# KNOWLEDGE AND ATTITUDE TOWARDS CARDIOPULMONARY RESUSCITATION AMONG COMMUNITY MEMBERS INSELECTED COMMUNITIES OF OBIO/AKPOR LGA, RIVERS STATE


## ABSTRACT

The survival chances of an out of hospital cardiac arrest are significantly increased by provision of bystander cardiopulmonary resuscitation (CPR). Early bystander cardiopulmonaryresuscitation has been documented as one of the most important predictors of out-of-hospital cardiac arrests survival. The study was designed to assess the knowledge and attitude towards cardiopulmonaryresuscitationamong community members in three selected communities in Obio-Akpor, Rivers State.

Cross sectional descriptive design utilizing mixed method was adopted. A total of 427 participants were selected by purposive sampling. Structured questionnaire was utilizedto assess community members "knowledge on cardiopulmonary Resuscitation. Mean score was determined and mean scores and above was categorized as good knowledge while below mean scores was categorized as poor knowledge. To access the attitude towards cardiopulmonary resuscitation mean score was determined and mean scores and above was categorized as positive attitude while below mean scores was categorized as negative attitude. The data was analyzed using descriptive analysis and inferential statistics of chi- square to test the set hypothesis at $p \leq 0.05$ .

Most occurring age group of the respondents were between 31-40 years and 50.5% are single. The findings on knowledge of CPR from this study revealed that 59.8% had poor knowledge while 40.2% had good knowledge of CPR. Overall, 58.5% had negative attitude towards administering CPR while 41.5% of the community members had positive attitude towards administeringCPR to out of hospital cardiac arrest victims. There is a significant association between sex, marital status, level of education, occupation and knowledge on CPR as well as marital status and attitude towardsCPR . Also, there is statistically significant association between knowledge on CPR and attitude towards CPR.

## INTRODUCTION

Africa is faced with burden of disease challenges among which are non-communicable such ascardiovascular diseases. Sudden Cardiac arrest is a catastrophic medical emergency that may occur at any time, at any place. Out of hospital cardiac arrest (OHCA) remains a challenging issue in most countries especially developing countries including Nigeria.

Emergency procedure performed manually to preserve intact brain functions until further measures are taken to restore spontaneous blood circulation and breathing in the person who isexperiencing the cardiac arrest is known as Cardio Pulmonary Resuscitation (CPR). Over 36 million people die from Non communicable diseases which accounts for 63% of all global deaths. Cardiovascular diseases are the leading cause among these diseases that accounts for 17.5 million deaths annually. (WHO, 2019). In Nigeria about 29% of all deaths are caused by Non communication diseases with 11% caused by Cardiovascular diseases. (WHO, 2018).

Out of HospitalCardiacArrest incidence rate ranges from 28.3 per 100,000 in Asia to 51.6 per 100,000 population in North America. African data suggest an incidence of 6.4 per 100,000 population this is likely underestimated as study was limited to OHCA cases attended to by paramedics. (Willem, Craig, Therese& Lee 2021). Cardiovascular diseases is the second leading cause of death in sub sahara Africa as it accounts for over 1 million deaths which constitutes 5.4% of all global Cardiovascular related deaths and 13% of all deaths in Africa. (WHO, 2021).

The survival rate from OHCA in high income countries has been reported to be between 1.3% and 11%. (Mazen, Reem, Yasmin, Nour, Marwan & Hani, 2017) In low income countries reports shows spontaneous circulation return rates ranging from 0% and 62%, survival rates to discharge between 1% and 16.7%, favorable neurological outcome ranging between 1% and 9.3%.(Schnaubelt, Monsieurs , Semeraro , Schlieber, chenget.al. 2020).

Only few patients experiencing OHCA are resuscitated successfully and lesser patients are discharged with minimal neurological impairment.(Shir,Karen,Kylie, Siew, Arul et.al. 2020).

The provision of early bystander cardiopulmonary resuscitation is necessary to improve survival chances in out of hospital cardiac arrest by two fold however survival chances decreases by 7-10% each minute without CPR. (Anto-Ocrah, Maxwell, Cushman, Acheampong ,Kodam et.al. 2020). Cardiac death occurs most likely after 10 minutes of loss of oxygen to the brain. Brain damage is expected to occur from 6-10 minutes after cardiac arrest. Brain damage is very possible from 0-4minutes and brain damage is virtually non existent from 0-4minutes of cardiac arrest if prompt CPR intervention is done.(CPR facts and stats 2020).

Low and Middle income countries including Nigeria are now experiencing an accelerating increase in Cardiovascular Diseases (CVD) especially over the past two decades alongside many high income countries (Chuka& Samuel2021). In low to middle incomes countries where CVD related mobility and mortality prevalently increasing particularly those in Africa region including Nigeria, there is sparse understanding of bystanders CPR rates. (WHO, 2018). The sole function of CPR is to provide circulation artificially and breathing functions until advanced care arrives. Cardiopulmonary resuscitation does not save a cardiac arrest victim miraculously but prolong their chances until advanced life support arrives. (AHA, 2020). Early bystander cardiopulmonary resuscitation is one of the most important predictors of out-of-hospital cardiac arrests survival. (Anto-Ocrah, Maxwell, Cushman, Acheampong ,Kodam et.al. 2020)

Fadi,Louis , Maged and Diyaa (2019) stated that approximately 70% to 75% of cases of OHCA are witnessed by non-medical people. The early recognition of OHCA, early activation of emergency medical services (EMS), and early provision of bystander basic life support (BLS) are the most important factors that determine the survival probability in patients with OHCA. These actions depend entirely on the knowledge, attitude, and actions of the bystanders. Majority of cardiac cases, victims' relatives, usually a non-medical person are the first person to act in OHCA. Survival after OHCA is low (3%–30%). Currently, about 9 in 10 people who have cardiac arrest outside the hospital die. But CPR can help improve those odds. If it is performed in the first few minutes of cardiac arrest, CPR can double or triple a person's chance of survival. (CDC 2021).

According to WHO (2018) fast response, coordinated resources is important toprovide initial care for out of hospital emergency medical services. WHO further stated that lack of a well-structured emergency services to the community, lack of specific training and lack of education of the population all contributes to decrease access to advanced emergency health care in many countries. CPR training was designated for health care professionals in the earlier days, later on it was observed that most sudden cardiac arrest happens outside the hospital settings and early CPR is needed and such should be performed by bystanders who witness the event, therefore CPR is said to be a skill for all people. (Mutlu, Mustafa, Orhan, Fatih,,Serdar et. al. 2017).

It is necessary that people in the society have basic knowledge on Basic life support skills to save lives thus improving the quality of community health and strengthening of values.(Tadesse, Seid, Getachew & Ali 2022).Therefore it is important for the public to have adequate knowledge of CPR for improvement of ones survival as they may be confronted with sudden collapse of any individual experiencing a cardiac arrest, Hence the relevance of this study.

**Objectives**

Assess community members level of knowledge on CardiopulmonaryResuscitation in ObioAkpor LGA.

Assess the attitude of community members towards CardiopulmonaryResuscitation in ObioAkpor LGA.

Identify the barriers of administering CardiopulmonaryResuscitation among community members in ObioAkpor LGA.

**Hypotheses**

There is no statistical significant association between the Socio demographics characteristics of bystander and their knowledge about Cardio pulmonary Resuscitation.

There is no statistical significant association between bystander attitude towards administering Cardio pulmonary Resuscitation and their knowledge about Cardio pulmonary Resuscitation

There is no statistical significant association between the sociodemographic characteristics of bystander and attitude towards administering Cardio pulmonary Resuscitation.

