DETERMINANTS OF KNOWLEDGE AND ATTITUDE ON BASIC LIFE SUPPORT AMONG CLINICIANS AT MBITINI HEALTH CENTRE, KITUI COUNTY

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ABSTRACT

Survival from cardiac arrest depends on a sequence of time sensitive and interconnected links termed the chain of survival. Two of these links, early bystander cardiopulmonary resuscitation (CPR) and early defibrillation, have been prioritized as the two most important links in the chain of survival. Delivery of early by stander CPR can increase the chance of survival two to three folds. The broad objective was to determine the knowledge and attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County. The specific objectives of the study were:- to assess the influence of demographic factors on basic life support among the clinicians at Mbitini Health Centre, Kitui County; to determine knowledge on basic life support among the clinicians at Mbitini Health Centre, Kitui County and to determine the attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County. This study adopted a descriptive research design. The study was carried out at Mbitini Hospital in Kitui County. The study population was 170 clinicians working at the facility and clinical officer students who come for rural experience in the facility. Adjusted Sample size was 70 and the researcher used a systematic sampling. Data was collected using a semi structured questionnaire. The questionnaires were numbered, coded and then analyzed using Statistical Package for Social Sciences (SPSS) version 21. Quantitative data was presented using tables, pie charts and bar graphs while qualitative data was discussed. The study found that most of the clinicians are confident when giving chest compressions to an adult, that mouth to mouth resuscitation should be given with a barrier and that the recommended maneuver to open the airway in un-responsive patient is Jaw Thrust maneuver. The study concluded that attitude and knowledge affect basic life support among the clinicians at Mbitini Health Centre, Kitui County. It was clear that most of the clinicians are confident when giving chest compressions to an adult and they are aware that mouth to mouth resuscitation should be given with a barrier. The study recommends more focus to be placed on the strengthening the BLS skills and that educational institution should be involved in the training of students and professionals for CPR and other emergencies that can occur in the dental office. CPR should be considered as part of dental curriculum.

Key Words: *knowledge, attitude, basic life support, clinicians, Mbitini health centre, Kitui County*

INTRODUCTION

Basic Life Support (BLS) is a simple life-saving protocol following a cardiac arrest. It is an integral part of emergency resuscitative care that aims to retain sufficient ventilation and circulation until the cause of the arrest is detected and eliminated. BLS procedures include Cardiopulmonary Resuscitation (CPR), artificial ventilation, bleeding control and basic airway management (Abbas et al., 2011). It is provided by health care providers (physicians, paramedics, and emergency) and even could be given by lay persons who have received BLS training (Jones et al.,2012). American Heart Association (AHA) recognizes and encourages

early CPR and defibrillation to maximize victim's survival rates also; it promotes public awareness of BLS to assure quick response achieved in the case of an emergency (Spencer et al., 2011).Basic life support initiated early together with cardiac pulmonary resuscitation contributes to survival of majority of cardiac arrest patients. In order to increase the likelihood of having a CPR-skilled person present at the cardiac event, there must be an adequate number of people trained in the community.

In the event of cardiac arrest, basic life support can be effective to reduce the chance of death. According to the 2015 American Heart Association Guidelines, there are four links in the chain of survival: early recognition and call for help, early performance of cardiopulmonary resuscitation, early defibrillation and post-resuscitation care. Scientific evidence suggests that survival rates can be improved significantly at each link in the chain. For example, immediate cardiopulmonary resuscitation (CPR) can double or triple survival rates and CPR plus defibrillation within five minutes can result in survival rates between 50–75%. There are two critical components to successful resuscitation and reducing preventable deaths: 1) The presence of a person with knowledge to perform CPR and 2) the successful performance of CPR at the earliest possible time (Alanazi et al., 2014).

Among the things that need to be considered when handling basic life support include; early recognition of sudden cardiac arrest which includes having prior knowledge of signs of sudden cardiac arrest, immediate activation of response system which include emergency care team of specialists, delivery of timely and effective cardiopulmonary resuscitation which includes giving chest compressions to stimulate the heart muscles to re-initiate cardiac activity and performance of quick defibrillation which includes use of external defibrillator. It has been documented that effective and timely cardiopulmonary resuscitation reduces the likelihood of death of many cardiac arrest patients (Almutiri, 2016).

