MATERNAL PERCEPTION ~~OF~~ ON FACTORS CONTRIBUTING TO UNDER NUTRITIONAMONG UNDER-FIVE CHILDREN IN SELECTED PRIMARY HEALTHCAREFACILITIES IN ABEOKUTA SOUTH LGA.

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ABSTRACT

IntroductionUndernutrition is the imbalance between the intake of nutrients and energy and the bodily requirements to live, grow, and carry out specific functions, especially before reaching the age of five. **Objective**This study ~~is~~ aimed at assessing maternal perception ~~of~~ on factors contributing to under nutrition among under-five children in selected primary healthcare facilities in Abeokuta South Local Government Area. Health belief model was used. ~~This~~**methodology** This study was carried out using a descriptive design, 80 questionnaires were distributed to the respondents. Data was analysed using SPSS version 22 and ~~was~~ presented using frequency, percentage and distribution table. **Results**The results showed ~~of~~ maternal perception ~~of~~ on factors contributing to under nutrition among under-five children such as cultural beliefs and traditional practices influence ~~on~~ nutritional practices, perception of snail, plantain and ~~okro~~okra consumption as taboo in pregnancy, eating less during pregnancy to prevent birth complications, perception of previous pregnancy as factors, perception of feeding children with meats/fishes to prevent theft and believe in supernatural powers affecting nutrition showed that one third (31.2%) of the population had poor perception while 68.8% ~~of the population~~ had good perception. Also, factors contributing to undernutrition such as low parental education, income, family size, challenging employment, poor living conditions, and inadequate dietary intake, were identified as significant determinants in this study which must be addressed to help combat child undernutrition comprehensively and ensure a brighter, healthier future for all children. ~~It~~**conclusion**It is recommended that the government should implement programs aimed at improving maternal education levels, focusing on proper child nutrition and healthcare practices to empower mothers with the knowledge needed to make informed decisions for their children's well-being and as well develop initiatives that promote economic empowerment among families with limited income to alleviate poverty and enhance access to nutritious food.

Aims: This study is aimed at assessing maternal perception of factors contributing to under nutrition among under-five children in selected primary healthcare facilities in Abeokuta South Local Government Area.

Study design: The study was descriptive design.

Place and Duration of Study: Sample: Department of Medicine (Medical Unit IV) and Department of Radiology, Services Institute of Medical Sciences (SIMS), Services Hospital Lahore, between June 2009 and July 2010.

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Methodology: This study was carried out using a descriptive design 80 questionnaires were distributed to the respondents. Data was analyzed using SPSS version 22 and was presented using frequency, percentage and distribution table.

Results: The knowledge of undernutrition among respondents showed that 86.3% of respondents believed that imbalanced diet is the cause of undernutrition and 50% were indifferent on the six classes of food. It was asserted by 77.5% of respondents that breastfeeding should be initiated within a half hour of delivery, 73.8% believed in practice of EBF within the first six months while 80% claimed that complementary feeding should be initiated at 6 months of age. It was claimed each by 95% and 92.5% of respondents that cereals, pulses, milk, fish, and green leafy vegetables are essential for the growth of children, less weight for age is a clinical feature of undernutrition and that excessive consumption of carbohydrate leads to marasmus respectively. Moreover, 90% claimed that too much protein will cause kwashiorkor, 88.8% agreed that child should be hospitalized to treat severe undernutrition, 90% were of the opinion 4 that adequate breastfeeding, nutritious food, and regular deworming will prevent undernutrition in children while 95% asserted that immunization of children is the best way to protect the child against infectious diseases. In summary, 37.5% of the population demonstrated low level of knowledge and 62.5% of the population had high level of knowledge of undernutrition in children.
Respondents' perception of factors responsible for undernutrition in children revealed that 91.3% of respondents claimed that cultural beliefs and traditional practices have great influence on nutritional practices, 83.8% perceived snail, plantain and okroconcumption as taboo in pregnancy while 81.3% asserted that eating less during pregnancy prevents birth complications. Moreover, 88.8% perceived previous pregnancy as factors, 67.6% of respondents dislike feeding of children with meats/fishes to prevent theft and while 36.3% do believe in supernatural powers affecting nutrition, 63.8% have different opinion to this. In summary, 31.2% of the population had poor perception while 68.8% of the population had good perception of the factors associated with undernutrition in children. The data revealed that 82.4%, 90%, 81.3% and 91.3% claimed low parental education, large family size, low parental income, home activities as well as mothers' nature of jobs as factors that might be responsible for undernutrition in children respectively. Moreover, 86.3%, 91.3% and 85.1% of respondents also believed that poor living conditions, inadequate dietary intake as well child state of health might be factors associated with undernutrition respectively.

