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Assessment of Knowledge, Attitude and Skills of Health Care Workers On Cardio-Pulmonary Resuscitation in Ibadan Oyo State, Nigeria

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Abstract:

This study assessed the knowledge, attitude and skills of health care workers on Cardio-pulmonary resuscitation in Ibadan Oyo State. A descriptive (cross-sectional study) design was adopted for this study. Simple random sampling technique was used to select 256 healthcare workers from the study setting. A pretested self-structured questionnaire was used for data collection. The validity of the instrument was ensured through face and content validity. The reliability of the instrument was determined by finding the internal consistency of the instrument using Cronbach alpha. This yielded a coefficient value of 0.78. The data collected from the questionnaire were analysed using descriptive and inferential statistics. The findings of the study revealed that 55.5 percent of the respondents had good knowledge of cardio-pulmonary resuscitation as against 114(44.5%) that had poor knowledge. Larger percentage (60.5%) had positive attitude towards cardio-pulmonary resuscitation. About 56.2% had adequate skills towards cardio-pulmonary resuscitation as against 43.8% that had inadequate skills. In addition, there was significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude; and between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills. Also, there was significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills. It was recommended

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among others that training of Nigerian healthcare workers on CPR should be encouraged to increase potential bystander CPR providers and CPR instructors, in line with the international community.

Keywords: Knowledge, Attitude, Skills, Health Care Workers, Cardio-Pulmonary Resuscitation,

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Introduction

Cardiopulmonary resuscitation (CPR) is a core emergency skill that must be acquired by all health care professionals. CPR remains a new procedure in developing compared to developed countries (Munezero, Atuhaire, Groves & Cumber, 2018). Cardiopulmonary resuscitation (CPR) is a life-saving procedure that consists of the use of chest compressions and artificial ventilation to maintain circulatory flow and oxygenation during cardiac arrest (Okonta & Okoh, 2015). Cardiac arrest is the unexpected cessation of effective cardiac function in an apparently healthy individual. Cardiac arrest is a substantial public health problem estimated to account for 15–20% of all deaths. It is an important cause of cardiovascular morbidity and mortality in both developed and developing countries. It could occur in the hospital or out of hospital (Mendhe, Burra, Singh & Narni, 2017).

Cardiac arrest is an emergency, which can be managed effectively by sound knowledge and practice of cardio-pulmonary resuscitation (CPR) and basic life support (BLS) skills (Majid, Jamali & Ashrafi, 2019). Despite advancements in treatment of sudden cardiac death (SCD) using cardiopulmonary procedure, it remains a leading cause of mortality and is responsible for approximately half of all deaths from cardiovascular disease. Outcomes continue to remain poor following a sudden cardiac arrest, with most individuals not surviving (Wong, Brown, Lau, Chugh & Albert, 2019).

Gebremedhn, Gebregergs, Anderson and Nagaratnam (2017), reported that the skill levels of healthcare workers, especially nurses and nursing students with regard to performing CPR were insufficient. Although, there are few related recent reports from Nigeria on knowledge of cardiopulmonary resuscitation as proposed by Onyeaso and Onyeaso (2017), however, there is still need for more data on this subject in the advocacy effort for the incorporation of bystander CPR teaching and training into the Nigerian health system, especially among healthcare workers.

Poor knowledge of CPR among healthcare givers portends a great danger to community health (Zha, Ariyo, Olaniran, Ariyo, Lyon, Kalu, Latif, Edmond & Sampson, 2018). To achieve the goal of improving the survival rate from cardiac arrest, there is an urgent need to train healthcare givers on CPR and BLS techniques (Owojuyigbe, Adenekan, Faponle & Olateju, 2015). Also, as healthcare workers, especially nurses are usually the first professional persons to provide BLS during emergency situations, they should possess the knowledge and skills to be able to perform CPR effectively and thus to save lives (Ehlers & Rajeswaran, 2014).

The study therefore examined the knowledge, attitude and skills of health care workers on Cardio-pulmonary resuscitation in Ibadan, Oyo State. The study specifically

- 1. determined the level of knowledge of health care workers on cardiopulmonary resuscitation in Ibadan North local government;
- 2. identified the attitude of health care workers towards cardiopulmonary resuscitation in Ibadan North local government;
- 3. measured the skill of health care workers on cardiopulmonary resuscitation in Ibadan North local government;

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3

- 4. examined the relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude;
- 5. examined the relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills; and
- 6. relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills.