Having adequate knowledge and good attitude towards basic life support is therefore very important not only to clinicians but also to all other healthcare workers since they are likely to experience many patients with sudden cardiac arrest at their clinical setups. Having adequate knowledge and the right attitude makes them confident while resuscitating dying patients and hence safe more lives in their course of duty. Adequate knowledge has been demonstrated from many studies that it prevents delay in making the right diagnosis, influences quick initial assessment, facilitates quick choices of treatment among health care workers and improves the general outcomes of all cardiac arrest patients. There it is known to prolong lives of patients on top of improving the quality of their living (Mani, et al., 2014).

Sudden cardiac arrest requires immediate cardiopulmonary resuscitation which dictates the survival rate by its timeliness. Most researches have established that if cardiopulmonary resuscitation is performed in time, it doubles or triples the survival chances of patients who collapse as a result of ventricular tachycardia or ventricular fibrillation. The survival chances decrease by 7-10% in delayed administration of cardiopulmonary resuscitation. As a result of this it is recommended worldwide that all healthcare workers need to have basic life support skills at their fingertips during their first posting. This improves their ability to handle cases during emergency and save lives. They can also be good advocates in training the community members on what to do in case they encounter patients with sudden cardiac arrest at home or

in public places. They can be able to inform policy makers and advise them accordingly concerning trainings on basic life support (Almutiri, et al., 2016).

Cardiovascular disease has been documented the leading cause of deaths globally. Statistics have shown that it accounts for over seventeen million deaths annually which is equivalent of thirty percent of all global mortality. In the developing countries it has been found to be causing twice as many deaths as HIV, malaria and tuberculosis. It has been documented that approximately forty to fifty percent of all cardiovascular related cases are sudden cardiac deaths and about eighty percent of those deaths are brought about by ventricular tachyarrythmias. There about six million deaths caused by sudden cardiac deaths occurring every year following ventricular arrhythmias. The survival rate has been estimated to be less than one percent globally and close to five percent in the United States. Cardiac disease can be prevented worldwide by increasing the community awareness to risk factors which include lack of exercise, poor diet which is in appropriate for health and smoking. It has been proved by research that implantable defibrillators improve quality of life among patients at risk of sudden cardiac death. The devices mostly being used in the developed countries leaving the developing countries yet to implement the same hence doubling the number of deaths from sudden cardiac arrest which has been contributed to by low budget allocation on health system.(Minneapolis,et al., 2017).

The number of Kenyans suffering heart attacks and other heart diseases is likely to increase, health experts have warned. They said cardiovascular issues such as heart attacks are the number one cause of death in adults over 30. However, the trend of the disease is fast shifting to the youth as more young people are diagnosed with heart conditions. At least 60 per cent of patients who go to hospital with heart attacks are between 20 and 30. “Trends of diseases are changing” although many Kenyans believe that heart attacks only affect the elderly, but the age bracket being seen in hospital is much younger. There has been a rising prevalence of sudden cardiac arrest although the level of awareness among Kenyans and policymakers is worryingly low (Casey, 1984).

There are hospitals that lack an electrocardiography (ECG) machine, which records the electrical activity of the heart, while in others the healthcare workers do not know how to interpret the results, often missing the diagnosis. There has been lack of specialists who can perform the optimal stent procedure, lack of adequate resources and the situation is worse in the regions and adding that lack of specialists and infrastructure drives up the cost. The stent procedure entails inserting a small metal tube, called a stent, into the artery to keep it open. Doctors put it in through an incision in the wrist and thread it up to the narrowed artery. The procedure, which takes about one hour is currently offered in only six hospitals in Kenya and costs between Sh200,000 and Sh500,000. To make it even worse Kenya has only eight cardiologists, all based in Nairobi, who have the training to perform it (Merab, 2016).

PROBLEM STATEMENT

Survival from cardiac arrest depends on a sequence of time sensitive and interconnected links termed the chain of survival. Two of these links, early bystander cardiopulmonary resuscitation (CPR) and early defibrillation, have been prioritized as the two most important