## Method

### Research design

The study adopted a cross sectional descriptive designs utilizingquantitative method approach

### Study Population

This study was carried outamongcommunity members, leaders and health workers living in three (3) selected communities of Mgbougba, Rumuokwuta and Rumuigboin ObioAkpor L.G.A, Rivers State due to its large population.

### Sampling Technique

### Quantitative

**First stage:** The researcher used simple random sampling techniques by paper balloting to select two (2) out of 17 wards in ObioAkpor L.G.A

**Second stage :**The researcher found out names of communities in selected wards and simple random sampling technique by paper balloting was used to select the communities from which , Rumuigbo, Rumuokwuta and Mgbuoba from wards 12 and 13 were selected for this study.

**Third stage:** The residential houses, stores, health care facility and market with eligible members was identified using a simple random samplingtechniques.

**Fourth Stage:** Eligible and consenting respondents were selected by purposively sampling.

### Instruments

An adapted, modified and self- designed questionnaire was used to collect data .

**Section A:** Thissection consists of 6 questions. It elicited information on socio-demographic data on members of community

**Section B**:Awareness of Cardio Pulmonary Resuscitation. It consists of 7 questions Adopted from (Yaw, 2019).

**Section C:** Knowledge of bystander on Cardio pulmonary resuscitation in out of hospital cardiac arrest. It consists of 17 questions Adopted from (Yaw, 2019).

**Section D:** Attitude towards Cardio Pulmonary Resuscitation. It consists of 10 questions. It is a self-designed questionnaire

**Section E:** Barriers to administration of CPR. It consists of 12 questions as adopted from (Fiona et al 2018)

**Ethical Consideration**

An introductory letter was collected from the Department of Nursing, University of Ibadan. The letter and research proposal were submitted to the ethical review committee in Ministry of Health, Port-Harcourt, Rivers State. Permission was obtained from the community chairmanat each selected study site after been contacted and consent granted. The participants wereInformed and consent (Verbal and written) was obtained.The participants were assured of information confidentiality and same was guaranteed by the research team. All participants that are eligible who are unwilling to participate or continue in the process of this study can opt out at any point without the decision influenced by the researcher or the researcher team members. Every step involved in this research was explained in details and no harm was caused to the participants.



**Data Analysis and Management**

Data entry was done using Statistical Package for Social Sciences (SPSS) version 25.0. Results were presented in tables, frequencies and charts. Statistical significance was set at $p \leq 0.05$. Chi-square test was used to determine the associated between the variables.

**Objective one (1):**

**Assessed bystander level of knowledge on CardiopulmonaryResuscitation.**

This was achieved through the response to item 14 -30. Question 14-22 was analyzed by assigning 1 mark for each correct and 0 for an incorrect answer. Responses from question 23-30 is either Yes or No and I don't know. Knowledge was scored by assigning 1 mark for each correct answer and 0 for an incorrect answer. The highest obtainable score was 17. A mean score was determined. Mean score and above was rated good knowledge while score below mean score was rated poor knowledge.

**Objective Two (2).**

**Toassessthe attitude of bystander towards performing CardiopulmonaryResuscitation.**

This was addressed using 10 items. Question 31- 40 and was measured on a scale of 1-5. Strongly disagree - 1, Disagree -2, Undecided - 3, Agree -4 , Strongly agree -5. The highest obtainable score was 50. A mean score was determined. Mean score and above was rated as Positive attitude while score below mean score was rated Negative attitude.

**Hypothesis Testing**

**Hypothesis 1**: There is no statistical significant association between the Socio demographics characteristics of bystander and their knowledge about Cardio pulmonary Resuscitation.

This was analysed using a chi- square test and the computed socio demographic (Age, education level, occupation) was cross tabulated with the knowledge about CPR computed. The value of Chi- square and level of significance was set at 0.05.

**Hypothesis 2**: There is no statistical significant association between bystander attitude towards cardiopulmonary resuscitation and their knowledge about Cardio pulmonary Resuscitation

This was analysed using a chi- square test and the computed attitude of administering CPR will be cross tabulated with the knowledge about CPR computed. The value of Chi- square and level of significance will be set at 0.05.

**Hypothesis 3**: There is no statistical significant association between the sociodemographic characteristics of bystander and attitude towards administering Cardio pulmonary Resuscitation.

This was analysed using a chi- square test and the computed socio demographic (Age, education level, occupation) was cross tabulated with the attitude about CPR computed. The value of Chi- square and level of significance was set at 0.05.

## Results

### Socio-Demographics Characteristics of the Respondents

The result of socio-demographic characteristics of the respondents administered in the study areas indicated that 39% of the respondents' age group is between 31-40years closely followed by 20-30 years (35%), only 26% are within 41-50 years. More than half of respondents are male and 46% were females. 50.5% were single and 83% had tertiary education. Less than one-fifth of the respondents were self-employed. Majority (98.3%) of the respondents were Christian. Table 1 shows details of socio demographic data.

Shown in table 2 is frequency distribution of respondents' awareness toward Cardiopulmonary Resuscitation. The participants who affirmed that they were aware about Cardiopulmonary Resuscitation before now were 70%. Most (71.3%) of the respondents don't have adequate knowledge to assist a cardiac arrest victim and 73% have never taken any CPR training course in the past. More than third-fifth of the respondents has witnessed a sudden cardiac arrest before.

The main source of information was from Personal reading with 24% followed by family wit.2h (22.2%), Radio/TV programme (20%), social media (13.9%). Figure.1 gives details about source of CPR.

Shown in figure.2 is the proportion of what encouraged the respondent in taking CPR training. About 38% of the respondent encouraged by School requirement, Personal choice (15%), Work (9.3%) and Previous experience (5.3%).

The proportion of relationship with victim of cardiac arrest among respondents shows 18% of the respondents experienced cardiac arrest among strangers, friend/acquaintance (10.3%) and 8.8% were Family members.

**Table.1: Socio-demographic variables of participants (N= 400)**

| Socio- demographic variables | N | % |
|---|---|---|
| **Age(years)** | | |
| 20-30 | 140 | 35 |
| 31-40 | 156 | 39 |
| 41-50 | 104 | 26 |
| **Sex** | | |
| Male | 216 | 54 |
| Female | 184 | 46 |
| **Marital status** | | |
| Single | 202 | 50.5 |
| Married | 174 | 43.5 |
| Divorce | 10 | 2.5 |
| Separated | 4 | 1 |
| Widowed | 10 | 2.5 |
| **Level of Education** | | |
| None | 3 | 0.8 |
| Primary | 10 | 2.5 |
| Secondary | 55 | 13.8 |
| Tertiary | 332 | 83 |
| **Occupation** | | |
| Civil servant | 105 | 26.3 |
| Retired | 23 | 5.8 |
| Self employed | 113 | 28.2 |
| Unemployed | 29 | 7.2 |
| Student | 76 | 19 |
| Trader | 54 | 13.5 |
| **Religion** | | |
| Christian | 393 | 98.3 |

| | | |
|---|---|---|
| Islam | 7 | 1.8 |

**Table 2: frequency distribution of respondents awareness toward CPR (N=400)**

| Variables | N | % |
|---|---|---|
| **Heard of CPR before now** | | |
| Yes | 278 | 69.6 |
| No | 122 | 30.4 |
| **Confident to assist a cardiac arrest victim** | | |
| Yes | 103 | 25.8 |
| No | 297 | 71.3 |
| **Ever taken a CPR training course in the past** | | |
| Yes | 108 | 27 |
| No | 292 | 73 |
| **Witness a sudden cardiac arrest** | | |
| Yes | 269 | 67.4 |
| No | 131 | 32.6 |