Conclusion: The findings demonstrate a high prevalence of undernutrition, specifically stunting, Factors found to be significantly associated with poor nutrition outcomes in children under five are unsafe drinking water and sanitation, maternal height, birth order and age of the child. These findings reinforce the multidimensional nature of undernutrition and the need for interdisciplinary approaches to address it.

Keywords: socio-demographic, undernutrition, respondent, knowledge, health concern.

INTRODUCTION

Undernutrition is a major public health concern in Low- and ~~MiddleIncome~~Middle-income Countries (LMICS) (Hall et al., 2020). Undernutrition is an important indicator for tracking nutritional status and survival (Agho, 2019 Adequate nutrition is a child's right and it is essential for a child's healthy growth and development (World Health Organization [WHO], 2022a; Ghodsi et al., 2021). The first one thousand days of life are the most crucial in terms of child development (Brits et al., 2022 Poor nutrition is associated with delayed brain development during this period and it has a negative effect on adult cognitive development, educational achievement and economic productivity (Njigang et al., 2021).

Undernutrition in early infancy may lead to impaired growth and development, mental illness and may increase the likelihood of hypertension, cardiovascular disease, diabetes and chronic thyroid disease in adulthood 2 (Mwangome et.al.,2019) Undernutrition is broadly categorizes as: wasting, stunting and underweight and these are further classified into moderate or severe undernutrition (Muraya et.al., 2016). In 2020, an estimated 149 million under-five children were stunted and 45 million wasted, globally and undernutrition is responsible for about 45% of under-five deaths. Between 2000 and 2018 the global rate of stunting fell from 32.5% to 21.9%. This drop, however, is not uniform across countries and regions (Akombi-Inyang, 2021). According to the World Health Organization, LMICs are the most affected (World Health Organization, 2022b). Sub-Saharan Africa is populated by a third of the world's undernourished children (Akombi-Inyang, 2021).

Undernutrition accounts for about 35% of under-five deaths in Africa (Agho, 2019). Nigeria has the second highest burden of stunted children in the world and the highest in Africa, with a national prevalence rate of 33.3 percent of children under five, 11.6 percent of Nigerian children aged 659 months are wasted (thin for their height), 25.3 percent are underweight (thin for their age) and 1.5 per cent are overweight (heavy for their height) (Ndujihe, 2022). Maternal perception of nutritional status is essential for prevention and treatment of nutritional disorders, as it acknowledges an altered nutritional status that generates health concern and represents the first step in searching for health attention and healthcare (Duarte et.al., 2019). Mothers can stimulate or restrict their children feeding depending on their perception of their nutritional status (Duarte et.al., 2019). Mothers observe and monitor different aspects of infant growth and form an opinion on the health and nutritional status of their infants. These opinions are guided by local norms and influence health-care seeking decisions and consequently the health of the child (Mwangome et.al., 2019).

METHODOLOGY

A descriptive approach was used to elicit information from mothers in selected health facility on the perception of mothers on the factors responsible for under nutrition in under-five children, The target population for this study were mothers in selected primary health centres in Abeokuta South LGA. Abeokuta, Ogun State. The selected health centers are; Kugba Health Centre, Keesi Primary Health Center, Erunbe Primary Health Center.

A ~~self-designed~~self-designed questionnaire was used for descriptive and explanatory purpose. The researcher sought appropriate permission from all the respondents and confidentiality of the information gathered were assured. The questionnaires were administered, and appropriate explanations were given to the respondents before commencement of the answering of the questionnaires. The answered questionnaires were collected back by the researcher which were analysed and used to answer the research questions.

Data was collected using a self-structured questionnaire. The questionnaire consists of four sections:

- Section A: Socio-demographic characteristics (Table 1)
- Section B: Factors responsible for under nutrition in children (Table 2)
- Section C: Level of knowledge of mothers on the factors responsible for undernutrition in children (Table 3)

Section D: Perception of mothers on the factors responsible for under nutrition in children

Analysis of the data was obtained using Statistical Packaged for Social Sciences (SPSS version 20). Data was presented using tables and figures. The remark of the findings on each question was summarized beneath each table. The sample size for this study was determined using Slovin's formula. $n = \frac{N}{1+N(e)^2}$