links in the chain of survival. Delivery of early bystander CPR can increase the chance of survival two to three folds. However, early bystander CPR rate still low, the rate of cardiac arrest is high. In Kenya, bystander CPR rate varies between 15.4% and 20.8% (Crdiol, 2011). The clinicians have little knowledge in how to perform CPR since there is little training. In Kenya Cardiovascular diseases accounts from 13.2% of autopsy cases, acute myocardial infarction accounted for 18.7%, pulmonary thromboembolism 14.2%, hypertensive heart disease 9% and rheumatic heart disease 7%. All these heart conditions threaten the individual patients to have risk of sudden cardiac arrest and death if not well resuscitated (Cardiol, 2011). In order to combat these conditions there must be an adequate number of clinicians with the right knowledge and attitude on basic life support. This calls for intensive training to give clinicians and other medical professionals the right skills on basic life support. Most of the mortality case in Kenya (56%) is contributed by inadequate knowledge about performing CPR coupled with negative attitude towards it (Merab, 2016). Mbitini being a remote area in Kitui county, clinicians faces a lot of challenges that affect knowledge and attitude on basic life support. It is evident that most of clinicians lack self-confidence in their ability to perform standard procedures upon entering residency training. The knowledge and awareness on CPR among the clinicians is low (Kitui Medical Report, 2017). There has been little training to improve the knowledge and attitude on basic life support among the clinicians. Although there are few cases of cardiac arrest in the past three years in Mbitini Health Centre it is important for the clinicians to have basic skills on basic life support (DHIS, 2018). Many studies investigated knowledge and attitudes on basic life support among health care professional and school students in Kenya. However, the limitation of previous studies in Kenya was that they were conducted among medical, dentist or nursing students who may have a CPR knowledge gained through study courses. Furthermore, it was reported in the literature that both knowledge and attitude to performing basic life support varies between different age groups and between counties. Thus, the aim of this study was to determine knowledge and attitude on basic life support among clinicians at Mbitini Health Centre, Kitui County.

BROAD OBJECTIVE

The broad objective determined the knowledge and attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County.

SPECIFIC OBJECTIVES

1. To assess the influence of demographic factors on basic life support among the clinicians at Mbitini Health Centre, Kitui County.
2. To determine knowledge on basic life support among the clinicians at Mbitini Health Centre, Kitui County.
3. To determine the attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County.

LITERATURE REVIEW

Demographic Factors on Basic Life Support

These refers to the factors associated with number of clinicians, age, gender and other population dynamics that may affect their knowledge and attitude towards BLS. The life of an individual is influenced by various factors including the condition of health, education, occupation, and socioeconomic status. Among the various factors, the condition of health influences the life of an individual to a greater extent. There are various systemic conditions of health like myocardial infarction, congestive cardiac failure, and stroke which may cause even death of an individual. There are different ways by which the occurrence of death of an individual may be prevented. They include the instructions given and medications prescribed by health professionals, diet and physical exercises. In addition to these ways, basic life support (BLS) in case of medical emergencies is most important. BLS refers to maintaining an airway and supporting breathing and circulation without using any equipment. Each individual in a community should know the importance of BLS in saving lives and improving the quality of community health (Jones, Owen, Thorne &Hulme, 2012).

Life-threatening emergencies can occur at any time, at anywhere and in anyone. Such emergencies are somewhat more likely to occur within the confines of the dental office due to the increased level of stress which is often present. Effective management of an emergency in the dental office is ultimately the dentist's responsibility. The lack of training and inability to cope with medical emergencies can lead to tragic consequences and sometimes legal complications. Therefore, health professionals including dentists must be well prepared to manage medical emergencies. Hence, BLS is an important tool until a medical emergency can be treated (Kaye, et al., 2011).

Basic life support is a lifesaving practice in which the rescuer tries to maintain airway patency, support breathing and circulation without the use of equipment with an exception of a protective device. It is normally used to save lives of patients and victims who suffer sudden cardiac arrest in which the heart stops its critical function of pumping blood throughout the body. It involves taking over the role of the person’s heart which is done through chest compressions and if in a health facility, a defibrillator can be used to stimulate the heart muscles regain strength to contract again (Mani, 2014).

Chest compressions and delivery of breaths can be done by two health professionals. The adults is given thirty chest compressions two breaths during which an health care professional uses an Abu bag to deliver breaths while the other one deliver chest compressions. Basic life support being performed outside the hospital should be continued until arrival of emergency services. The emergency services are composed of a team of specialists who are able to perform advanced life support by intubating the patient and connecting with a ventilator to ensure delivery of spontaneous breaths to the victim. They can also use defibrillators and medications on their way back to the health facility (Merab, 2016).

