

KNOWLEDGE AND AWARENESS OF MYOCARDIAL INFARCTION AMONG CHILD BEARING WOMEN IN ZARIA METROPOLIS, KADUNA STATE, NIGERIA

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Abstract

Myocardial infarction (MI) is one of the emerging public health problems in a developing country like Nigeria. However, knowledge and awareness is essential in the management of myocardial infarction. The study intended to explore knowledge and awareness of myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State, Nigeria. This study is primarily a qualitative case study involving women only. Data collected were recorded on a handheld device with the aid of a semi- structured interview guide involving 11 participants. Findings revealed that awareness of MI among women in Zaria is low. Participants have no prior knowledge about MI. Sources of information about MI among women in the child bearing age are medical practitioners, family members, social spaces and place of worship. It is concluded that health promotion of knowledge and awareness programmes should be developed to help in the inculcation of positive health behaviour. The study therefore recommends that women should be provided with information that will encourage transformative learning. Health awareness campaigns should be created from the medical perspectives so as to increase the awareness among women.

Keywords: *Myocardial infarction, Knowledge, Awareness, Childbearing, Health Information behaviour*

Introduction

Health information behaviour plays a significant role in preventing mortality among women. Health information behaviour of women regarding knowledge and awareness of myocardial infarction is very essential. Myocardial infarction (MI) is a major cause of mortality among women in Nigeria and globally. Myocardial infarction is the irreversible death of heart muscle secondary to prolonged lack of oxygen supply (Zafari, 2019). In a layman's language, it is known as heart attack or failure. Since 1984, the annual cardiovascular disease (CVD) mortality rate has remained

greater for women than men. More than two thirds of all deaths are caused by one or more of these five chronic diseases: heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes. An estimated 17.5 million people died from CVDs in 2012, representing 31% of all global deaths. Of these deaths, an estimated 7.4 million were due to coronary heart disease. Over three quarters of CVD deaths take place in low- and middle-income countries (http://www.who.int/cardiovascular_diseases/en/). Myocardial Infarction is most distressing, symptoms of cardiovascular diseases and it is associated with an increased risk of cardiovascular morbidity (Norlund, Lissaker, Wallert & Olsson, 2018). Although, myocardial infarction is life threatening disease, it is yet preventable. Good knowledge and practice is required for prevention and control of myocardial infarction. Studies (Ahmed, AL-Shami, Jamshed, & Nahas, 2018; Angwenyi, Aantjes, Kajumi, De Man, Criel & Bunders-Aelen, 2019; Georgio & Christina, 2018; Adhikari & Bhandari, 2017; Dahal, & Karki, 2017; Reddy & Yusuf, 1998) reported that a lack of awareness about disease risk factors and poor literacy rates in developing nations are associated with worse disease outcomes. The awareness of symptoms of myocardial infarction is important to reduce the morbidity and mortality among women.

Awareness is the state of being conscious of a phenomenon. In essence, it is the ability to directly know and perceive to feel, or to be cognizant of effect. Health awareness is very critical in the management of chronic diseases such as myocardial infarction. It assists in achieving desired health outcomes and increase in knowledge. Awareness is a development process that fosters the development of change in health behaviour. The only way to provide palliative care to a huge number of people in need is through community participation, which can be achieved by improving the awareness of the people about palliative care (Chandra, Sarkar, Adinarayanan & Balajee, 2016). In creating awareness, palliative care refers to an approach that improves the quality of life of the patients and their families facing the problem associated with life-threatening illness (WHO, 2019). Evidence – based studies (Hasoneh, 2018; Chandra, Sarkar, Adinarayanan & Balajee, 2016) have affirmed that the importance of knowledge and creating awareness of the diseases; and consequences cannot be underestimated, particularly in resource-limited conditions. The importance of these efforts needs to be recognized and barriers to awareness and education understood and overcome while health promotion research for ARF and RHD is prioritized (Zuhike & Engel, 2013).