Research Questions

The following research questions were raised to guide the study:

- 1. What is the level of knowledge of health care workers on cardiopulmonary resuscitation in Ibadan North local government?
- 2. What is the attitude of health care workers towards cardiopulmonary resuscitation in Ibadan North local government?
- 3. What is the level of skills on cardiopulmonary resuscitation among health care workers in Ibadan North local government?

Research Hypotheses

The following null hypotheses were generated for this study:

- 1. There is no significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude.
- 2. There is no significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills.
- 3. There is no significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills.

Methodology

This study utilized a descriptive cross-sectional survey design to give detailed description and assess the knowledge, attitude and skill of health care workers on Cardio-pulmonary resuscitation in Ibadan. The population comprised of healthcare workers that are presently working in the sixteen (16) primary health centres (PHCs) within Ibadan North local government of Oyo State. This included healthcare workers that are ready to participate voluntarily in the current research. Also, this involved healthcare workers from different socio-economic, cultural, educational and marital background. They were carefully selected to give a true representative of the study. However, those that refused to consent were excluded from participating in the study.

The participants of the study selected were 256 healthcare workers that are presently working in the PHCs within Ibadan North local government of Oyo State. The technique was based on simple random sampling. This is the random selection of the most readily available healthcare workers as participants. This technique was used because not all the healthcare workers were at the PHCs, at all-time and the same time.

A structured questionnaire was designed as the research instrument for this study. This questionnaire was used to collect data on knowledge, attitude and skills on CPR from the participants. The questionnaire was divided into 4 sections from section A to section D. Section A collected data on demographic characteristics, Section B collected data on

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4

knowledge of health care workers on cardiopulmonary resuscitation; Section C identified the attitude of health care workers on cardiopulmonary resuscitation; and finally Section D measured the skill of health care workers on cardiopulmonary resuscitation.

To determine the extent to which the instrument measured what it is meant to measure, the instrument was subjected to face and content validity. It was subjected to thorough screening by Health experts who were lecturers in the Department of Nursing as well as experts of Tests and Measurement to determine the face value and content validity of the instrument. In so doing, all irrelevances and ambiguous items were eliminated and professional comments on the appropriate method used in setting the instrument were made.

The reliability of the instrument was determined by finding the internal consistency through a study carried out outside the sampled locations. Data collected were tested using Cronbach alpha and the internal consistency of the items was ensured yielded a co-efficient value of 0.78. This was considered adequate for the study. The data collected were analyzed using descriptive and inferential statistics. The research questions were answered using frequency count and percentages. Hypotheses 1 – 3 were tested using Chi-square at 0.05 level of significance.

Results

Descriptive Analysis

Research Question 1: What is the level of knowledge of health care workers on cardiopulmonary resuscitation in Ibadan North local government?

Table 1: Knowledge of healthcare workers on cardio-pulmonary resuscitation

		True		False	
S/N	Respondents' Knowledge (n=256)	Freq	%	Freq	%
1.	CPR consists of the use of chest compressions and	240	93.8	16	6.3
	artificial ventilation to maintain circulatory flow and				
	oxygenation during cardiac arrest.				
2.	Cardio-pulmonary Resuscitation (CPR) is most effective	216	84.4	40	15.6
	when started immediately after the patient collapse.				
3.	The CPR technique restores and maintains the breathing	217	84.8	39	15.2
	and circulation of blood after cardiac arrest, preventing				
	brain damage and mortality.				
4.	The recommended compression to ventilation ratio is	192	75.0	64	25.0
	3:2.				
5.	Victims are to be given another rescue breathe if the	203	79.3	53	20.7
	chest does not rise after delivering the first rescue				
	breathe.				
6.	The recommended chest compression to be performed	202	78.9	54	21.1
	each minute when giving CPR is 100.				
7.	The best way to open the airway prior to giving mouth-	217	84.8	39	15.2
	to-mouth ventilation is to tilt the head back and lift the				
	chin up.				