Where n = sample size

N= Total population e =

Error margin (5%) e = 1

– confidence level e= 1

– 95% e= 1 – 0.95 e =

0.05

Total population = 100

$$\frac{100}{1 + 100\ (0.05)^2}$$

$$\frac{100}{1 + 100\ (0.0025)}$$

$$\frac{100}{1 + 0.25}$$

n= 80

RESULT

The knowledge of undernutrition among respondents showed that 86.3% of respondents believed that imbalanced diet is the cause of undernutrition and 50% were indifferent on the six classes of food. It was asserted by 77.5% of respondents that breastfeeding should be initiated within a half hour of delivery, 73.8% believed in practice of EBF within the first six months while 80% claimed that complementary feeding should be initiated at 6 months of age. It was claimed each by 95% and 92.5% of respondents that cereals, pulses, milk, fish, and green leafy vegetables are essential for the growth of children, less weight for age is a clinical feature of undernutrition and that excessive consumption of carbohydrate leads to marasmus respectively. Moreover, 90% claimed that too much protein will cause kwashiorkor, 88.8% agreed that child should be hospitalized to treat severe undernutrition, 90% were of the opinion 4 that adequate breastfeeding, nutritious food, and regular deworming will prevent undernutrition in children while 95% asserted that immunization of children is the best way to protect the child against

infectious diseases. In summary, 37.5% of the population demonstrated low level of knowledge and 62.5% of the population had high level of knowledge of undernutrition in children. Respondents' perception of factors responsible for undernutrition in children revealed that 91.3% of respondents claimed that cultural beliefs and traditional practices have great influence on nutritional practices, 83.8% perceived snail, plantain and ~~okro~~okra~~concumption~~consumption as taboo in pregnancy while 81.3% asserted that eating less during pregnancy prevents birth complications. Moreover, 88.8% perceived previous pregnancy as factors, 67.6% of respondents dislike feeding of children with meats/fishes to prevent theft and while 36.3% do believe in supernatural powers affecting nutrition, 63.8% have different opinion to this. In summary, 31.2% of the population had poor perception while 68.8% of the population had good perception of the factors associated with undernutrition in children. The data revealed that 82.4%, 90%, 81.3% and 91.3% claimed low parental education, large family size, low parental income, home activities as well as mothers' nature of jobs as factors that might be responsible for undernutrition in children respectively. Moreover, 86.3%, 91.3% and 85.1% of respondents also believed that poor living conditions, inadequate dietary intake as well child state of health might be factors associated with undernutrition respectively.

SOCIO-DEMOGRAPHIC DATA OF RESPONDENTS

Table 1: Socio-demographic characteristics (n=80)

Demographic Variables	Frequency (n)	Percentage (%)
Age (year)		
18-25	26	32.5
26-35	32	40.0
36-45	13	16.3
45 above	9	11.3
Religion		
Christians	47	58.8
Islam	33	41.3
Tribe		
Yoruba	64	80.0
Hausa	12	15.0
Igbo	4	5.0
Marital Status		
Single	5	6.3
Married	69	86.3

Widowed	6	7.5
Occupation		
Civil servant	14	17.5
Trading	39	48.8
House-wife	14	17.5
Students	3	3.8
Others	10	12.5
Number of children		
One	20	25.0
Two	40	50.0
Three	10	12.5
Four & above	10	12.5
Family Type		
Monogamous	74	92.5
Polygamous	6	7.5
Educational Level		
No formal learning	6	7.5
Primary	14	17.5
Secondary	48	60.0
Tertiary	12	15.0
Total	**80**	**100.0**

PERCEPTION OF FACTORS ASSOCIATED WITH UNDERNUTRITION IN CHILDREN

Table 2: Respondents' perception of undernutrition.

	SA n (%)	**A n (%)**	**D n (%)**	**SD n (%)**
Cultural beliefs and traditional practices have great influence on nutritional practices	54(67.5)	19(23.8)	4(5.0)	3(3.8)

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Giving of certain foods such as egg, snail, plantain and okro are considered as taboo	49(61.3)	18(22.5)	5(6.3)	8(10.0)
Eating less during pregnancy prevents birth complications caused by large babies	53(66.3)	12(15.0)	8(10.0)	7(8.8)
Another pregnancy may hinder one from the desire to practice exclusive breastfeeding	54(67.5)	17(21.3)	4(5.0)	5(6.3)
The first breast milk is dirty and should not be given to the baby	20(25.0)	13(16.3)	26(32.5)	21(26.3)
Mothers transmit pain to the child through breast milk	29(36.3)	23(28.7)	10(12.5)	18(22.5)
Feeding on meat/fish/egg make children thieves	45(56.3)	9(11.3)	6(7.5)	20(25.0)
Supernatural powers may affect and make child undernourished	17(21.3)	12(15.0)	24(30.0)	27(33.8)