Sudden cardiac arrest which requires basic life support involves ventricular fibrillation in which the ventricles contract abnormally but quiver very rapidly and in an irregular manner. The irregularity leads to pumping of little blood to the essential body parts which threatens

death in few minutes if the victim does not receive basic life support. The heart conducting system can also cause sudden cardiac arrest if it's interrupted by in any way like if the electrical signals become very low or stops. Some diseases like coronary heart diseases, severe physical stress, certain inherited disorders and structural changes in the heart are known to cause sudden cardiac arrest. Some other diseases like which interfere with the patency of the coronary arteries like atherosclerosis reduce the amount of blood being supplied to the heart and hence interfere with the heart muscles contractions leading to sudden cardiac arrest. A blood clot can partly or fully block the flow of oxygen-rich blood to the portion of heart muscle supplied by the artery which leads to scaring of the affected muscles and later affecting the conducting system of the heart (Merab, 2016).

Working experience is very crucial in the way healthcare workers deal with emergencies in their workplace since with repeated exposure to cases in need of basic life support, they gain experience on what to do when and why. It is a reality that those with little experience are likely to panic during crucial time to give basic life support Resuscitation training which should include, basic life support in full details is very crucial and recommended for all healthcare workers since their nature of work does not allow them to lack any basic life support skills. Training on basic life support should be done during pre-service training and also refresher courses should be offered to those already working since from continued research, new skills on offering basic life support keep emerging. On-job trainings have also been helpful since less experienced workers can be placed under experienced ones and undergo mentorship (Murola-Niemi, Makinen&Castren, 2017).

Knowledge on Basic Life Support

Confidence in giving chest compressions is an important skill since in offering basic life support chest compression are known to stimulate the heart muscles to restart contracting and hence save life which is almost lost during sudden cardiac arrest. If the giver has no confidence in giving chest compressions then there is likelihood of not being effective which leads to delay in resuscitation and loss of life. Clinicians need to have the ability and confidence in giving chest compressions to victims as well as mouth to mouth ventilation with a protector.

Knowledge on different terms used in basic life support is important because they are the same terms used in active resuscitation and thus it's required that everyone involved knows them so as to be able to act fast when instructed by the lead person in resuscitation. It was found necessary to enquire about the meaning of CPR (Cardiopulmonary Resuscitation) since delay in giving it to sudden cardiac arrest victims reduces the survival by a very greater percentage (Papadima, 2010).

During resuscitation there must be time to start and time to end in which one of the main determinants of ending are when there is still no signs of life despite continuous resuscitation. It is therefore required that everyone who is trained in offering basic life support should have on their fingertips the signs of life which are expected to be used to assess victims before, during and after resuscitation. Majority of the respondents 65% could recognize no signs of life. The respondents had been asked two questions which included: what should be the next

step in basic life support after recognition of un-responsive victim and what the best option of resuscitation was if one is not willing to perform mouth to mouth ventilation (Spencer, Chacko&Sallee, 2011).

Different maneuvers are used during resuscitation to open the airway and make it possible to re-initiate breathing in un-responsive victim. It's therefore necessary for those offering basic life support to be able to perform without guessing since it's a lifesaving skill. During chest compressions, the location at which the person giving them is very crucial for its effectiveness. Nearly half of the respondents had knowledge on the right location of the hands for chest compressions to be effective. They pointed out that the best location was at the Centre of the chest between the two nipples, the rate of chest compressions should be 100/min and the ratio of compressions to ventilation was 30:2 in adults (Srinivas, Kotekar & Rao, 2014).

Attitude on Basic Life Support

Attitudes on basic life support vary between counties. Basic life support is included in different curriculums for healthcare workers to make students conversant with before they face the real victims at their working stations post school. The swiftness of those performing basic life support determines its outcome because it has been proved that when performed immediately, it improves the chances of survival. The respondents were asked about their readiness or reluctance in performing basic life support in different situations both in the community and Hospital level (Mani, et al., 2014).

Mouth to mouth has been discouraged of late HIV (Human Immunodeficiency Virus), hepatitis and other diseases which can easily be contacted through human saliva and other body fluids with many recommending for a barrier use in performing mouth to mouth ventilation. Research has shown that most healthcare workers don't like offering basic life support since it is a basic that it's not easy to deal with dying victims and the fact that many feel they have failed when the victim loses life. It's therefore important to enquire about the respondents attitudes towards offering basic life support (Shretha, et al., 2012).

The clinician's attitude towards basic life support has a great impact on the survival rate of the cardiac patients. In the event of cardiac arrest, basic life support can be effective to reduce the chance of death. According to the 2015 American Heart Association Guidelines, there are four links in the chain of survival: early recognition and call for help, early performance of cardiopulmonary resuscitation, early defibrillation, and post-resuscitation care. Scientific evidence suggests that survival rates can be improved significantly at each link in the chain. For example, immediate cardiopulmonary resuscitation (CPR) can double or triple survival rates and CPR plus defibrillation within five minutes can result in survival rates between 50–75%. There are two critical components to successful resuscitation and reducing preventable deaths: 1) The presence of a person with knowledge to perform CPR and 2) the successful performance of CPR at the earliest possible time (Spencer, Chacko & Sallee, 2011).