Knowledge is an important factor that adds value to coping and management of chronic diseases such as myocardial infarction. The health care sector globally is undergoing a cultural transformation, as the traditional passive and respectful patient population is replaced by an assertive group of customers (Hasoneh, 2018). Possession of knowledge concerning personal health has created a shift in paradigm in the people seek for health information. In 2018, Hasoneh reported that the educated and informed consumer moves through the health care system and use more services, he /she is demanding information and choice, engaging in self-care and self-management of diseases.

In developing countries like Nigeria, mortality from cardiovascular diseases is high and in most cases occurs outside the orthodox hospital. It is reported that in Western Nigeria, 86.1% of sudden-cardiac-deaths occurred out of hospital (Rotimi, Fatusi & Odesanmi, 2004). Low patronage of orthodox hospitals in Nigeria may contribute to more out of hospital deaths (Bamidele, Adebimpe & Oladele, 2009). It is therefore possible that some cases of cardiovascular related deaths never got to the hospital.

Statement of the Problem

Myocardial infarction (*heart failure*) also known as cardiovascular disease is the leading cause of mortality among women in Zaria metropolis, Kaduna State Nigeria. Based on observation by the researchers, there is a high incidence of death amongst women in Zaria metropolis after child birth. This is becoming worrisome as emotion from the loss of these women is always shifted to the medical practitioners. Evidence-based studies (WHO, 2020, 2019; Fillipi, Chou, Ronsmans, Graham & Say, 2016) have reported that no life should be lost as a result of pregnancy related complications. In spite of the findings from these studies, there seem to be no difference in the number of mortality rate among women in Zaria metropolis. Therefore, this study sought to investigate knowledge, awareness and source of information about myocardial infarction among women in the child bearing age group in Zaria metropolis, Kaduna State.

Research objectives

The objectives of this study include the following:

1. To explore the awareness status of childbearing women in Zaria metropolis, Kaduna State about myocardial infarction.
2. To investigate the prior knowledge of childbearing women in Zaria metropolis, Kaduna State about myocardial infarction.
3. To determine the sources of information used among childbearing women in Zaria metropolis, Kaduna State about myocardial infarction.

Literature Review

Studies have been conducted that investigated the role of information on knowledge and awareness of myocardial infarction among women in order to evaluate causes and management. Abdo, Abdulkareem, AL-Shami, Jamshed, Zawiah, Elnaem, Izham & Ibrahim (2020) carried a study on awareness of the risk factors for heart attack among the general public in Pahang, Malaysia. The study was a cross-sectional study among 393 adult individuals in Kuantan, Pahang, Malaysia. Data collection was conducted through face-to-face interviews among the lay public members who were 18– 64 years old, excluding healthcare professionals in clinical settings and academic settings. Findings of the study revealed that majority of the individuals in the study identified smoking as a risk factor for heart attack, followed by atrial fibrillation (57.7%), heart disease (54.1%), and obesity (53.8%). However, diabetes (26%) was the risk factor that was least recognized by the participants. A total of 90.6% of participants identified at least one risk factor for heart attack, while 9.8% of the participants did not identify any risk factors for heart attack, whereas 5.6% identified all modifiable heart attack risk factors. Furthermore, participants aged 46– 64 years old, married respondents, and Chinese participants, those with higher educational levels, and received prior information demonstrated great awareness of eight modifiable risk factors for heart attack. It concluded that awareness of risk factors for heart attack appears to be poor, where most of the respondents recognized only one modifiable risk factor. Based on the findings, the study recommended that programs and strategies to raise awareness of modifiable risk factors for heart attack (HA) are urgently needed to protect the lay public from myocardial infarction.

