Knowledge of Malnutrition among Women of Child Bearing Age in Rivers State College of Health Science and Management Technology Demonstration Clinic, Port Harcourt in Obio/Akpor Local Government Area of Rivers State

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Abstract

The study focused on knowledge of malnutrition among women of child bearing age in Demonstration Medical Center of Rivers State College of Health Science and Management Technology Port Harcourt in Obio/Akpor Local Government Area of Rivers State. ***Introduction:*** *Malnutrition is a condition that results from eating a diet in which one or more nutrients are either not enough or are too much such that the diet causes health problems. Inappropriate and insufficient diet in pregnancy affects maternal health and birth weight negatively, therefore, proper diet that supplies energy for mothers and their fetus is a linear, positive correlation between mothers and fetuses weight.* ***Methodology****: The study used a descriptive survey study design with a sample size of 140 which are selected through simple random sampling techniques. A structured questionnaire were used as an instrument for data collection, while SPSS, frequency tables and simple percentage were adopted for data analysis.* ***Result****: The findings of the study showed that majority of women of child bearing age attending RIVCOSMAT Demonstration Medical Center have poor or no knowledge of malnutrition and that poverty, food price, dietary practice and health related issues are prominent factors that caused malnutrition. The study revealed that Changes in body mass index, poor healing of wound, severe weight, and Weakness/dizziness are the health effects of malnutrition Also methods of treatment and prevention of malnutrition include dietary advice, eating some sources of proteins and dairy food among others.* ***Conclusion:*** *There should be enlightenment campaign to educate and arouse the awareness level of women of childbearing age about malnutrition by health care providers. Also, health care providers should introduce strategies for providing health education about proper and balance maternal nutrition during antenatal care visit (ANC).*

Key words: *Knowledge; Malnutrition; Child bearing age; Demonstration clinic*

Introduction

Malnutrition is now a global problem in both rich and poor countries. In developing countries, while prevalence of under - nutrition and micro - nutrient deficiencies persist, obesity is also fast emerging as a problem (Shekar; Heaver & Lee, 2016). All human beings need a balanced amount of nutrients for proper functioning of the body system. Nutrition is a fundamental pillar of human life, health and development throughout the entire lifespan (Daba, Beyene & Fekadu, 2013). There are approximately 40 different nutrients that are essential for health and if any one of these is deficient in them, the person will not be fully healthy and able to resist the agents of disease (Collins, 2017).

Malnutrition is a conduction that results from eating a diet in which one or more nutrients are either not enough or are too much such that the diet causes health problems. It may involve calories, protein, carbohydrates, fats, vitamins, or minerals (Khattak & Murtahg, 2017). Pregnancy is one of the most significant and most risky period of life for mothers and infants, which is highly important to individual, family, and Community health. The health and or disease of pregnant mothers affect not only their quality of life but also fetal life and health, several factors are involved in maternal and fetal health, including proper nutrition in pregnancy. Women of child bearing age are highly susceptible to malnutrition due to enormous pressures caused by hormonal, metabolic, and physical variations (Sharifirad, 2012).

Bansil (2014) study on malnutrition indicated that inappropriate and insufficient diet in pregnancy affects maternal health and birth weight negatively, therefore, proper diet supplies energy for mothers and their fetus is a linear, positive correlation between mothers and fetuses weight. Ugwa (2016) posits that inappropriate nutrition may lead to some complications such as intrauterine growth restriction (IUGR), abortion, preterm delivery and particularly low birth weight. Therefore, the quantity and quality of reproductive women's nutrition began when low birth weight was reported 8-10% and the mortality in the infants with low birth weight at the early days and / or weeks of life was much more likely than the infants with normal birth weight. In addition to sufficient nutrition, the balance between protein and energy in late pregnancy has significant effects of birth weight and the acquisition of disease by infants.