In order to increase the likelihood of having a CPR-skilled person present at the cardiac event, there must be an adequate number of people trained in the community. Studies have been conducted in Saudi Arabia to assess knowledge and attitudes toward basic life support.

These studies have assessed university students, specifically medical students, and the community members. The studies have shown that knowledge is quite low but attitudes are positive (Merab, 2016).

Among student samples, around half of them scored lower than 50% on the knowledge questions and in the community 80% are unaware of CPR. There are no studies, to date, among teachers in Saudi Arabia; however, the international studies among teachers show on average that theoretical knowledge of basic life support is around 50%. Further, international studies report that attitudes toward CPR training is positive-meaning that teachers, students, and parents all reported the willingness to participate in more training courses (Papadima, 2010).

RESEARCH METHODOLOGY

Study Design

This study adopted a descriptive research design. A descriptive study was one in which information was collected without changing the environment. It should answer five basic questions: who, what, why, when and where (Creswell, 2009). The design was deemed appropriate because of the observational nature of data that were collected from respondents at Mbitini Health center in Kitui County on Knowledge and attitude on basic life support among the clinicians.

Study Area

The study was carried out at Mbitini Hospital in Kitui County. Mbitini Health Centre is located to the south of Kitui county referral Hospital in Mbitini Location. The Health Centre is located a few kilometers from Kitui Mutomo-Kibwezi Road. Services offered in the Health Centre include Emergency cases, medical, surgical, general outpatient services, MCH/FP services, physiotherapy, occupational therapy, laboratory services and maternity services, dental services, VCT, PITC among other services offered. There are four wards in the Facility namely; Female general, Male general, Paediatric ward and maternity ward. There is also the casualty department which attends to the walking in patients and emergencies.

Study Population

A population refers to an entire group of individuals, events or objects having a common observable characteristic (Mugenda and Mugenda, 2003). The study population was 170 clinicians working at the facility and clinical officer students who come for rural experience in the facility.

Inclusion Criteria

The inclusion criteria were all clinicians who were consented to participate in the study.

Exclusion Criteria

The Exclusion criteria were all clinicians who were not consent to participate in the study.

Sample Size

The sample size was determined using the formula designed by Fisher (1998).

$$n = \frac{z2\ p\ (1-p)}{d2}$$

Where: z = was the z value for the corresponding confidence level (1.96 for 95% confidence); d =was the margin of error (i.e 0.05= - or+ 5%); p =was the estimated value for the proportion of a sample that have the condition of interest; In this study p was 30% which was used by Akinyemi (2013) in Nigeria.

$$n = 1.962\ p\ (1-p) / 0.052$$

$$n = 1.962X\ 0.30\ (1-0.30) / 0.052$$

$$n = 119$$

The total population was 170 which was the approximate number of clinicians and students clinicians on rural experience.

The sample size was adjusted using Yamane Equation

$$nf = n / (1 + n / N)$$

Where: nf = desired sample size; n= calculated sample size; N= estimate of population in study area = 108

$$Nf = 119 / (1+ 119/170) = 70$$

Adjusted Sample size was 70

Sampling Technique

In this study, the researcher used a systematic sampling by doing the following: Given that the researcher used a sample size of 70 clinicians from the population:

The sampling interval was calculated by:

$$SI = \frac{N}{Nf}$$

$$SI = 119/70$$

$$SI = 1.7$$

In this case the sampling interval were 2

A number between one and the sampling interval (two) was selected from the random number table (in this case (2)

The clinician #2 was the first participant to be interviewed

The researcher then counted down the list starting with clinician #2 and selects each 3rd clinician met in different departments during data collection. For example, the second to be selected was 2+3, or #5

That was followed correctly until the required sample of 70 is attained.

Data Collection Tool

Data was collected using a semi structured questionnaire designed by the researcher to determine the Knowledge and attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County at a specific time. The tool had sections, Section A; demographic data and part B; knowledge and C; attitude of clinicians on BLS (Basic Life Support). The clinicians was given the tool to answer the questions on their own by the researcher.