The study conducted by Georgio & Christina (2018) on knowledge of patients with acute myocardial infarction in relation to risk factors of heart disease. The study investigated the levels of information available to patients coping with myocardial infarction. Content analysis of literature was adopted as the methodology for the investigation. Findings of the study revealed that only a small percentage of patients have a good level of knowledge about the predisposing factors of the disease. The study concluded that aggressive educational strategies should target towards

the population to create awareness. It recommended that new studies should therefore be carried out with a view to providing a more detailed picture of the level of knowledge, as the depiction of knowledge will contribute to the development of new health policies that will lead to the prevention of the disease.

Similarly, Boateng, Wekesah, Browne, Agyemang, Agyei-Baffour, de-Graft Aikins, Smit, Grobbee & Kipstein-Groubusch (2017) investigated knowledge and awareness of and perception towards cardiovascular disease risk in sub-Saharan Africa. The study was a systematic review of five databases for publications up to December 2016. Narrative synthesis was conducted for knowledge level of Cardio Vascular Diseases (CVDs), knowledge of risk factors and clinical signs, factors influencing knowledge of CVDs and source of health information on CVDs. Findings of the study revealed that Levels of knowledge and awareness for CVD and risk factors were generally low, coupled with poor perception. High educational attainment and place of residence had a significant influence on the levels of knowledge for CVDs among SSA (Sub-Saharan African) populations. The authors of the study concluded based on the findings that low knowledge of CVDs, risk factors and clinical symptoms is strongly associated with the low levels of educational attainment and rural residency in the region. And recommends that useful information for implementers of interventions targeted at the prevention and control of CVDs should be provided.

In another study conducted by Anjorin, Faruk & Ene (2005) on myocardial infarction at the University of Maiduguri Teaching hospital, reported that between 1983 – 2004, 87 cases of Acute Myocardial Infarction (AMI) were seen. During the period covered by study, new admissions to the Medical wards of the Hospital totaled 25,588 patients. Myocardial infarction thus formed 0.34% of all new admissions over the period under review. Findings revealed that the commonest complications were congestive cardiac failure due to severe pump failure, arrhythmias, mitral regurgitation and pericardial effusion. The commonest site of the infarction was the anterior myocardium. The study concluded that presence of myocardial infarction in the far Northeastern Nigeria is established and the incidence of this disease, though lower than that of other parts of Nigeria.

Methodology

Qualitative methodology and case study design were employed in investigating knowledge and awareness of myocardial infarction among child bearing women. This methodology was considered ideal for this study because it will capture the worldview of those with myocardial infarction precisely the way it is. The methodology represents the voice of the individual. One's voice is one of the most valuable assets. Population of the study consisted of women who have not stopped giving birth. Convenience sampling was used for the selection of total of 35 women; but sample size for this study is 11 based on data saturation. Sample size was determined when saturation was reached when new information no longer emerged from the participants. Data was collected with the aid of a structured interview informed by the raised research questions. This study only covered women between 25 – 40 years of age who have not stopped giving birth. Women in this age bracket who are yet to start raising families are excluded from the study and also women outside the age bracket.

Results

Data were collected through voice recordings which were later transferred to phrases and sentences through transcription; from eleven (11) participants. The patients are between 25 – 40 years age

bracket. The selected participants are women in the childbearing in Zaria metropolis. The women who partook in this study uttered diverse opinions based on their knowledge and awareness about myocardial infarction. This is in alignment with the interpretive paradigm qualitative study.

Eleven recorded interview sessions with participants were transcribed verbatim. Voice recordings were listened to repeatedly; to ensure participant's views are captured in line with the interpretive paradigm. A total of 33 narratives captured the knowledge and awareness of MI among women in Zaria was recorded. A total of 33 open codes were generated altogether from the research questions. 11 narratives were generated from research question one; 11 from research questions two and 11 narratives from research question three.

Eleven (11) topics were recognized as classification categories from all the raised research questions. The emergent topics are presented as follows in the data presentation according to the raised questions.