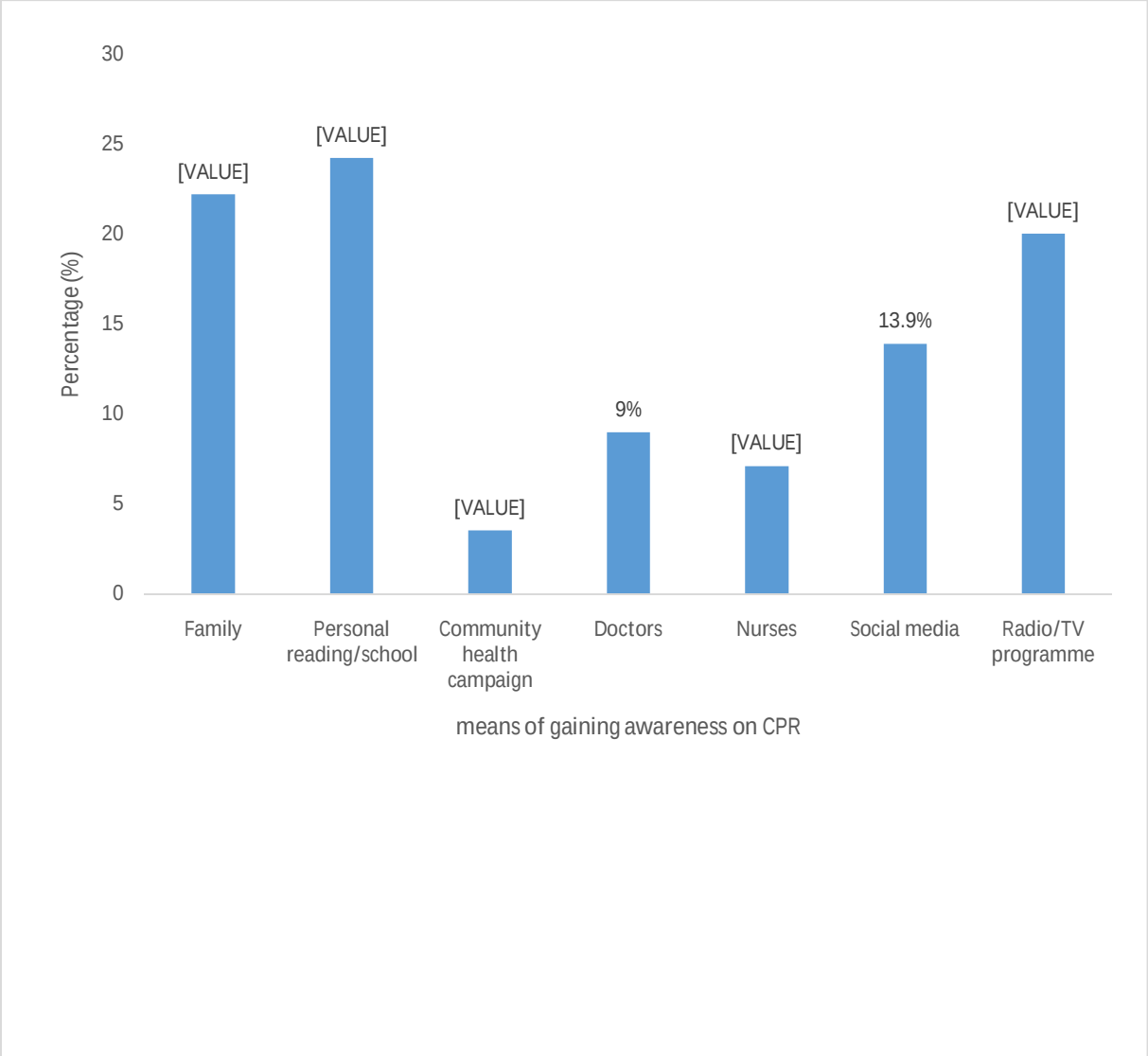


**Figure 1: Sources of Cardiopulmonary Resuscitation among participants**

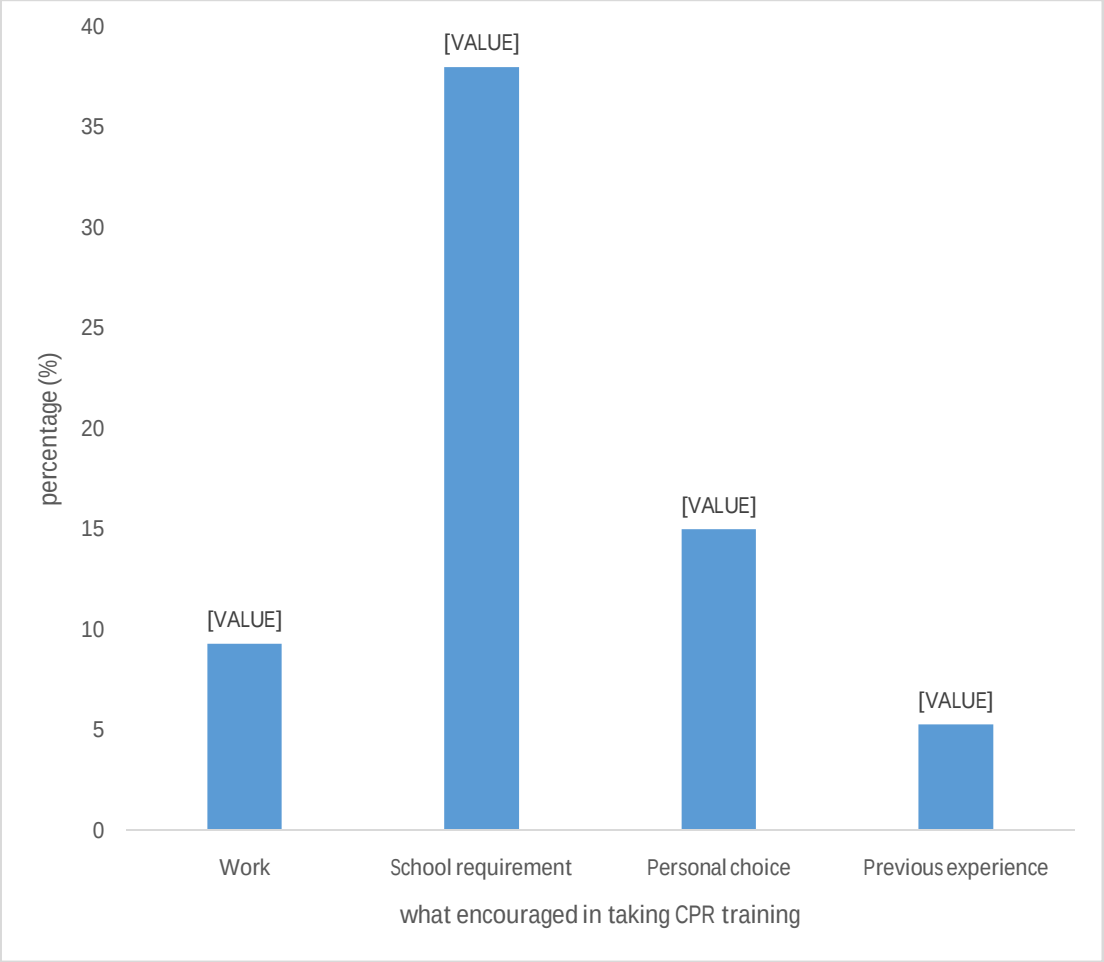


**Figure 2: Proportion of CPR training among respondents**

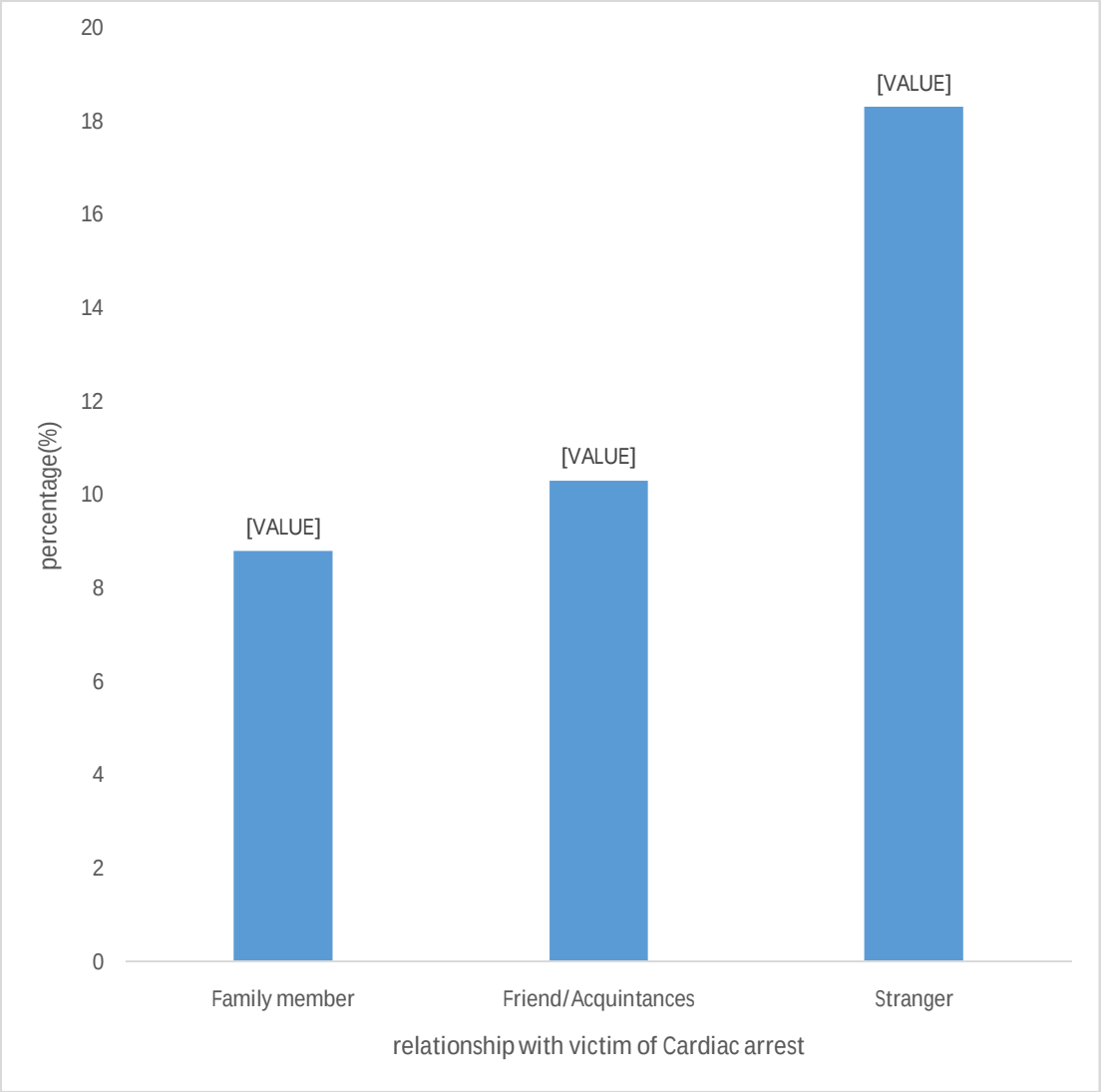


**Fig 3: Proportion distribution of relationship with cardiac arrest victim**



### 1.3 knowledge of respondents on Cardiopulmonary resuscitation (CPR)

As shown in figure.4 is the knowledge of respondents on Cardiopulmonary resuscitation . About 59.8 of the respondents has poor knowledge of CPR while 40.2% has good knowledge.

### 1.4 Respondents' Attitude towards Cardiopulmonary Resuscitation

Less than one-fifth of the respondents disagreed to have confidence in administering CPR and would abstain from performing Cardiopulmonary Resuscitation on a cardiac arrest victim. About 35% of respondents want to learn Cardiopulmonary Resuscitation techniques. Few (29.3%) of the respondents agreed they feel unsure of how to react when they are faced with a cardiac arrest victim. Less than one-fifth of the respondents strongly disagreed that they know what to do if cardiac arrest occurs. About 24% of the respondents strongly agreed not to perform mouth-to-mouth breaths during CPR. More than one-fifth of the respondents agreed to perform Cardiopulmonary resuscitation on family and friends. Few (23.8%) of the respondents are unsure of performing CPR on strangers. Details of respondents' attitudes towards CPRis shown in table.3.

As shown in figure 5 shows the attitude of respondents towards Cardiopulmonary Resuscitation. About 59% of the respondents show a negative attitude towards Cardiopulmonary Resuscitation. On the other hand, 41.5% has positive attitude towards Cardiopulmonary Resuscitation.

**1.5 Barriers affecting Administration of CPR among Respondents**

About two-fifth of the respondents agreed administration of CPR can lead to contracting a disease and 37.3% don't have the skills to give CPR . More than two-fifths of the respondents feared legal issues, police involvement (40%), reprisal by the gang (33.3%) and making mistakes (38.3%). More than one-fifth of the respondents don't know when CPR is needed and fear being charged in court (32.8%). Details of barriers affecting respondents on the administration of Cardiopulmonary Resuscitation is shown in table7.