World Health Organization (WHO) (2017) reported that nine countries in Africa had a prevalence rate of malnutrition among women of child bearing age above 15% maternal underweight exceeds 20% in Ethiopia, Madagascar and Senegal while the lowest rate among reproductive women are found in Benin, Cameroon, Ghana, Lesotho, Rwanda, Swaziland, and Togo (WHO, 2017). Also another study was conducted by Paul (2016) on the factors that contribute to malnutrition among women of reproductive age in Tanzania. The study uses a sample size of 933 eligible women reproductive age which was selected through simple random sampling techniques from urban and rural areas on the Tanzania mainland. A cross sectional study design was used and a structured questionnaire was used as a method for data collection in the study. Frequency distribution table and percentage were used for method of data analysis. The result of the study reported that body mass index (BMI), poverty and social-economic factors are the prevailing and remote factors to malnutrition among women of childbearing age in Tanzania.

Bengre (2018), conducted a study on mothers' knowledge and malnutrition in India. A cross section descriptive study design was used in the study. 570 mothers were selected randomly as

the sample size. A pre-test structured questionnaire was used as method for data collection and tables, frequencies and percentage were used for data analysis. The result showed that 83.0% mother having poor socio- economic status below poverty line have poor knowledge of malnutrition and only 17.0% have knowledge due to their socio-economic status. The study concluded by reintegrating the need for education to improve knowledge of malnutrition among mothers.

Similarly, Mohammed (2015), carried out a study on the effect and health implications of malnutrition on women of reproductive age in Pakistan indicated that malnutrition can lead to severe weight loss, organ failure and changes in the body mass index (BMI). Also a study conducted by Fasola, Olayinka & Foluke (2018) on knowledge, attitude and practice of good nutrition among women of child–bearing age. In Lagos – Nigeria using a cross sectional descriptive survey and a sample size of 244 women of child-bearing age (15-49yrs) reported that only 38% of the Respondents' have good knowledge of good nutrition and the respondent attitude towards the practice of good nutrition was negative due to some underlying factors that is social- Economics status of the women.

Again study conducted by Matthews (2013) on causes and effects of malnutrition among pregnant women in Ilorin, Ogun State, Nigeria indicated that about 38% of reproductive women are affected by malnutrition due to inadequate nutrition and this is caused by some factors such as poverty, unemployment, food insufficiency etc., hence the health of these women and their fetus are affected accounting for high mortality and morbidity rate.

Statement of the Problem

Despite the huge sum of money which the Federal, State and Local Government in Nigeria have been spending on health sector to enhance good and quality health care deliver services, it has been observed that most of the women of child bearing are undernourished and this has poses a serious threat to their health and that of her fetus. There had never been a study to ascertain the knowledge of women of child bearing age on malnutrition which accounts for high mortality and morbidity rate among women who attend Rivers State College of Health Science and Management Technology Demonstration Medical Center Port Harcourt. Therefore, this study is designed to evaluate the knowledge of malnutrition among women of child bearing age in Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt.

Purpose of the Study

The purpose of this study is to evaluate the knowledge of malnutrition among women of child bearing age in Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt, in Obio/Akpo Local Government Area of Rivers State.

Objectives of the Study

The specific objectives of the study are as follows;

1. To assess the knowledge of malnutrition among women of reproductive age in Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt.

2. To identify the causes of malnutrition among women of reproductive age in the study area.
3. To identify the health implications of malnutrition among women of child bearing age attending Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt, in Obio/Akpor Local Government Area of Rivers State.
4. To identify the health implications of malnutrition among women of child bearing age attending Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt.

Research Questions

1. What is the level of knowledge of malnutrition among women of reproductive age in Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt?
2. What are the causes of malnutrition among women of reproductive age in the study area?
3. What is the health implications of malnutrition among women of child bearing age attending Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt?
4. What are the health implications of malnutrition among women of child bearing age attending Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt?

Methodology

Study Area

The study area is Rivers State College of Health Science and Management Technology, Demonstration Medical Center, Port Harcourt, in Obio-Akpor Local Government Area of Rivers State. RIVCOHSMAT, Demonstration Medical Center, Port Harcourt, is located in Rumueme Community in Obio – Akpor L.G. A. of Rivers State. It lies between Latitude $6^0$50E and 8^0 00'E in the Niger Delta region of Nigeria. (South - South Geopolitical Zone). It shared common boundaries with Oyigbo LGA in the North, Obio/Akpor local government area in the West, Okrika LGA in the South and Eleme LGA in the East respectively. The occupation of the people are predominantly civil services, business, trading, industrial activities, self-employed, commercial activities etc.