Research Question 1: Awareness of myocardial infarction among women in the childbearing in Zaria metropolis, Kaduna State

This section consisted of the narratives of childbearing women about awareness of myocardial infarction in Zaria metropolis, Kaduna State. Two categories emerged. These categories and sub-categories are discussed in the following paragraphs;

Category one: Not aware. This category consisted of narratives of participants' awareness of myocardial infarction among women still giving birth in Zaria metropolis, Kaduna State. This category consisted of three sub-categories; I am not aware; I have never heard about it; this is the first time of hearing this.

Category Two: I am aware. This category consisted of the narratives of the participants who expressed they are aware of myocardial infarction among women in the child bearing age. This category consisted of one sub-category; I hear from the doctors.

Research Question 2: Prior knowledge about myocardial infarction among women in childbearing in Zaria metropolis, Kaduna State

This section consisted of the prior knowledge of the participants in this study setting about their prior knowledge of myocardial infarction. Two categories emerged. Categories and sub-categories that emerged from participants' prior knowledge are presented as follows;

Category One: I have no knowledge. This category consisted of the narratives of participants in this study setting who revealed that they have no prior knowledge about myocardial infarction. This category consisted of three sub-categories; hearing it for first time now; I do not have any knowledge and I knew some women dies after child birth but I do not the cause.

Category Two: I know about it (3/11,27%). This category consisted of the narratives of participants who stated that have prior knowledge of myocardial infarction. This category have one sub- category; I have knowledge about it (3/11, 27%).

Research Question 3: Sources of information about myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State

This section explored the sources of information utilized by women in the child bearing in Zaria metropolis when sourcing for information about myocardial infarction (heart attack). Table 1 revealed sources of information utilized by women of child bearing age in Zaria about myocardial infarction.

Table 1: Sources of information about myocardial infarction among women in child bearing in Zaria metropolis, Kaduna State

Research Question	Categories	Sub-categories	Frequency	percentage
What is the source of information about myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State?	1.medical practitioners	1.1 Doctors 1.2 Nurses	2/11	18.1%
			2/11	18.1%
	2.Family members	2.1 Sister	1/11	9.1%
	3.Social spaces	3.1Naming ceremony	3/11	27.2%
	4.Place of Worship	4.1women's Fellowship	1/11	9.01%
	5. I do not use any source	5.1 Do not use any source	3/11	27.2%

Source, Interview Analysis, 2021

Categories and sub-categories that emerged from the sources of information for sourcing about myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State. These categories are discussed as follows;

Category One: Medical practitioners (4/11, 38%). This category captured of the narratives of participants who indicated that they source for information through the medical practitioners. This category have two sub- categories; doctors (2/11, 18.1%) and nurses (2/11, 18.1%).

Category Two: Family members (1/11, 9%). This category exposed narrative of women who stated that they get information from their family members. This have sub-category; sister (1/11, 9%).

Category Three: Social spaces (3/11, 27%). This category consisted of the narratives about social spaces as source of information. Social spaces are a physical gathering or virtual space where people gather and interact. This category has one sub-category, naming ceremony (1/11, 9%).

Category Four: Place of worship (1/11, 9%). This category exposed narrative of participant who stated that the place of worship is her source of information. This have one sub-category; women's fellowship (1/11, 9%).

Category Five: I do not use any source (3/11, 27%). This category consisted of the narratives of participants in this study who acknowledged that they do not use any source of information on myocardial infarction. The sub-category is I do not use any source.

Discussion of Findings

Awareness of myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State

Two themes emerged on the awareness of myocardial infarction among women in the child bearing age in Zaria metropolis. These are; not aware and I am aware. Awareness of a health condition is very critical to timely intervention and management. This will enhance the seeking of help promptly and equally aid in achieving desired health outcome. Findings of this study revealed that level of awareness of myocardial infarction among women in the child bearing age in Zaria, Kaduna State is low. Three of the eleven participants in the study setting are the only one who signified their awareness about myocardial infarction. This is scenario would foster the cultivation of a clamoured health behaviour. There is new paradigm in health management. This involves self

management and patients' involvement in their healthcare. With a low level of awareness, self care management and patients' involvement will be a mirage.