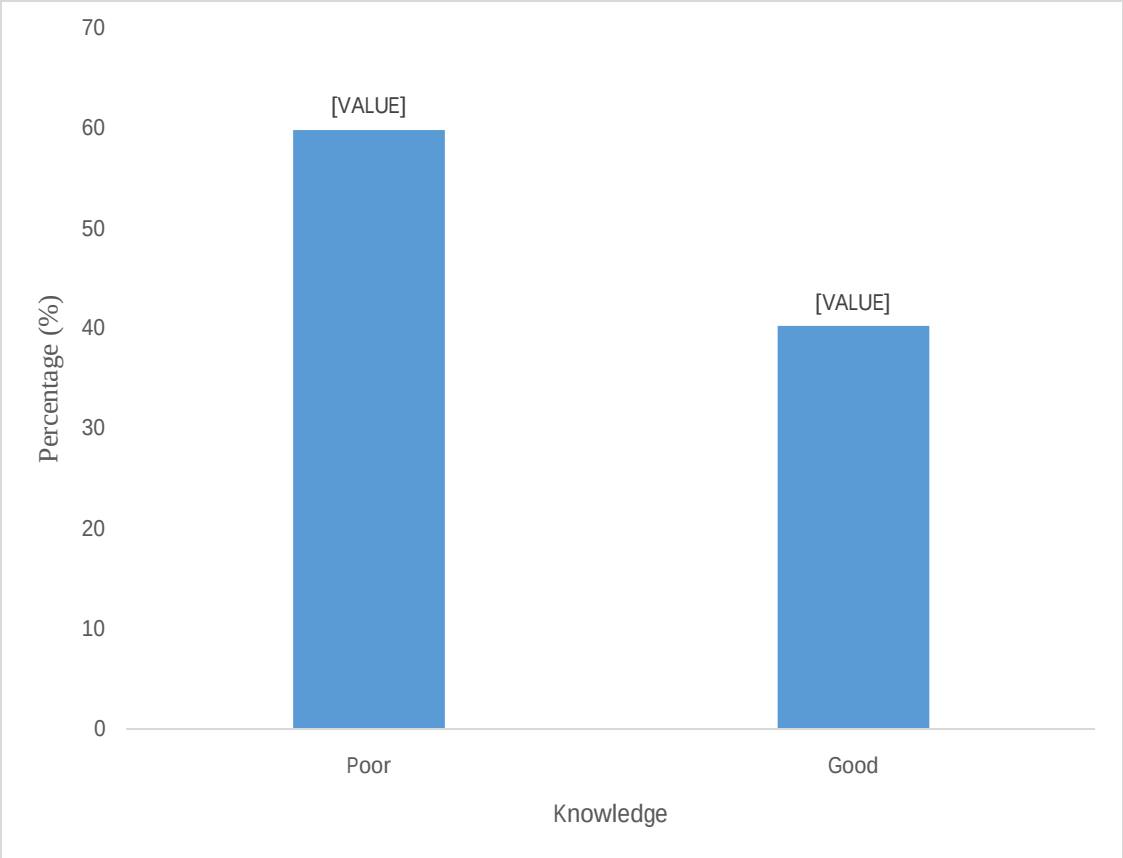


**Figure 4: Level of knowledge of CPR among community members**



**Table 3: frequency distribution of respondent attitude toward CPR (N= 400)**

| Variable | Strongly agree (%) | Agree (%) | Disagree (%) | Strongly disagree (%) | Undecided (%) |
|---|---|---|---|---|---|
| Confident to administer CPR to a cardiac arrest victim | 33(8.3) | 60(15) | 116(29) | 99(24.8) | 92(23) |
| Would abstain from performing CPR to a cardiac arrest victim | 42(10.5) | 106(26.5) | 105(26.3) | 67(16.8) | 80(20) |
| Would want to learn CPR techniques | 109(27.3) | 141(35.3) | 32(8) | 23(5.8) | 95(23.8) |

| | | | | |
|---|---|---|---|---|
| Would feel unsure of how to react when am faced with a cardiac arrest victim | 93(23.3) | 117(29.3) | 61(15.3) | 46(11.5) | 82(20.6) |
| Would consider it my duty to intervene in situation that required CPR | 53(13.3) | 73((18.3) | 80(20) | 87(21.8) | 107(26.8) |
| Know what to do if cardiac arrest occurs | 50(12.5) | 81(20.3) | 73(18.3) | 108(27) | 88(22) |
| Would need gloves, face mask and other items relevant for self-protection to act | 57(11.2) | 58(11.5) | 103(25.8) | 58(11.5) | 124(31) |
| Would prefer not to perform the mouth to mouth breaths during CPR | 95(23.8) | 83(20.8) | 62(15.5) | 46(11.5) | 114(28.5) |
| Would prefer to give CPR to a family members and friends | 78(19.5) | 126(31.5) | 53(13.3) | 40(10) | 103(25.8) |
| Unsure of performing CPR to a stranger | 79(19.8) | 95(23.8) | 53(13.3) | 39(9.8) | 134(33.5) |

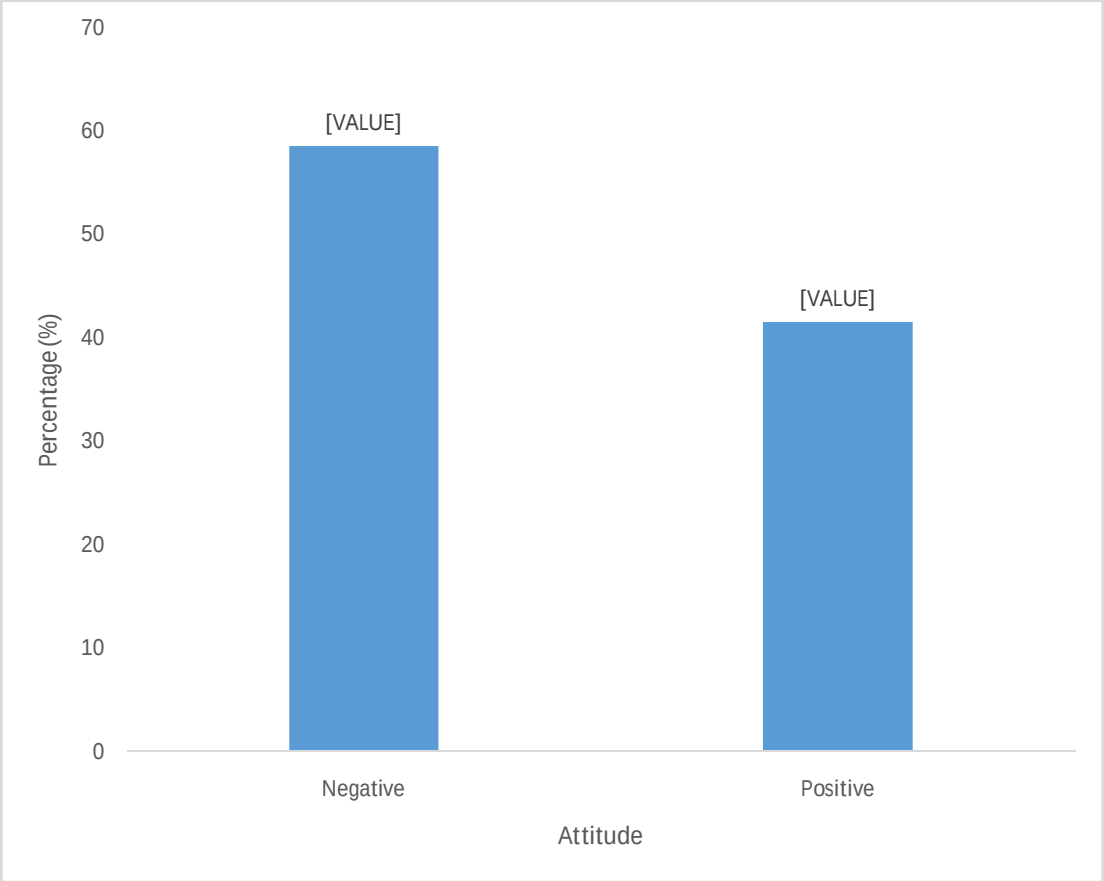


**Figure 5: Respondent's level of attitude towards CPR administration**



**Table 4 frequency distribution of barriers affecting administration of CPR among respondent (N=400)**

| Variable | Strongly agree (%) | Agree (%) | Disagree (%) | Strongly disagree (%) | Undecided (%) |
|---|---|---|---|---|---|
| Fear I may contact a disease | 133(33.3) | 161(40.3) | 34(8.5) | 37(9.3) | 35(8.8) |
| Do not have the skills to give CPR | 136(34) | 149(37.3) | 39(9.8) | 28(7) | 48(12) |
| Concerns about legal issues | 122(30.5) | 167(41.8) | 44(11) | 26(6.5) | 41(10.3) |
| Fear of Police involvement | 130(32.5) | 160(40) | 37(9.3) | 36(9) | 37(9.3) |
| Fear of causing injuries makes things worse | 131(32.8) | 159(39.8) | 45(11.3) | 18(1.5) | 47(11.8) |
| I don't want to give mouth to mouth resuscitation | 116(29) | 129(32.3) | 61(15.3) | 28(7) | 66(16.5) |
| Fear of reprisal by gangs | 113(28.2) | 133(33.3) | 48(12) | 40(10) | 66(16.5) |
| Fear of been harassed due to negative outcomes | 130(32.5) | 147(36.8) | 31(7.8) | 38(9.5) | 54(13.5) |
| Fear of making a mistake | 140(35) | 153(38.3) | 31(7.8) | 28(7) | 48(12) |
| Not sure if they need it | 118(29.5) | 123(30.8) | 47(11.8) | 37(9.3) | 75(18.8) |
| I don't know the person | 135(33.8) | 112(28) | 45(11.3) | 35(8.8) | 73(18.3) |
| Fear of been charged to court | 129(32.3) | 131(32.8) | 37(9.3) | 34(8.5) | 69(17.3) |



