA, the study claimed. In this Nigerian study, 94.9% of the students would want CPR taught in schools while 68.5% would carry out mouth-mouth ventilation on a stranger. This is a good reflection of the curiosity that the Nigerian students exhibited in learning this subject matter.

Chair et.al (2014) investigated the public knowledge and attitudes about cardiopulmonary resuscitation in Hong Kong. Respondents with CPR training were more willing to perform it at home and in the street (under emergency situations), presumably as they had acquired enough knowledge and skills to generate confidence and courage. The powerful impact of CPR training on saving lives should never be underestimated. Although only 15% of the respondents without CPR training would like to save others' lives, nearly half of them (45%) expressed willingness to perform CPR for their family members if needed. The intimate relationship among family members may be the motivation in such cases. They recommended introduction of CPR training into the secondary and college curricula in China. In this Nigerian study, 95.7% indicated willingness to carry out CPR on family relatives. This high percentage of Nigerian students willing to perform CPR on family relatives is a good indication that bystander role in the 'chain of survival' in Nigeria would be impressive when the teaching and practice of CPR comes to stay in Nigeria. According to the AHA, 80% of sudden cardiac arrests happen at home (Hazinski, 2010) Therefore, it makes sense to exploit intimate emotions to facilitate and publicize the CPR training, especially for those with vulnerable members in their family.

In the middle East, a similar study among King Saud University students in Riyadh, Saudi Arabia (Al-Turki et al., 2008), reported overall positive attitude towards CPR also with 88% of the students showing willingness to learn how to perform CPR. In that Saudi Arabia study, 12.7% of the participants encountered a situation that required the use of CPR while only 14% of them performed it because most of them did not know what to do. Lorem, Steen and Wik (2010) reported that each student in their study trained mean 2.8 extra persons on CPR, reflecting the positive attitude of the high school students.

## **IMPLICATIONS OF THE FINDINGS / CONTRIBUTION TO KNOWLEDGE**

- The findings of this Nigerian study show that the incorporation of the teaching / training of CPR into the Nigerian secondary school curricula would be welcomed by the students.
- The possible subsequent practice of the art and science of CPR by the secondary school students would definitely increase the available of bystanders needed in the provision of CPR in our community.
- This study has provided the first documented information on how the Nigerian secondary school students feel about cardiopulmonary resuscitation and its introduction into their schools' curricula.

## **CONCLUSIONS**

Based on the findings above, the following conclusions were drawn:

- The school system offers a promising route to the widespread dissemination of CPR skills. Indeed, schools provide suitable environment for training and reinforcement of knowledge and skills as

school children are more accessible and more easily motivated than adults; they learn quickly and retain skills well.

-The positive attitude of the studied Nigerian students towards CPR is not only comparable to what has been reported in Europe and Asia, but actually much more which gives a strong support to the advocacy for the introduction of the teaching of this subject into the Nigerian secondary schools' curricula.

-By incorporating resuscitation skills into the school curriculum, it is hoped that greater awareness and acceptance of CPR as well as specific resuscitation skills might be instilled routinely in the upcoming generation, thereby increasing effectively the CPR bystanders providers in the community.

## RECOMMENDATIONS

-Based on the findings of this study, it is recommended that the teaching of CPR should be incorporated into the Nigerian secondary schools' curricula without delay and teachers should capitalize on children's willingness to learn this subject as one of basic emergency life-saving skills and reinforce skills performance on an annual or more frequent basis.

-Similar studies should be carried out in other parts of Nigeria.

## REFERENCES

- Al-Turki, Y.A., Al-Fraih, Y.S., Jalaly, J.A., Al-Maghlouth, I.A., Al-Rashoudi, F.H., Al-Otaibi, A.F., Thnayan, A.A., Trazoni, A.I. Al-Shaykb, A.S.(2008). Knowledge and attitudes towards cardiopulmonary resuscitation among university students in Riyadh, Saudi Arabia. *Saudi Med J* 29(9): 1306-1309.
- Chair, S.Y., Hung, M. S. Y., Lui, J. C. Z., Lee, D.T.F., Shiu, I. Y. C., Choi, K.C. (2014). Public knowledge and attitudes towards cardiopulmonary resuscitation in Hong Kong: telephone survey. *Hong Kong Med J* 2014; 20:126–33 | Epub 14 March 2014  
DOI: 10.12809/hkmj134076
- Field, J.M. Hazinski, M.F., Sayre, M.R., Chameides, L., Stephen M., Schexnayder, Robin Hemphill, S.R.,... Hoek, V.(2010). Part 1: Executive Summary: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care *Circulation*.2010; 122:S640-S656 doi: 10.1161/CIRCULATIONAHA.110.970889
- Hazinski, M.F., Nolan, J.P., Billi, J.E., et al. Part 1: Executive summary: 2010 International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations. *Circulation* 2010; 122(16 Suppl 2):s250-75
- Kanstad, B.K., Nilsen, S.A., & Fredriksen, K. (2011). CPR knowledge and attitude to performing bystander CPR among secondary school students in Norway. *Resuscitation*, 82(8):1053-1059 doi:10.1016/j.resuscitation.2011.03.033.
- Lorem, T., Steen, P.A., Wik, L. (2010). High school students as ambassadors of CPR – A model for reaching the most appropriate target population? *Resuscitation* 81(1): 78-83.
- Mayo Clinic (2010). Sudden Cardiac Arrest <http://www.mayoclinic.com/health/sudden-cardiac-arrest/DS00764> Wikipedia. (2014).

**Table 1: Attitude towards CPR among the selected secondary school students**

	Question Items	Agreed		Disagreed	
		No	%	No	%
1.	I would like to learn CPR	368	98.9	4	1.1
2.	I would like to teach others after learning	363	97.6	9	2.4
3.	I would perform MMV on a stranger.	255	68.5	117	31.5
4.	I would perform CPR on a trauma victim	326	87.6	46	12.4
5.	I would perform CPR on a relative	356	95.7	16	4.3
6.	I would perform CPR on an elderly victim	320	86	52	13.9
7.	I would like to perform CPR on a child.	340	91.4	32	8.7
8.	There is hope of survival after CPR	339	91.1	33	8.9
9.	CPR should be taught in schools in Nigeria	353	94.9	19	5.1
10.	CPR should also be taught to other citizens	360	96.8	12	3.2
	<b>CUMULATIVE %</b>		<b>90.85</b>		<b>9.15</b>

**Table 2: T-test analysis of attitude towards cardiopulmonary resuscitation**

One Sample t-test	$\bar{x}$	DF	t-cal	t-crit	p-value (2-tailed)	Decision
	34.45± 3.46	371	191.67	1,96	.000	Rejected

Significant at  $p = <0.05$