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8.	The chest compression landmark on adult is at the centre	197	77.0	59	23.0
	of the chest.				
9.	Chest compressions should be performed on an infant	226	88.3	30	11.7
	with two fingers of one hand while doing CPR.				
10.	The steps of CPR in the correct sequence is compression,	214	83.6	42	16.4
	maintain a patent airway and artificial breathing.				
11.	The CAB of resuscitation represents Compression,	215	84.0	41	16.0
	Airway and Breathing.				
12.	The chance of saving a victim when CPR is performed	221	86.3	35	13.7
	correctly is 75%.				
13.	When dealing with a conscious choking patient, the	201	78.5	55	21.5
	treatment or action to be taken is an abdominal thrust				
	(also called Heimlich maneuver)				
14.	Children become adults in CPR terms by 12 years.	198	77.3	58	22.7

Above table shows various responses of respondents on their knowledge of cardiopulmonary resuscitation. It was observed that larger percentage of the respondents 142(55.5%) had good knowledge of cardio-pulmonary resuscitation as against 114(44.5%) that had poor knowledge. However, greater percentage 93.8% answered true to the facts that Cardio-pulmonary Resuscitation (CPR) consists of the use of chest compressions and artificial ventilation to maintain circulatory flow and oxygenation during cardiac arrest and 84.4% of the respondents also ascertained that CPR is most effective when started immediately after the patient collapse. Surprisingly, 84.8% of the respondents indicated that the CPR technique restores and maintains the breathing and circulation of blood after cardiac arrest, preventing brain damage and mortality. This study shows that healthcare workers in Ibadan have fairly-good knowledge of cardiopulmonary resuscitation.



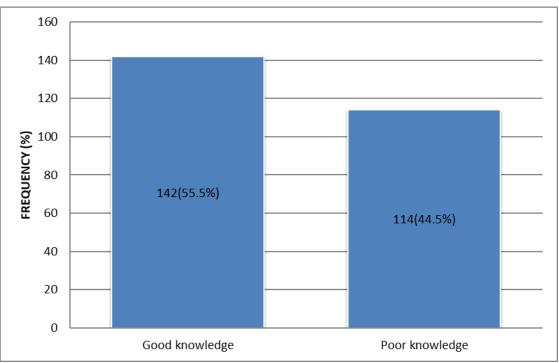


Figure 1: Summary of respondents' knowledge on cardio-pulmonary resuscitation.

Figure 1 shows that larger percentage of the respondents 142(55.5%) had good knowledge of cardio-pulmonary resuscitation as against 114(44.5%) that had poor knowledge.

Research Question 2: What is the attitude of health care workers towards cardiopulmonary resuscitation in Ibadan North local government?

Table 4.3: Attitude of healthcare workers on cardio-pulmonary resuscitation

		SA		A U		D		SD			
S/N	Respondents' Attitude (n=256)	Fre q	%	Freq	%	Freq	%	Freq	%	Freq	%
1.	I would want to perform mouth-to-mouth ventilation during CPR.	108	42.2	75	29. 3	29	11. 3	36	14. 1	8	3.1
2.	I feel that my knowledge of CPR is sufficient.	78	30.5	89	34. 8	32	12. 5	42	16. 4	15	5.9
3.	I would want to learn CPR techniques.	141	55.1	86	33. 6	15	5.9	10	3.9	4	1.6
4.	I would abstain myself from performing CPR to a victim who has cardiac arrest.	67	26.2	68	26. 6	31	12. 1	54	21. 1	36	14. 1
5.	I think that CPR training course should be mandatory for all healthcare workers.	152	59.4	87	34. 0	11	4.3	3	1.2	3	1.2
6.	The best method to increase awareness of CPR among healthcare workers is to encourage increase publicity, encourage CPR training in Continuous Professional	139	54.3	87	34. 0	20	7.8	3	1.2	7	2.7

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	Development and encourage free training courses for healthcare workers.										
7.	I would feel unsure of how to react when present at the scene of a victim who has cardiac arrest.	64	25.0	80	31. 3	52	20. 3	37	14. 5	23	9.0
8.	I would feel nervous to be brought face to face with a situation requiring CPR.	78	30.5	71	27. 7	36	14. 1	52	20. 3	19	7.4
9.	I would consider it my duty to intervene in a situation requiring CPR.	125	48.8	97	37. 9	28	10. 9	5	2.0	1	0.4
10.	I would feel secure in my CPR knowledge.	106	41.4	108	42. 2	31	12. 1	8	3.1	3	1.2
11.	I would feel anxious to perform CPR.	89	34.8	90	35. 2	32	12. 5	31	12. 1	14	5.5
12.	I know what to do if cardiac arrests occur.	93	36.3	96	37. 5	39	15. 2	17	6.6	11	4.3
13.	I would act instinctively to perform CPR.	97	37.9	89	34. 8	45	17. 6	18	7.0	7	2.7
14.	I would see CPR as a chance to help.	129	50.4	100	39. 1	22	8.6	4	1.6	1	0.4
15.	I would need gloves, face mask and other items relevant for self protection to act.	116	45.3	86	33. 6	25	9.8	16	6.3	13	5.1
16.	I would prefer not to perform the mouth to mouth ventilation during CPR.	150	58.6	50	19. 5	26	10. 2	20	7.8	10	3.9
17	I am willing to provide bystander CPR to my relatives, strangers and trauma victims.	113	44.1	97	37. 9	37	14. 5	4	1.6	5	2.0
18	I want CPR to be formally taught in this primary health centre.	171	66.8	53	20. 7	17	6.6	8	3.1	7	2.7