KNOWLEDGE OF UNDERNUTRITION IN CHILDREN

Table 3: Respondents' knowledge of nutrition in children

	Yes n (%)	**No n (%)**
Imbalanced diet is the cause of undernutrition	69(86.3)	11(13.8)
Carbohydrate, protein, vitamins, fat and oil, minerals and water are the six classes of food	40(50.0)	40(50.0)
Breastfeeding should be initiated within half an hour of delivery	62(77.5)	18(22.5)
It is not good to practice exclusive breastfeeding in the first 6 months of age	21(26.3)	59(73.8)
Complementary feeding should be initiated at 6 months of age	64(80.0)	16(20.0)

Cereals, pulses, milk, fish, and green leafy vegetables are essential for the growth of children	76(95.0)	4(5.0)
Less weight for age is a clinical feature of undernutrition	76(95.0)	4(5.0)
Excessive consumption of protein leads to kwashiorkor	74(92.5)	6(7.5)
Excessive consumption of carbohydrate will lead to marasmus	72(90.0)	8(10.0)
Height and every 3 months weight must be checked for children aged 3–5 years	70(87.5)	10(12.5)
Child should be hospitalized to treat severe undernutrition	71(88.8)	9(11.3)
Delayed physical growth and impaired cognitive development are the complications of undernutrition	65(81.3)	15(18.8)
Adequate breastfeeding, nutritious food, and regular deworming will prevent undernutrition in children	72(90.0)	8(10.0)
Immunization of children is the best way to protect the child against infectious diseases	76(95.0)	4(5.0)

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DISCUSSION

Mothers have shown moderate to high knowledge of undernutrition in children. A larger proportion of the mothers, ~~representing~~ 62.5% in this ~~present~~ study have shown a high level of knowledge of undernutrition in children. The high level of knowledge shown by the mothers was similar to what was observed in the study carried out by (Mwangome et.al., 2019) which reported that undernutrition in early infancy may lead to impaired growth and development, mental illness ~~and~~ may increase the likelihood of hypertension, cardiovascular disease, diabetes and chronic thyroid disease in adulthood. Also, the study conducted by (Farid-Ul- Hasnain, 2019) revealed undernutrition as a consequence of inadequate dietary intake in children. In this ~~current~~ study, despite their generalized good level of knowledge, majority could not answer some questions correctly, for example, the mothers have failed to understand the consequences of excessive consumption of carbohydrate and proteins as Kwashiorkor and Marasmus

respectively while also stating that breastfeeding should be initiated within half an hour of delivery. These findings were in contrast to what was observed in the study of (Wakim & Grewal, 2021) which reported wasted limbs, emaciated bodies and ~~wizened~~wrinkled features of a marasmic child. ~~Also~~Moreover, the findings of the study conducted by (Benson) revealed immunization as ~~very~~ compulsory in treating?of severe illnesses, a finding agreed with by mothers in this current study. Hence, maternal education as reported by Oyira (2019) has a strong influence on the nutritional status of children and very essential to improve the knowledge of nutrition in children amongst nursing mothers.

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Maternal perceptions were categorized as either "good," indicating mothers agreed with most of the cited factors, or "poor," indicating disagreement with most of the factors. The findings revealed that the majority of mothers had a positive perception of the factors discussed in this study. This aligns with the observations made in ~~Akparibo's 2018~~Akparibo's 2018 study, which found that most mothers believed malnutrition resulted from disregarding traditional norms and beliefs.

In this study, mothers held positive perceptions regarding various factors associated with undernutrition in children, including cultural differences, dietary restrictions (such as not eating certain foods like okra, snail, and plantain), future pregnancies, concerns about breast milk cleanliness, and the consumption of low-quantity foods. Similar positive perceptions of cultural and traditional differences, as well as food taboos related to snail and okra consumption during pregnancy, were also noted in the studies conducted by Lokossou et al. in 2021 and Pérez & García in 2018. While some mothers in the present study believed that not giving fish and meat to children could prevent theft or stealing, the majority did not perceive undernutrition as a supernatural problem in children. However, the notion that withholding meat and fish from children can prevent theft contradicts the findings of Liyanatul et al (2021) who advocated strategies such as widespread distribution of nutritious supplementary food, food and/or cash

transfers to households, and the inclusion of various nutrient-rich foods, including meats and fish, to prevent child undernutrition.