### 1.6 Testing Research Hypothesis

These hypotheses were tested in this study:

**H0 1: Association between socio-demographics and knowledge of CPR among respondents**

The association between socio-demographic characteristics and knowledge of CPR among respondents as seen in table 5 shows that there is a high proportion of good knowledge of CPR among respondents that are male (50%) compared to female (28.8%) at P-value<0.05. The proportion of good knowledge of CPR is high among respondents that are widowed (50%) compared to those that are married (43.1%) and single (40.1%) at P-value<0.05. There is a high proportion of good knowledge of CPR among respondents with a tertiary level of education (44.9%) compared to those that attended secondary school (20%) at P-value<0.05. The proportion of good knowledge is high among respondents that are retired (60.9%) compared to those that are unemployed (55.2%), civil-servant (49.5%), self-employed (43.4%), student (27.6%) and trader (16.7%) at P-value<0.05.

**H0 2: Association between socio-demographics and respondents attitude towards CPR**

The association between socio-demographics and respondents' attitudes towards CPR as seen in table 6 shows that the proportion of positive attitudes is high among respondents that are divorced (70%) compared to those that are married (41.3%) and single (40.1%) at P-value<0.05.

**H0 3: Association between attitude and respondents knowledge towards CPR**

The association between attitude and respondents knowledge towards CPR as seen in table 6 shows that there is high proportion of positive attitude among respondents that has good knowledge (52.2%) compared to those with poor knowledge (31.3%) at P-value<0.05.

**Table 5 Association between respondents socio-demographic and knowledge on CPR**

| Variables | Poor(%) | Good(%) | $\chi^2$ | P-value |
|---|---|---|---|---|
| **Age(years)** | | | 2.28 | 0.321 |
| 20-30 | 88(62.9) | 52(37.1) | | |
| 31-40 | 86(55.1) | 70(44.9) | | |
| 41-50 | 65(62.5) | 39(37.5) | | |
| **Sex** | | | 18.56 | 0.000* |
| Male | 108(50) | 108(50) | | |
| Female | 131(71.2) | 53(28.8) | | |
| **Marital status** | | | 10.42 | 0.034* |
| Single | 121(59.9) | 81(40.1) | | |
| Married | 99(56.9) | 75(43.1) | | |
| Divorce | 10(100) | 0(0) | | |
| Separated | 4(100) | 0(0) | | |
| Widowed | 5(50) | 5(50) | | |
| **Level of Education** | | | 18.16 | 0.000* |
| None | 3(100) | 0(0) | | |
| Primary | 9(90) | 1(10) | | |
| Secondary | 44(80) | 11(20) | | |
| Tertiary | 183(55.1) | 149(44.9) | | |
| **Occupation** | | | 28.48 | 0.000* |
| Civil servant | 53(50.5) | 52(49.5) | | |
| Retired | 9(39.1) | 14(60.9) | | |
| Self employed | 64(56.6) | 49(43.4) | | |
| Unemployed | 13(44.8) | 16(55.2) | | |
| Student | 55(72.4) | 21(27.6) | | |
| Trader | 45(83.3) | 9(16.7) | | |
| **Religion** | | | 0.85 | 0.358 |
| Christian | 236(60.1) | 157(39.9) | | |
| Islam | 3(42.9) | 4(57.1) | | |

*statistically significant

**Table 6 association between socio-demographics and respondents' attitude towards CPR**

| Variables | Negative(%) | Positive(%) | $\chi^2$ | P-value |
|---|---|---|---|---|
| **Age(years)** | | | 1.5 | 0.473 |
| 20-30 | 87(62.1) | 53(37.9) | | |
| 31-40 | 86(55.1) | 70(44.9) | | |
| 41-50 | 61(58.7) | 43(41.3) | | |
| **Sex** | | | 0.08 | 0.782 |
| Male | 125(57.9) | 91(42.1) | | |
| Female | 109(59.2) | 75(40.8) | | |
| **Marital status** | | | 10.98 | 0.027* |
| Single | 121(59.9) | 81(40.1) | | |
| Married | 97(55.7) | 77(41.3) | | |
| Divorce | 3(30) | 7(70) | | |
| Separated | 4(100) | 0(0) | | |
| Widowed | 9(90) | 1(10) | | |
| **Level of Education** | | | 2.54 | 0.469 |
| None | 3(100) | 0(0) | | |
| Primary | 5(50) | 5(50) | | |
| Secondary | 31(56.4) | 24(43.6) | | |
| Tertiary | 195(58.7) | 137(41.3) | | |
| **Occupation** | | | 7.06 | 0.217 |
| Civil servant | 53(50.5) | 52(49.5) | | |
| Retired | 13(56.5) | 10(43.5) | | |
| Self employed | 64(56.6) | 49(43.4) | | |
| Unemployed | 19(65.5) | 10(31.5) | | |
| Student | 47(61.8) | 29(38.2) | | |
| Trader | 38(70.4) | 16(29.6) | | |
| **Religion** | | | 0.49 | 0.484 |
| Christian | 229(58.3) | 164(41.7) | | |
| Islam | 5(71.4) | 2(28.6) | | |
| **Knowledge** | | | 12.65 | 0.000* |
| Poor | 157(65.7) | 82(31.3) | | |
| Good | 77(47.8) | 84(52.2) | | |

*statistically significant

**Objectives One: To assess bystander level of knowledge on CardiopulmonaryResuscitation in ObioAkpor LGA.**

Gaafar, Khan and Elmorsy (2022) conducted a study in Saudi Arabia on the knowledge and attitude toward CPR among the young population. The study found that there is a high level of CPR knowledge and attitude, which can be ascribed to things like age, gender, and high levels of education. The findings is relatively incongruent with the study conducted in muscat city by Aisha and Gu (2020) where the knowledge level toward CPR was very low despite its differences with respect to socio-demographic characteristics. In addition, a study done by Mekonnen and Muhye (2020) among non-medical population in Ethopia demonstrated that knowledge score of the participants was below average. This may be due to lack of CPR training among participants.

In this study less than half of the respondent had good knowledge of CPR. The findings may be attributed to certain factors like Lack of CPR training. The result is in line with the study conducted in Ethiopia by Mekonnen and Muhye (2020) which was 41.4%. Also it is congruent with the study done by Ganfure,Ameya, Tamirat, Lencha, Bikila et al. 2018 in Ethopia with an overall good knowledge level of 40.0%. In addition, it is similar to the findings derived from Midani, Tilawi, Saqer, Hammami, Taifour et al. (2019) done in United Arabs which shows that respondents have good knowledge level of 40.3%.

