

Introduction of Cardiopulmonary Resuscitation into the Primary and Secondary Schools' Curricula in Nigeria: The Teachers' View

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Abstract

Unlike in Nigeria, incorporation of cardiopulmonary resuscitation (CPR) into the primary / secondary schools' curricula has been done by many advanced countries. This study aimed at assessing the views of some Nigerian primary and secondary schools' teachers on the introduction of CPR into their schools' curricula. Three hundred teachers aged 35 to 45years – 88 (29.33%) male and 212 (70.67%) female from schools in different States in Nigeria who came for 2015 Post NCE programme at the University of Port Harcourt participated in this questionnaire-based study. The data was analyzed using SPSS and tested four null hypotheses using chi-square test with significance level set at 0.05. All the hypotheses were rejected with each having P value of .000 ($P < 0.05$), thereby strongly indicating that the teachers would want to learn CPR, would also want to teach same to their pupils and students, as well as its introduction into the schools' curricula.

Keywords: Cardiopulmonary resuscitation, Primary / Secondary Schools, Nigeria

1. Introduction

Cardiopulmonary resuscitation (CPR) is a combination of rescue breaths and chest compressions which are intended to re-establish cardiac function and blood circulation in an individual who has suffered cardiac or respiratory arrest (Field, 2010). The medical science opined that the first 4-8 minutes in sudden collapse is the most crucial period in which resuscitation intervention is most needed (European Resuscitation Council, 2010). Cardiopulmonary Resuscitation is indeed an important life-saving first aid skills practiced throughout the world. It is perhaps the only known effective method of keeping a victim of cardiac arrest alive long enough for definitive treatment to be delivered (Hazinski, 2010).

The International Liaison Committee on Resuscitation (2003) strongly recommended that instruction in CPR be incorporated as a standard part of the school curriculum. Although many school systems in other parts of the world have complied with these international standards (Isbye & Meyhoff, 2007; Lorem & Palma, 2008) the situation is different in Nigeria with only few recently published works on cardiopulmonary resuscitation involving the Nigerian school system (Onyeaso & Imogie, 2014; Onyeaso & Achalu, 2014; Onyeaso, 2014; Onyeaso & Onyeaso, 2016a, 2016b; Onyeaso, 2016a, 2016b).

Cardiopulmonary resuscitation (CPR) is not just becoming mandatory for students, but for teachers as well. Following the recommendation of the International Liaison Committee on Resuscitation in 2003, the American Heart Association (AHA) recommended that schools should establish a goal to train every teacher in CPR and first aid as a part of their preparation for a response to medical emergencies on campus (Hazinski et al., 2004). Most States in the USA where it is required, they are doing it as part of teacher certification or re-certification (School CPR). In addition, there are bills in many states that are in various stages of implementation (School CPR). According to the REVISED SCHOOL CODE (Act 451 of 1976), beginning from July 1, 2004, the superintendent of public instruction shall not issue an initial teaching certificate to a person unless the person presents evidence satisfactory to the superintendent of public instruction that the person has successfully completed a course approved by the department in first aid and cardiopulmonary resuscitation, including a test demonstration on mannequin, and has successfully completed instruction approved by the department in foreign body airway obstruction management, among others. Similarly, Indiana Department of Education has made it mandatory that applicants applying for an initial teaching license (and at the time of conversion or renewal of any kind) must have successfully completed training in CPR that include a test demonstration on mannequin (CPR-Heimlich Maneuver – AED Certification, 2016).

In recognition of the importance of incorporation of CPR teaching into schools' curricula and the obvious vital role of teachers towards its success in Nigeria as in other countries of the world, this study aimed at assessing the views of a cross section of primary and secondary school teachers concerning this. The following hypotheses were made: (i) learning of cardiopulmonary resuscitation would not be of significant importance to the teachers; (ii) the teachers would not be significantly interested in teaching cardiopulmonary resuscitation to primary and secondary school children; (iii) inclusion of cardiopulmonary resuscitation in the primary school curriculum would not be of significant importance to the teachers; (iv) inclusion of cardiopulmonary resuscitation in the secondary school curriculum would not be of significant importance to the teachers.

2. Materials and Method

In September 2015, a convenient cross-sectional study of the teachers who came for the Post NCE Sandwich Programme at the Faculty of Education of the University of Port Harcourt was conducted by serving the teachers a questionnaire that requested for their knowledge of CPR and their views on the introduction of CPR teaching into the primary and secondary schools' curricula (see Appendix).

In all, three hundred (300) teachers participated in the study – 87(29%) males and 213 (71%) females with their ages ranging from 22 to 60 years. They came from schools in the following states: Akwa Ibom, Cross River, Abia, Anambra, Enugu, Imo, Ebonyi, Rivers, Delta, Edo, Ondo, Ogun, Benue, and Kogi states.

2.1 The following four (4) null hypotheses were generated and tested:

Ho1: Learning of cardiopulmonary resuscitation would not be of significant importance to the teachers

Ho2: The teachers would not be significantly interested in teaching cardiopulmonary resuscitation to primary and secondary school children

Ho3: Inclusion of cardiopulmonary resuscitation in the primary school curriculum would not be of significant importance to the teachers

Ho4: Inclusion of cardiopulmonary resuscitation in the secondary school curriculum would not be of significant importance to the teachers

2.2 Statistical Analysis

Descriptive statistics and chi-square statistics were employed to analyze the data. The Statistical Package for Social Sciences (SPSS) was used and the alpha level set at .05 in hypotheses testing.

3. Results

Table 1 below shows the testing of the Null Hypothesis 1 which was rejected. This means that the teachers felt learning CPR was of significant importance to them.