This finding is not surprising as scholars (Abdo, Abdulkareem, AL-Shami, Jamshed, Zawiah, Elnaem, Izham & Ibrahim, 2020; Adhikari & Bhandari, 2017; Dahal & Karki 2017) have reported that awareness of the health condition is essential in pain management and use of information. It reported that Good knowledge, awareness and practice are required for prevention and control of myocardial infarction. Similarly, Abdo *et al* (2020) equally reported that awareness of symptoms and action towards heart attack and stroke is important to reduce the morbidity and mortality in both developed and developing countries. Level of Knowledge was reported to be moderate among majorities but all of participants had inadequate practice despite highest literacy level and majority from urban setting (Dahal & Karki, 2017). Similarly, Gkika & Vasilopoulos (2018) reported from their study of knowledge of patients about acute myocardial infarction that only a small percentage of patients have a good level of knowledge about myocardial infarction. Likewise, Hertz et al (2019) reported that knowledge of myocardial infarction symptoms is poor among all segments of the population in northern Tanzania and only a minority of residents perceive themselves to be at risk of this disease.

The implication of this finding is that it will never foster the practice of self care management and will further put pressure on the health practitioners who work under strenuous working circumstances.

Prior knowledge about myocardial infarction among women in child bearing in Zaria metropolis, Kaduna State

Finding revealed that prior knowledge of the participants in this study setting is in two dimensions. These are; I have no knowledge and I know about it. Prior knowledge of myocardial infarction among women in child bearing in Zaria metropolis is poor. Participants expressed that they are have never heard about the health before till the interaction held with the researchers. For instance Participant 2 indicated that "I knew about it through my doctor. During of my appointment to see the doctor, I complained about a sign and the explanation he gave me was in relation to heart condition". Likewise, Participant 1 also revealed she knew about it. She said "I knew a lady who died four weeks after delivery. She was okay but one day she slept and died in her sleep. It was then I learned that cause of death is heart failure".

This finding is not surprising as studies conducted have reported that knowledge about myocardial is poor. For instance, Gkika & Vasilopoulos (2018) reported from their study of knowledge of patients about acute myocardial infarction that only a small percentage of patients have a good level of knowledge about the predisposing factors of the disease. Also, the good level of knowledge is directly related to the male gender and the highest level of education. As observed by O'Keefe-McCarthy in 2008, women are distinguished not to recognize the threat of chronic heart disorder and delay seeking for health care.

In LIS, prior knowledge is an underlining factor to meeting information needs of users. This will facilitate the provision of resources that promote learning and research. Prior knowledge could be linked with conducting of user needs analysis. User needs analysis is uncovering the goals a user has and the capabilities needed from a technology to assist the user in meeting those goals. This involves understanding the target audience, their typical tasks, and their specific constraints, usually through a combination of observational techniques, including interviews, surveys, artifact analysis, and consulting with domain experts. The main purpose of needs analysis is the user's satisfaction.

The implication of this finding is that lack of prior knowledge about one's health condition will prevent individual/s from seeking for medical assistance in time. Delay in seeking for healthcare in time can result in morbidity and mortality.

Sources of information about myocardial infarction among women in the child bearing age in Zaria metropolis, Kaduna State

Seven sources were identified by participants' sources of information about myocardial infarction through five different sources. . These are; medical practitioners, family members, social spaces, place of worship and I do not use any source. Source of information is a determinant of achieving desired health outcome. Discussion of finding is as follows starting with medical practitioners as sources of information.

Medical practitioner is the most authentic source of information for coping and managing illness and highly instrumental to achieving positive health outcome. Participants' indicated that they place total reliance on the medical doctors/nurses for information about their health. For instance, a participant stated that "I rely on my doctor for information. I do not know anything about my health, so I ask for information on about things bothering me". Similarly, another one affirmed that "my doctor is my source of information". Narratives of participants who stated that Nurses are sources of information goes thus; "I get information through the nurse". "The nurses usually lecture us at the Clinic before the arrival of the doctors".