Concerning the attitude of respondents on cardiopulmonary resuscitation, table 2 above revealed that 108(42.2%) strongly agreed that they would want to perform mouth-to-mouth ventilation during CPR, 75(29.3%) agreed, 29(11.3%) were undecided, 36(14.1%) disagreed, while 8(3.1%) strongly disagreed. Also, 78(30.5%) of the respondents strongly agreed that they felt that their knowledge of CPR is sufficient, 89(34.8%) agreed, 32(12.5%) were undecided, 42(16.4%) disagreed, while 15(5.9%) strongly disagreed. More so, 141(55.1%) of the respondents strongly agreed that they would want to learn CPR techniques, 86(33.6%) agreed, 15(5.9%) were undecided, 10(3.9%) disagreed, while 4(1.6%) strongly disagreed. See table 4.3 for details.

It was revealed that more than half 155 (60.5%) of the respondents had positive attitude towards cardio-pulmonary resuscitation as against 101(39.5%) that had negative attitude. Thus, this study shows that the attitude of health care workers towards cardiopulmonary resuscitation in Ibadan is positive.

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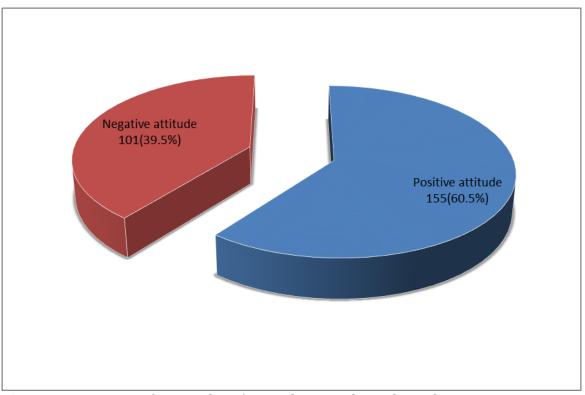


Figure 2: Summary of respondents' attitude towards cardio-pulmonary resuscitation From the above figure, it was observed that more than half 155(60.5%) of the respondents had positive attitude towards cardio-pulmonary resuscitation as against 101(39.5%) that had negative attitude.

Research Question 3: What is the level of skills on cardiopulmonary resuscitation among health care workers in Ibadan North local government?

Table 3: Skills of healthcare workers on cardio-pulmonary resuscitation

	rable 5: 5kms of hearthcare workers on cardio-pullionary resuscitation										
	Respondents' skills	SA		A		U		D		SD	
S/N	(n=256)	Freq	%								
1.	I have had a formal CPR training before.	106	41.4	74	28.9	14	5.5	38	14.8	24	9.4
2.	I have performed CPR technique on a patient before.	70	27.3	75	29.3	30	11.7	49	19.1	32	12.5
3.	I have never encountered a situation that required the use of CPR.	80	31.3	65	25.4	30	11.7	48	18.8	33	12.9
4.	I have acquired the CPR training due to my personal interest.	86	33.6	65	25.4	30	11.7	57	22.3	18	7.0

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		400	100		00 =	4.0	· - ·	0.6			0.6
5.	I have been given CPR	103	40.2	76	29.7	19	7.4	36	14.1	22	8.6
	training at some point										
	during my medical										
	training.										
6.	We do have a periodic and	90	35.2	52	20.3	24	9.4	62	24.2	28	10.9
	constant CPR training in										
	this primary health centre.										
7.	I have been actively	100	39.1	65	25.4	24	9.4	46	18.0	21	8.2
	involved in the										
	resuscitation of patients										
	before using CPR.										
8.	I am willing to provide CPR	143	55.9	84	32.8	18	7.0	8	3.1	3	1.2
	to patients if the need										
	arises.										
9.	The head of this primary	99	38.7	82	32.0	28	10.9	34	13.3	13	5.1
	health center ensures that										
	we have regular CPR										
	training and assessment										
	which is reviewed from										
	time to time.										
10.	I can perform CPR	90	35.2	80	31.3	31	12.1	40	15.6	15	5.9
	technique on a patient very										
	efficiently.										
11.	I have been actively	97	37.9	45	17.6	33	12.9	51	19.9	30	11.7
	involved in resuscitation of										
	patients using CPR in the										
	last three months.										