Table 1: Learning of Cardiopulmonary Resuscitation would not be of significant importance to the Teachers (Null Hypothesis 1)

Item	Yes	No	No Response	N	DF	P value	Decision
I would like to learn CPR	282 (94%)	7 (2.3%)	11 (3.7%)	300	299	.000	Rejected

Sig < 0.05

Table 2 below shows that the Null Hypothesis was equally rejected, meaning that the teachers were significantly interested in teaching CPR after learning it.

Table 2: The teachers would not be significantly interested in teaching Cardiopulmonary Resuscitation to primary and secondary school children (Null hypothesis 2)

Item	Yes	No	No Response	N	DF	P value	Decision
Would you like to teach CPR after learning it?	277 (92.3%)	17 (5.7%)	6 (2.0%)	300	299	.000	Rejected

Sig < 0.05

Below is Table 3 which shows that the teachers would significantly want the incorporation of the CPR teaching into the Nigerian primary school curriculum because the Null Hypothesis was also rejected.

Table 3: Inclusion of Cardiopulmonary Resuscitation in the Primary School Curriculum would not be of significant importance to the teachers (Null Hypothesis 3)

Item	Yes	No	No Response	N	DF	P value	Decision
Is it important to include CPR in the Primary school curriculum?	256 (85.3%)	39 (13%)	5 (1.7%)	300	299	.000	Rejected

Sig < 0.05

Table 4 below shows equally the rejection of the Null hypothesis 4, which means that the teachers were significantly interested in the incorporation of CPR teaching into the Nigerian secondary school curriculum

Table 4: Inclusion of Cardiopulmonary Resuscitation in the Secondary School curriculum would not be of significant importance to the teacher (Null Hypothesis 4)

Item	Yes	No	No Response	N	DF	P value	Decision
Do you consider it important to include CPR in the secondary school curriculum?	277 (92.3%)	17 (5.7%)	6 (2.0%)	300	299	.000	Rejected

Sig < 0.05

4. Discussion

Although the risk of an out-of-hospital cardiac arrest (OHCA) event occurring in a school is relatively low, the emotional costs associated with the sudden death of a child are enormous. Increasing the percentage of students, staff, and faculty trained in CPR increases the likelihood of someone promptly initiating time-critical CPR for a victim of OHCA (Cave et al., 2011).

Previous related studies from Nigeria did not only reveal good positive attitude of Nigerian secondary school students to CPR, but equally documented very impressive post-training CPR knowledge and skills among some secondary school students (Onyeaso & Imogie, 2014; Onyeaso & Achalu, 2014; Onyeaso & Onyeaso, 2016; Onyeaso, 2016). The present Nigerian study has also shown that the teachers were equally interested in learning CPR as well as transferring the knowledge to others. This present study has also shown their desire to have CPR teaching in both primary and secondary schools' curricula. These findings suggest the willingness of Nigerian school children as well as the teachers to learn CPR and to have it incorporated in the school curriculum.

According to Riad et al (2013), capacity building is one of the WHO strategies for improving disaster preparedness for school students and teachers. They further opined that teachers must be encouraged to undergo such training. Compton et al (2003) reported that majority of the urban public school teacher believed that CPR alone (83.0%) and CPR / AED (92.6%) prior to ambulance arrival would result in a favourable outcome of cardiac arrest.

Mindell (1997) reported that time constraints and a lack of suitably trained teachers were the main reasons for not teaching First Aid. She also reported that cost of tuition, cost of a supply teacher and lack of time were the most common barriers to training of teachers, and the teachers considered it appropriate to teach First Aid in schools.

Training in CPR and First-Aid have become part of the clear credentials for Teachers in the San Francisco Bay. In fact, the American Heart Association highly recommends that teachers take both CPR and First Aid in case of a childhood emergency in their classroom (CPR for Bay Area Teachers). Similar training for teachers hold for Berkeley and Oakland teachers (CPR certification for Berkeley and Oakland Teachers). American BLS states that not only do teachers have the responsibility of instructing and guiding today's youth, but they also have the responsibility of keeping them safe in the classroom. According to American BLS, the potential emergencies that might occur in the classroom include choking, injuries, allergy attack, bleeding, broken bones, concussion, etc. The American BLS+ recommends that all teachers and school employees take the CPR Course and the First Aid Course.

5. Conclusion

The present Nigeria study has shown that not only that the teachers studied were interested in learning CPR and willing to teach others; they wanted CPR introduced into the Nigerian primary and secondary schools' curricula.

6. Recommendations

1. A similar study should be conducted in both the western and northern parts of the country
2. The introduction of CPR teaching into the Nigerian primary and secondary schools' curricula should be given serious attention by both the States and Federal Ministries of Education, in line with the growing global practice.

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QUESTIONNAIRE

SECTION A: Personal Data

(Please tick as it applies to you in both Sections A and B)

1. Gender Male () Female ()
2. Your age in years (Please indicate your age) -----
3. Name of the School where you teach: -----

4. Indicate the State where your school is located: -----
5. Your Department in University of Port Harcourt: -----

SECTION B: The questions below are on Cardiopulmonary Resuscitation. Please answer them honestly. (Note: Cardiopulmonary Resuscitation (CPR) is an emergency procedure that combines chest compression often with artificial ventilation in an effort to manually preserve intact brain function until further measures are taken 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)

1. Would you like to learn CPR if given the opportunity? Yes () No ()
2. After learning CPR, would you like to teach others? Yes () No ()
3. Is it important to include CPR in the primary school curriculum in Nigeria?
Yes () No ()
4. Do you consider it important to include CPR in the secondary school curriculum in Nigeria?
Yes () No ()

Thank you.