The level of good knowledge of CPR in the current study was lower than the study conducted by Althubaiti, Altowairqi, Alnefai and Alsulimani (2019) in Taif university. The study revealed a score of 50.3% among undergraduate students. This finding is congruent to the study done by Oladokun, Ogungbenro, Odetola, Abimbola et al. (2022) which reveal a score of 61.3% of low awareness among staff and students of university of Ibadan. More So, the study carried out by Teshal and Alemu (2017) among Taxi drivers in Ethopia shows a poor level of knowledge of 71.3%. Meanwhile, the findings from this study on good knowledge was higher than the study conducted by Subki, Mortada, Alsallum,Alattas,Almalki et al (2018 ) which revealed that 39% of the participants were knowledgeable. Also, the recent study findings on good knowledge was higher than that of a study carried out on factors

affecting knowledge and attitude towards adult Cardiopulmonary Resuscitation by Mersha, Kiros, Egzi, and Tawuye (2020) in Ethopia with a score of 25.1%.

The findings of this study show majority of the respondents (60%) has poor knowledge. Similar findings were seen in the study conducted by Olajumoke, Afolayan and Raji (2012) in Nigeria. The study revealed inadequate knowledge of CPR among respondents. Also, in a study done by Aliyu, Michael, Grema and Ibrahim (2019) in Kano state among clinical students shows that there was a poor knowledge of CPR. This may be as a result of proper awareness on CPR.

### 5.1.2 Objectives Two: To assess the attitude of bystander towards CardiopulmonaryResuscitation in ObioAkpor LGA.

The findings from this study revealed that majority had negative attitude towards administering Cardiopulmonary Resuscitation to out of hospital cardiac arrest victims. It is similar to the study conducted by Mersha, Kiros, Egzi and Tawuye 2020 in Ethopia. The study concluded that that there was a suboptimal attitude level among participants. This finding is incongruent with a study done by Buranasakda, 2021 in Auckland on the knowledge of and attitudes towards bystander Cardiopulmonary Resuscitation. The study shows that majority of respondents have positive attitude towards providing bystander CPR.

Hung, Chow, Chu and Xuan (2017) conducted a study on College students knowledge and attitudes toward bystander cardiopulmonary resuscitation in China. The study revealed that the respondent's attitudes toward CPR was overall positive with maximum at 30 and minimum at 16 for the 10 items. This is contrary to the findings from this study as about 59% of the respondents have negative attitude towards bystander CPR. This may be due to barriers affecting CPR practice such as Fear of Legal action and police involvement.

The level of good attitude (41.5%) derived from this study was lower than that carried out by Kassie and Salih (2021) in Ethopia. The finding shows that about (46%) had positive attitude towards administering CPR. Also, a study carried out by Teshale and Alemu 2016 shows a positive attitude of 93.8% towards administering CPR among taxi drivers in Addis Ababa. This finding is in congruent with a study conducted by Alkandari, Alyahya and Abdulwahab (2017) in Kuwiat that revealed respondents had 99% positive attitude towards CPR.

Yaw, (2019) conducted a study on the assessment on the willingness to practice CPR in Ghana. The study findings shows that most participants family and friends should expect CPR from bystanders without hesitation, but due to health and safety considerations, outsiders should not expect bystander assistance. The findings is relatively congruent with the study done by Meng, Yue, Xuan et al in China (2017) on public knowledge and attitudes towards bystander CPR. The study revealed that majority (98.6%) of laypersons would perform CPR on their family members, but fewer laypersons (76.3%) were willing to perform CPR on strangers as most respondents (53.2%) were worried about legal issues. Meanwhile it is revealed in this study that more than one-fifth of the respondents agreed to perform CPR on family and friends. Few of the respondents are unsure of performing CPR on strangers. More than two-fifths of the respondents feared legal issues, police involvement .

### 5.1.3Association between socio-demographics and knowledge of CPR among respondents

The findings of the study shows that there was significant association between the participants "sex and their knowledge of CPR thus, male gender exhibited better knowledge than the female gender. This is congruent with study conducted by Aljameel, Alhuwayfi, Banjar, Alswayda, Alhijali et al (2018). The study revealed that males have more knowledge about CPR than females.

More so, this study shows that there was a significant association between Level of Education and knowledge of CPR. This finding is similar to the study conducted by Mbada, Hakeem, Adedoyin et al (2015). The study revealed association between level of education and knowledge of CPR. It is also congruent with a study done by Pei-Chuan , Chiang, Hsieh, Wang, Yang et al (2019). The study revealed that there is association between level of education and knowledge of CPR.

Similarly, there was a significant association between the participants "marital status and their knowledge of CPR. This finding is similar to the study conducted by Pei-Chuan , Chiang, Hsieh, Wang, Yang et al. (2019). The study revealed association between marital status and knowledge of CPR.

The findings of the study shows that there was significant association between the participants "Occupation and their knowledge of CPR thus, civil servants exhibited better knowledge. This is congruent with study conducted by Mersha, Egzi and

Tawuye (2020). The study revealed that there is association between occupation and knowledge of CPR. This reason made be influenced by the level of working experience and working sectors.

### 5.1.4Association between socio-demographics and respondents' attitude towards CPR

The findings of the study shows that there was significant association between the participants "marital status and their knowledge of CPR. This is congruent with the study carried out by Mbada, Hakeem, Adedoyin et al (2015). The study revealed association between marital status and knowledge of CPR.

### 5.1.5 **Association between attitude and respondents knowledge towards CPR**

The findings of the study shows that there was significant association between the participants "attitude and their knowledge of CPR. This is congruent with the study carried out by Gutena (2021). The study revealed association between attitude towards administering CPR and knowledge of CPR.

## 5.2 Summary and Conclusion

The study was able to identify the level of knowledge of community members in the administration of bystander CPR to out of hospital cardiac arrest victim. Also, the study explores the barriers limiting CPR practices among community members. Results indicate that majority of the participants had poor knowledge of CPR and poor attitude towards administering bystander Cardiopulmonary Resuscitation. Also, the result from the qualitative aspect of the study indicates that community participation towards facilitating CPR administration is influenced by the barriers. Hence participation among members is individualistic.

## 5.3 Implication to Nursing

The nurse plays a vital role in the sensitization of the community members on prevention and management of Sudden cardiac arrest. They possess skills that can be used to foster community collaboration and participation in providing prompt CPR administration to out of hospital cardiac arrest victim and fully apply these skills in other to curb out of hospital sudden deaths. Therefore, there is need for nurses to ensure adequate health education, awareness creation and proper sensitization on the

benefits of CPR in the case of out of hospital cardiac arrest. Also, nurses need to be readily available to give prompt CPR intervention when victims are rushed to the hospital. However, there is need for nurses to adapt a community centered care approach for the continuity of health.

### 5.4 Recommendation

Based on findings of the study, the following recommendations were proposed.

- Community sensitization on Cardiopulmonary Resuscitation and its importance in sudden cardiac arrest
- CPR Training courses should be made available to the community members.
- Encouraging Community members to participate in CPR practice
- Organizing of community leaders/members health seminars on cardiopulmonary administration and prevention of sudden cardiac death
- There should be an emergency medical service contact provided to the public to call in cases of sudden cardiac arrest
- There should be AED machines in public places such as the market, religious centers, airport, schools etc
- Educating community members on the importance of their participation in the preventionof out of hospital cardiac death

### 5.5 Limitations

- The study is limited by the scarcity of recent literature review on community participation in the knowledge and attitude of bystander cardio pulmonary resuscitation in out of hospital cadiac arrest victims
- There was an attrition rate: 27 out of 427community members recruited did not return their questionnaire
- There was shortage of 1 participant for FDG in the Rumuokwuta communities of Obio Akpor.

### 5.6 Suggestions for further research

- Attitude of Health professionals towards out of hospital cardiac arrest

- Barriers to attain training and the effectiveness of the available CPR training programmes
- Prevalence of out of hospital cardiac arrest in Nigeria.
- Intervention study to effective on improving the knowledge, attitude and skill in providing CPR.