Research Design.

The study adopted a descriptive survey research design. The study was conducted between September, 2022 and October, 2022 to evaluate knowledge of malnutrition among women of child bearing age in Demonstration Medical Center of Rivers State College of Health Science and Management Technology, Port Harcourt, in Obio/Akpor Local Government Area of Rivers State.

Study Population

The study population comprised all the health care workers in Demonstration Medical Center of Rivers State College of Health Science and Management Technology, Port Harcourt numbering 1,400 persons and this was achieved through a census (Head count) method.

Sample Size and Sampling Technique

The study used a sample size of 140 women of reproductive age attending ante - natal care in Demonstration Medical Center of Rivers State College of Health Science and Management Technology Port Harcourt in the study area which is 10% of the population of study and this was selected using simple random sampling technique;

Instrument for Data Collection

The instrument used for data collection was structured questionnaire. (Fixed - response type close – ended questionnaire).

Method of Data Collection

The researcher administered 150 copies of the questionnaire directly (face-face) to all the participants. Copies of the questionnaire are collected on the spot after the completion.

Method of Data Analysis

The data collected from this study are subjected to statistical analysis using Statistical Package for Social Sciences (SPSS) of windows (version 20.0), frequency table and simple percentage.

Ethical Consideration

The researcher received approval letter from the ethical committee, Department of Public Health, Rivers State College of Health Science and Management Technology, Port Harcourt, which enables him to conduct research in the study area.

Result and Discussion of Findings

Socio-demographic Data

Table 1. Showing Respondents' Age Limits

Age Limit	Frequencies	Percentage (%)
10 – 20 years	43	30.7
21 – 30 years	42	30.0
31 – 40 years	25	17.9
41 years – above	30	21.4
Total	**140**	**100**

The table above shows that the respondents' whose age limit fall between 10 – 20 years are 43(30.7%), the ones between 21 – 30years are 42 (30.0%) and those that are within the age bracket of 31 – 40 years are 25 (17.9%) while the group between 40 years and above have a frequency of 30 (21.4%) respectively.

Table 2. Showing Respondents' Marital Status.

Marital status	Freq.	Percentage (%)
Single	12	8.6
Married	70	50.0
Widow	13	9.2
Separated	48	34.3
Total	**140**	**100**

From the table above, there is a clear indication that 12 (8.6%) respondents' are single, 70 (50.3%) are married while 13 (9.2%) are widow, while 48(34.3%) are separated.

Table 3. Showing Respondents' Educational Level.

Educational level	Freq.	Percentage (%)
Non-formal education	13	9.3
Primary education	40	28.6
Secondary education	62	44.3
Tertiary education	25	17.9
Total	**140**	**100**

Again, table 3 shows that 13 (9.3%) of the respondents' had non-formal education, 40 (28.6%) have primary education, 62 (44.3%) obtained secondary education while 25 (17.9%) had tertiary education certificate.

Table 4. Showing Respondents' Occupational Distribution.

Occupation	Freq.	Percentage (%)
Trader	42	30.0
Civil service	38	27.1
Student	26	18.6
Other(specify)	34	24.3
Total	**140**	**100**

Similarly table 4 indicate that 42 (30.0%) of the respondents' are trader, 38 (27.1%) are civil servant, while 26 (18.6%) are students and 34 (24.3%) are in other category occupation respectively.

Table 5. Showing Respondents' Religion

Religion	Freq.	Percentage (%)
Christianity	85	60.7
Islam	15	10.7
Others	40	28.6
Total	**140**	**100**

Information obtained from the table above reveals that 85 (60.7%) of the respondents' are Christians, 15(10.7%) are Islamic worshipers while 40 (28.6%) worship other religions.