Table 3 shows various responses of respondents on their skills of cardiopulmonary resuscitation; 106(41.4%) of the respondents strongly agreed that they have had a formal CPR training before, 74(28.9%) agreed, 14(5.5%) were undecided, 38(14.8%) disagreed, while 24(9.4%) strongly disagreed. About 70(27.3%) of the respondents strongly agreed that they have performed CPR technique on a patient before, 75(29.3%) agreed, 30(11.7%) were undecided, 49(19.1%) disagreed, while 32(12.5%) strongly disagreed. Also, 80(31.3%) of the respondents strongly agreed that they have never encountered a situation that required the use of CPR, 65(25.4%) agreed, 30(11.7%) were undecided, 48(18.8%) disagreed, while 33(12.9%) strongly disagreed.

The analysis revealed that more than half 144(56.2%) of the respondents had adequate skills towards cardio-pulmonary resuscitation as against 112(43.8%) that had inadequate skills. This shows that the level of skills on cardiopulmonary resuscitation among health care workers in Ibadan is fairly-good.

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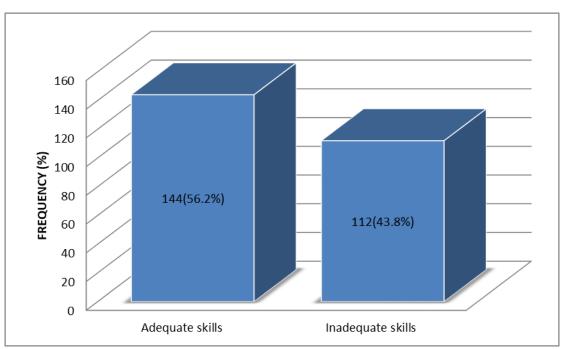


Figure 3: Summary of respondents' skills on cardio-pulmonary resuscitation

From the above figure, it was observed that more than half 144(56.2%) of the respondents had adequate skills towards cardio-pulmonary resuscitation as against 112(43.8%) that had inadequate skills.

Testing of Hypotheses

Hypothesis 1: There is no significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude.

 Table 4: Relationship between knowledge on cardiopulmonary resuscitation and attitude

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Respondents' knowledge	Attitude of healthcare w			
of cardiopulmonary	cardiopulmonary resusc	cardiopulmonary resuscitation		
resuscitation	Positive attitude	Negative attitude		
Good knowledge	99(38.7%)	43(16.8%)	142(55.5%)	
Poor knowledge	56(21.9%)	58(22.7%)	114(44.5%)	
Total	155(60.5%)	101(39.5%)	256(100%)	
$\chi^2 = 11.229$, df	= 1, p-value=0.001	Remark: p<0.05		

Table 4 above showed that there is a significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude (χ^2 = 11.229, df = 1, p<0.05). The chi-square value of 11.229 is significant because the p-value of 0.001<0.05, therefore the null hypothesis is rejected. Hence, there is a significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude. This means that healthcare workers' knowledge on cardiopulmonary resuscitation influences their attitude.

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Hypothesis 2: There is no significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills.

Table 5: Relationship between knowledge on cardiopulmonary resuscitation and skills

Respondents' knowledge	Skills of healthcare work	Skills of healthcare workers towards			
of cardiopulmonary	cardiopulmonary resusc	cardiopulmonary resuscitation			
resuscitation	Adequate skills	Inadequate skills			
Good knowledge	92(35.9%)	50(19.5%)	142(55.5%)		
Poor knowledge	52(20.3%)	62(24.2%)	114(44.5%)		
Total	144(56.2%)	112(43.8%)	256(100%)		
$\chi^2 = 9.447$, df =	1, p-value=0.002	Remark: p<0.05			

Table 5 above showed that there is a significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills (χ^2 = 9.447, df = 1, p<0.05). The chi-square value of 9.447 is significant because the p-value of 0.002<0.05, therefore the null hypothesis is rejected. Hence, there is a significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills. This means that healthcare workers' knowledge on cardiopulmonary resuscitation influences their level of skills.

Hypothesis 3: There is no significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills.