**REFERENCES**


American Heart Association (AHA). 2020. Highlights of the 2020 American Heart Association. Guidelines for CPR and ECC.

Anto-Ocrah M, Maxwell N, Cushman J, Acheampong E, Kodam RS, Homan C, Li T. 2020. Public knowledge and attitudes towards bystander cardiopulmonary resuscitation (CPR) in Ghana, West Africa. *Int J Emerg Med. 10;13(1):29.*

Aisha, A., Gu, C . 2020. Evaluation of public awareness, knowledge and attitudes towards basic life support among non-medical, adult population in muscat city, oman: Cross-sectional study.

Aliyu, I., Michael, G.C., Grema, B.A., Ibrahim, Z.F. 2019.Knowledge and practice of cardiopulmonary resuscitation among clinical students of a medical school in Kano, Nigeria 8.4: 242-246

Aljameel, O., Alhuwayfi, A.,Banjar, K.,Alswayda, S., Alhijaili, R., Elkandow, A., Ahmed, H. 2018. Sources of Knowledge about CPR and Its Association with Demographical Characteristics in Saudi Arabia.Open Journal of Emergency 43-53.

Alkandari S.A, Alyahya L, AbdulwahabM.(2017) Cardiopulmonary resuscitation knowledge and attitude among general dentists in Kuwait. World J Emerg

Buranasakda, M. 2021. Knowledge of and attitude towards bystander CPR among Thais in Auckland

CDC .2021. Three things you may not know about CPR

Chuka, T. O. &Samuel O.I.2021.Cardiovascular diseases in Nigeria: What has happened in the past 20 years?*Nigerian Journal of Cardiology* 17:21-6

CPR Facts and Stats. 2020. Cardiopulmonary Resuscitation facts and sheets

Fadi,J.Q., Loui,K.A,Maged,M.F,&Diyaa,H.B. 2019.Knowledge of nonmedical individuals about cardiopulmonary resuscitation in case of cardiac arrest: a cross-sectional study in the population of jeddah, saudiarabia. *Emergency Medicine International* 19.11

Gaafar, R.M., Khan, A.S., Elmorsy, S. 2022. Knowledge and attitude of young population toward CPR training, results from largest training session in an official attempt to enter Guinness Book of Records: A cross-sectional study from Saudi Arabia. *Journal of family medicine and primary care* 11: 2, 531 -536

Ganfure G, Ameya G, Tamirat A, Lencha B, Bikila D.2018. First aid knowledge, attitude, practice, and associated factors among kinder- garten teachers of Lideta sub-city Addis Ababa, Ethiopia.*PLoS One.*;13:3

Guteta M. Factors Affecting Cardiopulmonary Resuscitation Practice Among Nurses in Mizan Tepi University Teaching Hospital, Tepi General Hospital, and Gebretsadik Shawo Hospital, Southwest Ethiopia.2022. *Open Access Emerg Med.* 14:165-175

Hung,M.S., Chow,M.C., Wing ChuT.T., Wong,P., Nam,W.Y., Ki Chan,V. & Chan, T.H. 2017. College students' knowledge and attitudes toward bystander cardiopulmonary resuscitation: A cross-sectional survey, Cogent Medicine, 4:1

Kassie D.G. & Hassen S. M. Study department and gender affects the knowledge and attitude of students towards cardio pulmonary resuscitation procedure at the University of Gondar, northwest Ethiopia. 2021 Am J Cardiovasc Dis 11(4):441-449.

Mazen,E.S., Reem,A.A., Yasmin,A.A., Nour, G.,Marwan, M.R & Hani,T. 2017. Measuring the impact of emergency medical services (EMS) on out of hospital cardiac arrest survival in a developing country: A key to metric for EMS systems performance. *National Library of Medicine* 96.29

Mbada, C. E.; Hakeem, B. O.; Adedoyin, R. A.; Awotidebe, T. O.; Okonji, A. M. Knowledge, attitude and practive of cardiopulmonary resuscitation among nigerian physiotherapists.2015. *Journal of Respiratory and CardioVascular Physical Therapy,* 52–62,

Mekonnen, C.K & Muhye, A.B .2020. Basic Life Support Knowledge and Its Associated Factors Among a Non-Medical Population in Gondar Town, Ethiopia, *Open Access Emergency Medicine,* 12:, 323-331,

Meng C., Yue, W. & Xuan, L. 2017. Public Knowledge and attitudes towards cardiopulmonary resuscitation in china. B*iomedical Research International*

Mersha T. Kiros A.H., Egzi, G., Tawuye, H.Y. 2020. Factors associated with knowledge and attitude towards adult cardiopulmonary resuscitation among healthcare professionals at the University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia: an institutional-based cross-sectional study

Midani O, Tillawi T, Saqer A, Hammami MB, Taifour H, Mohammad H. .2019 Knowledge and attitude toward first aid: a cross-sectional study in the United Arab Emirates. Avicenna J Med. 9(1):1.

Mutlu,V.,Mustafa,F.K,Orha,K.,Fatih,K.,Serdar,K.,Sevil,T. & Hasan,B.I.2017. Cardiopulmonary resuscitation knowledge among nursing students: a questionnaire study. *Anatolian Journal of Cardiology* 17.2 :140-145

Oladokun,T.F., Ogungbenro,F.A., Odetola,T.F., Abimbola O.O . & Abiona, M. 2022. Awareness and Perceptions of Basic Life Support (BLS) among Staff, Students and Abadina Residents of the University of Ibadan

Olajumoke TO, Afolayan JM, Raji SA, et al.2012. Cardiopulmonary resuscitation - knowledge, attitude & practices in osun state, Nigeria. *J West Afr Coll Surg* 2:23

Pei-Chuan, H. E., Chiang, W.C., Hsieh, M.J., Wang, H.C., Yang, CW, Lu, T.C., Wang, C.H., Chong, K.M., Lin, C.H., Kuo, C.W., Sun, J.T., Lin, J.J., Yang, M.C. & Huei-Ming M.M.2019. Public knowledge, attitudes and willingness regarding bystander cardiopulmonary resuscitation: A nationwide survey in Taiwan. *J Formos Med Assoc* 118(2):572-581.

Renner, A.E, Ohaeri, B., O.Abimbola, O., OJO, I. &Babarimsa, O. 2022. Sudden cardiac death: A national health concern. *IJARBAS*. 4.6:1-12

Schnaubelt, S., Monsieurs, K.G., Semeraro, F.,Schlieber, J., Cheng, A. et.al. 2020. Clinical outcomes from out of hospital cardiac arrest in low resource setting - A scoping review. *National Library of Medicine* 153: 137-145

Shir L., Karen S,, Kylie D., Siew P., Arul E., Resmi N., et, al. 2020. Incidence and Outcomes of Out□of□Hospital Cardiac Arrest in Singapore and Victoria: A Collaborative Study. *Journal of American Heart Association* 9.21

Tadesse, M., Seid, S,A., Getachew, H., & Ali, S.A. 2022. Knowledge, attitude, and practice towards basic life support among graduating class health science and medical students at Dilla University; a cross sectional study,*Annals of Medicine and Surgery* 82: 2047-0801

World Health Organization (WHO).2018. WHO, non communicable diseases(NCD)Nigeria profiles.

World Health Organization (WHO). 2019. WHO & Nigeria government move to curb CVD.

World Health Organization (WHO). 2021. Cardiovascular diseases.

Yaw,G.A.2019.*A*wareness of cardiopulmonary resuscitation (CPR) among university of ghana students and an assessment of their willingness to practice.