Findings of the study identified low parental education, large family size, low parental income (as stated by (Chukwunedum&Egbuna, 2019), home activities as well as mothers' nature of jobs as factors that might be responsible for undernutrition in children respectively. Education and socioeconomic status were major factors associated in the report of (Nwakwo et.al., 2022; Johri et al., 2019; Khattack, Iqbal, &Ghazanfar, 2019) whose studies showed a reverse relationship between maternal education and nutrition in children. Also, the study of (Amaha& Woldeamanuel, 2021) reinforced that educated women have better child nutrition practices and health-seeking behaviour. In this present study, the mothers also cited poor living conditions, inadequate dietary intake as well child state of health might as factors. Household associated environmental sickness in children according to the study of (Ansah, 2019; Galgalmuwa et al., 2019; Liyanatul et.al., 2019) can affect under-five children eating ability. Also, standard of living such as vaccination status, environmental and social factors could hinder nutrition in children as cited in the study carried out by (Thurstans et al*.,* 2022; Nwakwo et. al., 2022; Farhadi & Ovchinnikov, 2018).

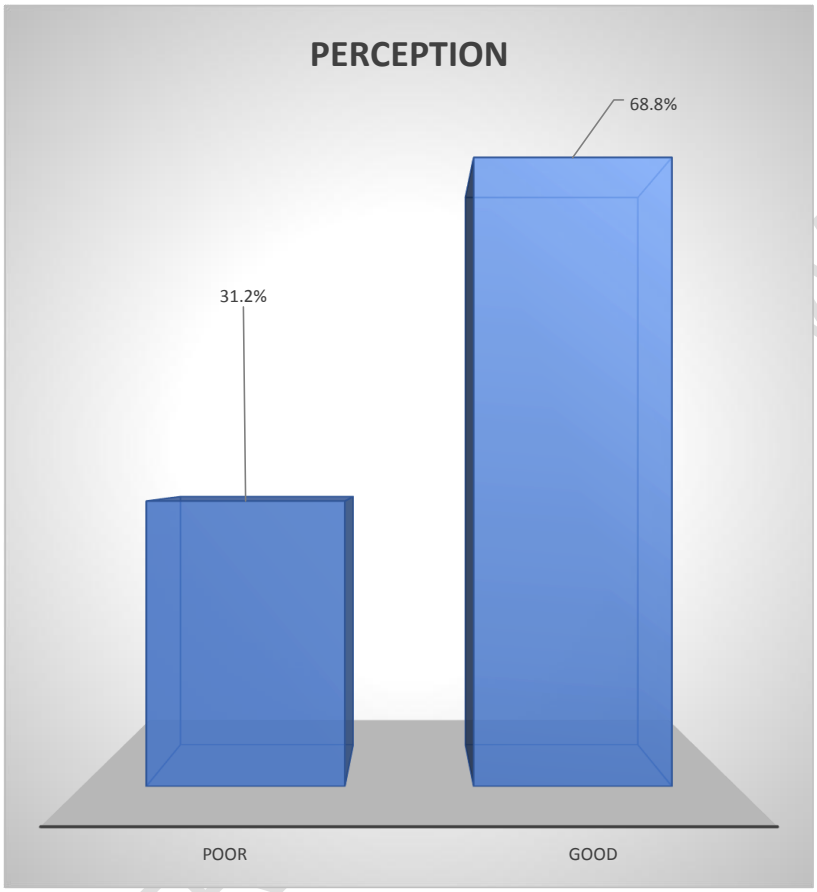

Fig 1. Pictorial representation of respondents' perception of factors responsible for undernutrition in children.

CONCLUSION

The findings demonstrate a high prevalence of undernutrition, specifically stunting, Factors found to be significantly associated with poor nutrition outcomes in children under five are unsafe drinking water and sanitation, maternal height, birth order and age of the child. These findings reinforce the multidimensional nature of undernutrition and the need for interdisciplinary approaches to address it. The aim was to explore perception, the findings showed almost on

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third (31.2%) of participants had bad perception which might contribute to what you have concluded here i.e. high prevalence of under nutrition.

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ETHICAL CONSIDERATION

Ethical approval to conduct this study was obtained from the nursing division of the research committee and laid down procedure on research ethics was thoroughly adhered to. Informed consent was obtained from the correspondents prior to administration of questionnaire. Respondents were assured of confidentiality and were informed not to indicate their name on the questionnaire.

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