This is not out of context as studies (Zuhike & Engel, 2013; Travaline, Ruchinskas & D'Alonzo, 2005; Rosheim & Fowles, 1999) have stated that this source is the most used when searching for information. Rosheim & Fowles (1999) reported that physicians, nurses and dieticians were overall sources of information. Patient-physician communication is an integral part of clinical practice (Travaline, Ruchinskas & D'Alonzo, 2005). Thus using medical practitioner as source of information by participants in this study setting is not out of place.

Family members as source of information

Family members are usually to closest ones to people living with chronic diseases like T2DM. Family members are interconnected; every person within a family has a role to play within the life of the family coping with chronic diseases such as myocardial infarction (heart failure). Narrative of the participant who indicated that she used her sister as source of information is captured as follows; "my sister was the one who informed me about the death of her neighbour 5 days after delivery. Since then, I always ask her for information. I am pregnant and do not want to take any sign for granted".

Social spaces as source of information

Participant in the study revealed that information is sought at social gathering; specifically at naming ceremony. Narration of the participant is; "I was at my friend's baby naming ceremony and some women got talking about deaths rate after child birth. This scared me; I am pregnant for my fourth child. Information I gathered at the place have informed me on what to report immediately I start feeling unusual".

This finding has been reported before that socialization assists in creating the reality of disease to enhance coping and managing the disease (Quadir, 2019).

The implication of this finding is that information sharing and diffuse has no boundary. Crucial information get shared at unusual places; thus possibility of information encountering is constant.

Place of worship as source of information

Finding revealed that participants in the study setting equally indicated they utilized place of worship as a source of information about MI. Information is usually shared through interaction between the women after the fellowship meeting. Interactive discourse between two or more individual is usually beneficial because it provides opportunity for people to rob minds and share ideas. Interaction among patients is further enhanced through socialization. The participants expressed thus;” I usually get information about anything disturbing from other members at the women fellowship. I make enquiries from them”.

Socialization can occur irrespective of location. In as much as the concerned individuals are well acquainted with one another, information is shared. This is always on issues that information is required.

I do not use any source

Participants revealed that they do not use any source of information about MI. Not searching of information about one’s condition is will not promote patient’s participant in his/her health care. In most cases not searching for information about chronic disease like MI is a result of fear appeal. They narrated thus “I do not use any source of information”. I am not even aware of the health condition. Then why will I go looking for information about what I do not know”. “I did not need to consult for information about what I am not aware of”.

Fear appeal is a crucial factor in making decision to search for information. A fear appeal is a persuasive message that attempts to arouse fear in order to divert behavior through the threat of impending danger or harm. It presents a risk, presents the vulnerability to the risk, and then may, or may not suggest a form of protective action.

The implication of the finding about using various sources is that it will keep people informed and will enhance decision making. For those who do not use any source of information, they stand the risk of delaying of seeking for help on time.

Conclusion

It is concluded that health promotion of knowledge, awareness, attitude and information practices should be developed to help in the formulation of health behaviour. Women in the child bearing age in Zaria metropolis should develop health behaviour that will foster their wellbeing. They should always seek for information that would help in preventing morbidity and mortality among women; instead of waiting till the situation deteriorates or gets out of hand.

Recommendations

1. Medical authorities should provide women with information that will encourage transformative learning. Also, libraries should make available and disseminate information resources that will foster transformative learning. This is a creative, epistemic shift in someone’s perceptions and set of beliefs that result in enhanced self-awareness and greater global consciousness.
2. Intervention should be developed from the medical perspectives by medical doctors and nurses to create extensive awareness about MI. Once women are aware about myocardial infarction, knowledge will be gained about the disease.
3. Academic and public libraries should develop intervention that would encourage women in the childbearing age to seek for information and help on time to avoid dire consequences that could result from pregnancy related complications.

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