Pre-testing of the Tool

Before starting of actual collecting of data for the project, a pre-test of the data collection instrument was done at Kisasi Dispensary to determine the reliability and validity of the research tool. Seven questionnaires were administered to seven respondents, 10% of the respondents.

Ethical Considerations

The researcher carried out the study after seeking permission from Mount Kenya University, School of Nursing and from the Medical Officer of Health Kitui Rural Sub-county. All the respondents participating in the research was informed of the aim of the study and an informed consent obtained from them. Confidentiality was maintained; each subject was interviewed separately and the researcher also ensured confidentiality was maintained. Those unwilling to participate in the study were free to opt out and were not coerced to participate.

Data Analysis

When data collection was completed, questionnaires were checked for completeness, uniformity and accuracy. Data with similarities and items of importance was grouped together. The questionnaires was numbered, coded and then analyzed using Statistical Package for Social Sciences (SPSS) version 21. Quantitative data was presented using tables, pie charts and bar graphs while qualitative data was discussed.

Dissemination of the Findings

The report on the findings of the study, recommendations and conclusion was presented to the Medical officer of Health Kitui Rural Sub-county, the Facility In charge Mbitini Health Centre and the School of nursing Mount Kenya University.

Study Limitations

The researcher was not able to get the real picture of the whole County as far as the study was concerned because of both time and financial constraints.

Study Delimitations

The researcher recommended that others do the same research in different parts of the County and compare their findings.

RESEARCH RESULTS

The study further sought to determine knowledge on basic life support among the clinicians at Mbitini Health Centre, Kitui County. The study found that most of the clinicians are confident when giving chest compressions to an adult, that mouth to mouth resuscitation should be given with a barrier and that the recommended maneuver to open the airway in un-responsive patient is Jaw Thrust maneuver.

The study also sought to determine the attitude on basic life support among the clinicians at Mbitini Health Centre, Kitui County. The study found that BLS should be included in the curriculum for all Healthcare workers that most of the clinicians are not reluctant to offer BLS and that most of the clinicians are always ready to give mouth to mouth Ventilation to safe life without a barrier. The study also found that most of the clinicians have a feeling that performing BLS in un-responsive victim is saving life effectively.

The study finally sought to assess the influence of demographic factors on basic life support among the clinicians at Mbitini Health Centre, Kitui County. The study found that Training on BLS (Basic Life Support) after graduation, working experience and Cadre of the clinician greatly influence basic life support among the clinicians at Mbitini Health Centre while age of the clinician influences basic life support among the clinicians at Mbitini Health Centre lowly.

CONCLUSIONS

The study concluded that attitude and knowledge affect basic life support among the clinicians at Mbitini Health Centre, Kitui County. It was clear that most of the clinicians are confident when giving chest compressions to an adult and they are aware that mouth to mouth resuscitation should be given with a barrier. The study also established that the clinicians were aware that the recommended maneuver to open the airway in un-responsive patient is Jaw Thrust maneuver. The study also found that BLS should be included in the curriculum for all Healthcare workers. This makes most of the clinicians not to be reluctant to offer BLS and always ready to give mouth to mouth Ventilation to safe life without a barrier.

The study finally concluded that demographic factors greatly influence basic life support among the clinicians at Mbitini Health Centre, Kitui County. The study deduced that Training on BLS (Basic Life Support) after graduation, working experience and Cadre of the clinician greatly influence basic life support among the clinicians at Mbitini Health Centre.

RECOMMENDATIONS

The study recommends more focus to be placed on the strengthening the BLS skills. In addition, the study recommended annual mandatory BLS courses for all medical students to consolidate their skills and knowledge. The study also recommends applying a new active

learning by making the medical students participate in teaching BLS to non-medical students in schools and other students in various colleges.

The study further recommends that educational institutions should be involved in the training of students and professionals for CPR and other emergencies that can occur in the dental office. CPR should be considered as part of dental curriculum. Hence, regular workshops are necessary for dental students to know the practical aspects of CPR on dummies. CPR courses and workshops are usually suitable for junior and senior doctors.

The study further recommends that CPR/BLS training and refreshing courses should be mandatory to all teachers at schools. There is also a need for incorporation of the BLS teaching into the Kenyan health 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.

There is an urgent need to get clinicians trained in CPR so as to make them ready for the urgent need of training Kenya school students accordingly, in line with the growing global trend. The study also recommends that universities in Kenya should the possibility of including BLS training in the curricula, as part of the training of the future health professional, as well as ensuring continuous training in this subject.

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