Table 6: Relationship between attitude towards cardiopulmonary resuscitation and level of skills

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Respondents' level of	Attitude of healthcare w		
skills on cardiopulmonary	cardiopulmonary resus	Total	
resuscitation	Positive attitude	Negative attitude	
Adequate skills	123(48.0%)	21(8.2%)	144(56.2%)
Inadequate skills	32(12.5%)	80(31.2%)	112(43.8%)
Total	155(60.5%)	101(39.5%)	256(100%)
$\chi^2 = 85.223$, df:	= 1, p-value=0.000	Remark: p<0.05	

Table 6 above showed that there is a significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills (χ^2 = 85.223, df = 1, p<0.05). The chi-square value of 85.223 is significant because the p-value of 0.000<0.05, therefore the null hypothesis is rejected. Hence, there is a significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills. This means that healthcare workers' attitude influences their level of skills towards cardiopulmonary resuscitation.

Discussion

The findings of this study revealed that larger percentage (55.5%) of the respondents had good knowledge of cardio-pulmonary resuscitation. Thus, the knowledge of healthcare

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workers on cardio-pulmonary resuscitation is fairly-good. This finding contradicted the submission of Okonta and Okoh (2014) who submitted that there was a general poor knowledge of the performance of basic CPR amongst health officers. Also, it has been globally reported that the knowledge of healthcare professionals regarding cardiopulmonary resuscitation (CPR) and BLS is poor and sub-standard (Majid, Jamali and Ashrafi, 2019). In another study conducted among Community Nurses in Remo Area of Ogun State, Nigeria by Olateju and Amoran (2014), it was reported that the knowledge of basic CPR amongst nurses at primary health care level is generally poor.

The findings of the present study also showed that more than half (60.5%) of the respondents had positive attitude towards cardio-pulmonary resuscitation. This finding is not in consonance with the finding of Onyeaso and Imogie, (2014) on attitude towards Cardiopulmonary Resuscitation, as they revealed that 98.8% of the respondents exhibited positive attitude towards learning CPR among others.

The results of the present study also showed that more than half (56.2%) of the respondents had adequate skills towards cardio-pulmonary resuscitation as against (43.8%) that had inadequate skills. This finding is in line with Okonta and Okoh (2014), Olateju and Amoran (2014) who concluded that most of the qualified nurses have adequate skills towards cardio-pulmonary resuscitation.

Findings from hypothesis one showed that there was significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and attitude. This could be attributed to the fact that the quality of CPR mainly depends on the sufficiency of the knowledge, attitude and skill of health professionals who deliver CPR. Doubling the survival of patients from cardiopulmonary arrest requires improvement in resuscitation education (Gebremedhn, *et al.*, 2017).

From the second hypothesis, it was revealed that there was a significant relationship between healthcare workers' knowledge on cardiopulmonary resuscitation and level of skills. This could also be attributed to the fact that cardiac arrest is an emergency, which can be managed effectively by sound knowledge and practice of basic life support (BLS) skills (Majid, Jamali and Ashrafi, 2019). In a study conducted by Mbada, Hakeem, Adedoyin, Awotidebe and Okonji (2015), it was reported that low CPR practice frequency is attributable to the lack of opportunity to practice CPR or lack of adequate knowledge.

It was revealed in the third hypothesis that there was significant relationship between healthcare workers' attitude towards cardiopulmonary resuscitation and level of skills. This could also be attributed to the fact that for effective bystander cardiopulmonary resuscitation (CPR), retention of CPR skills and attitude after the training is central (Onyeaso, 2016).

Conclusion

The study has assessed the knowledge, attitude and skills of health care workers on Cardio-pulmonary resuscitation in Ibadan North local government. The overall knowledge, attitude and skill levels of healthcare workers with regard to performing CPR were fairly-good. This might be due to their limited exposure to CPR cases and insufficient training on cardiopulmonary resuscitation during their medical training. It is also concluded that

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13

healthcare workers' knowledge on cardiopulmonary resuscitation influence their attitude and level of skills.

Recommendations

The following recommendations are made based on the findings of this study:

- 1. Training of Nigerian healthcare workers on CPR should be encouraged to increase potential bystander CPR providers and CPR instructors, in line with the international community.
- 2. There is the need to create more awareness on the importance of cardiopulmonary resuscitation especially outside tertiary health facilities.
- 3. The government should come out with a policy that will make attendance of CPR training programme mandatory for all health care givers in the country.
- 4. Healthcare workers, especially the nurses should be regularly updated for new guidelines on performing CPR.
- 5. Measures should be taken to involve the general public on performing CPR technique, in order to increase the number of first aid responders.

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