Research Question 1.

What is the Knowledge Level of Malnutrition among Women of Reproductive Age Attending Rivers State College of Health Science and Management Technology Demonstration Clinic Port Harcourt?

Table 1: Mean ratings of the respondents' on Knowledge level of malnutrition (n = 140)

Knowledge level of malnutrition S/n	items	*Mean*	*Decision*
1.	Good knowledge	3.20	negative
2.	Poor knowledge	3.50	positive
3.	No knowledge	3.46	positive
	Overall Mean	**3.39**	**Positive**

From the table above, it is shown that the respondents' affirmed that they had good knowledge of malnutrition because the item scored a mean of 3.20 which is below the criterion mean of 3.39, hence it had no much effect on the respondents'. The respondents also agreed that they had Poor knowledge of malnutrition as indicated by the mean score of 3.50 which is above the criterion mean of 3.39. The respondents' who had no knowledge of malnutrition had a mean score of 3.46 which is also higher than the criterion mean of 3.39. Items 3 and 4 were positive having attracted mean scores of 3.50 and 3.46, while item 1 was negative having attracted mean score of 2.50 respectively. The overall mean of 3.39 from the above table indicates that the generated items 2 and 3 portrays knowledge level of malnutrition among women of reproductive age attending Rivers State College of Health Science and Management Technology Demonstration Clinic, Port Harcourt.

Research Question 2: What are the causes of Malnutrition among Women of Reproductive age in the Study Area?

Table 2: Mean Ratings of the Respondents on causes of Malnutrition (n = 140)

Causes of malnutrition

S/n	*Item (Question)*	*Mean*	*Decision*
1	Poverty and food price	2.85	positive
2.	Agricultural productivity	2.56	positive
3	Dietary practice	2.36	negative
4	Mixture of several factors	2.22	negative
5	Health related issues	2.54	positive
Overall mean		**2.50**	**positive**

From the above, it is indicated that the respondents' confirmed causes of malnutrition as poverty and food price, agricultural productivity, health related issues having produced mean scores of 2.85, 2.56 and 2.54 respectively. Items 3 and 4 had no much effect on the respondents' because their mean scores were less than the criterion mean of 2.50. The overall mean of 2.50 is an indication of causes of malnutrition.

Research Question 3: What are the Health Implications of Malnutrition among Women of Child Bearing Age Attending Rivers State College of Health Science and Management Technology Demonstration Medical Center, Port Harcourt?

Table 3: Mean Ratings of the Respondents on the Health Implications of Malnutrition (n =140)

Health Implications of Malnutrition

S/n	*Item (Question)*	*Mean*	*Decision*
1	Changes in body mass index [BMI]	2.67	positive
2.	Poor healing of wound	2.83	positive
3	Severe weight lose	2.56	positive
4	Weakness/dizziness	2.74	positive
5	Heart failure	2.28	negative
Overall mean		**2.61**	**positive**

The results in table 3 above indicate that items 1- 4 were among the health implications of malnutrition having produced mean scores above the criterion mean of 2.61. However, heart failure (item 5) was not a significant implication because it had a mean score of 2.28 which is below the criterion mean of 2.61. Conclusively, the overall mean of 2.61 is an indication of the fact the respondents experienced health implications of malnutrition.

Research Question 4: What are the Methods of Treatment and Prevention of Malnutrition among Women of Child Bearing Age?

Table 4: Mean Ratings of the Respondents on Methods of Treatment and Prevention of Malnutrition (n = 140)

Methods of Treatment and Prevention of Malnutrition

S/n	*Item (Question)*	*Mean*	*Decision*
1.	Dietary advice	2.85	positive
2.	Eating plenty of fruit (vitamins)	2.56	positive
3	Eating enough carbohydrate food	2.36	negative
4	Taking some milk and dietary food	2.22	negative
5	No dietary food alternations	2.54	positive
Overall mean		**2.50**	**positive**

The results in Table 4 show that (items 1, 2 and 5) questions asked in respect methods of treatment and prevention of malnutrition had positive responses having produced mean scores above the criterion of 2.50 and (item 3 and 4) was not a significant implication because it had a mean score of 2.36 and 2.22 which is below the criterion mean of 2.50. The overall mean of 2.50 is an indication that the respondents accepted 3 of the items as ways of methods of treatment and prevention of malnutrition having scored above the cutoff point.

Discussion of Findings

Research Question 1: Knowledge level of malnutrition

Results of the study indicated that women of reproductive age attending Rivers State College of Health Science and Management Technology Demonstration Clinic, Port Harcourt either have poor knowledge or no knowledge level of malnutrition having produced mean scores above 2.50. This finding is in agreement with the study conducted by Uthman (2018), on the knowledge and awareness level of women of reproductive age of Ikot-Ekpene, Akwa Ibom state about malnutrition which reported that majority of the women have poor knowledge of malnutrition and attributed this to lack of enlightenment of the women on malnutrition.

Research Question 2: Causes of malnutrition

Results of the study proved that three of the variables investigated under research question 2 established that causes of malnutrition are poverty and food price, agricultural productivity, health related issues. Similarly, this finding is in line with the finding of the study carried out by Ahmed (2012), on causes and effects of malnutrition among women of reproductive age in

Nairobi, Kenya. The result of his study reported that health related issues, poverty and high cost of food are contributory factors to malnutrition.

Research Question 3: Health Implications of Malnutrition

The results of the variables investigated under research question 3 revealed that all the variables items 1- 4 except item 5 were the health implications of malnutrition. This result confirms the opinion Goldenberg (2012), in his study on the health impacts of malnutrition on women of reproductive age in Accra, Ghana. The study highlighted acute weight loss changes in body mass index (BMI), Poor healing of wound, Weakness/dizziness as some of the health effects of malnutrition among the women of child bearing age in the study area.

Research Question 4: Prevention of teenage pregnancy

The results of the variables investigated under research question 4 indicated that (items 1, 2 and 5) (i.e.) Dietary advice, Eating plenty of fruit (vitamins) and No dietary food alternation are methods of treatment and prevention of malnutrition these items scored above the criterion mean of 2.50. This finding corroborates the opinion of Moges & Loha (2015) on the treatment and prevention of malnutrition among reproductive age women in Toronto, Canada. The study revealed that 78% of the respondents affirmed that taking drug food supplement, eating enough sources of proteins, Dietary advice and eating plenty of vitamins are methods of treatment and prevention.

Conclusion

From systematic review and analysis, it has been estimated that there is a high prevalence of malnutrition during pregnancy among women of child bearing age which is consistence irrespective of other observed source of variation of variations.

These acceptable high maternal malnutrition estimate stress the need for priority interventions targeted to improve maternal nutrition during pregnancy. Investigating on maternal malnutrition is also a key strategy to reduce the prevalence of malnutrition among women of child bearing age and its health implication. Apart of socio-demographic and economic factors, maternal malnutrition has been affected by inadequate nutrient intake or poor nutritional indicators and multiple pregnancies.

An optimal nutrient intake by the mothers is essentials to meet both maternal and fetal requirements and reduce adverse health consequences in addition to spaced pregnancy. Although several nutritional intervention programs have been introduced to improve maternal nutrition globally and regionally, the problem has been increasing. Effort should be renewed to ensure a proper and widespread implementation programs in order to significantly reduce its burden across in Nigeria in particular, Africa continentally and the world generally.

Recommendations

Following the finding of the study, the under - listed recommendations are made:

1. Health care service providers should organize enlightenment campaigns to education and arouse the awareness level of women of child bearing age about malnutrition.
2. Health care providers should introduce strategies for providing health education about proper and balance maternal nutrition during antenatal care [ANC] visit.

3. Government should intervened in enhancing the standard of living of women of child bearing age as well as controlling or reducing the price of food to enable the women of reproductive age afford the required nutritional food item
4. Woman of child bearing age should go for dietary advice during pregnancy to enable eat the necessary diet which will supply them and their fetus the required nutrient.

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