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Determinants of Nutritional Status of Pregnant Women at Njoro Sub County Hospital, Nakuru County, Kenya

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Abstract

Globally, maternal nutrition is an essential aspect of every pregnant woman's life. Proper maternal nutrition during prenatal and post-natal periods has been shown to reduce the risks of maternal and infant complications. Pregnant women who have not achieved optimal nutrition are at higher risk of experiencing poor pregnancy outcomes. In many countries around the world, Kenya not an exception, the nutritional status of women is unacceptably poor, far too many women cannot access the nutrition services they need for optimal health. Therefore, the current study aimed at establishing the determinants of nutritional status of pregnant women at Njoro Sub County Hospital, Nakuru County, Kenya. The study used descriptive survey research design. A total sample of 80 pregnant women attending prenatal clinic at Njoro Sub County Hospital, Nakuru County was selected using simple random sampling technique. Data was collected through questionnaires to establish determinants of nutritional Status of pregnant women at Njoro Sub County Hospital. Descriptive statistics was used to analyze data. The result of the study reveals that the determinants of nutritional status of the respondents were maternal education, level of income, land ownership and crop farming. The findings show that the overall nutritional knowledge of the respondents was 33% high, 53.3% moderate and 13.3% low. Secondly, results indicate that a majority (90%) of pregnant women attending ANC at Njoro Sub County Hospital had good nutrient adequacy (>5 food groups) with only 10% having nutrient inadequacy. Thirdly, findings show that the nutritional status of the pregnant women was very good, standing at 96.7 % (MUAC above 23cm). The study recommends that health care workers should create awareness by providing nutrition education on the importance of optimal maternal nutrition, both to the baby and the mother. Secondly, Pregnant women who have financial difficulties need to be identified and support provided for them in terms of nutritious food. Finally, community health volunteers need to have a record and keep track of all pregnant women in the community to ensure that they seek early antenatal services.

Keywords: determinants, nutritional status, pregnant women

1. Introduction

1.1 Trends in Maternal Nutritional Status

Research findings by World Health Organization and United Nations Children's Educational Fund (WHO/UNICEF, 2010) reports that over the past century there have been many changes in recommendations made to women about weight gain during pregnancy. Maternal weight gain could be used as an indicator of maternal nutritional status. In turn, maternal nutritional status influences fetal growth. An excessive weight gain was regarded as a clinical sign of edema and toxemia. In the sixteenth, seventeenth and eighteenth centuries, much emphasis was placed on the maternal diet since the mother was known to be the only source of nutrients for the fetus (Cogil, 2003; Dave & Josh, 2021). In the nineteenth century, the idea that pregnant women should not overeat became rampant. Overeating was believed to be a cause of macrosomic babies and as a consequence, more difficult labors. (Bhowmik, Siddique, Majumder. Mdala, Hossain, Hassan, & Hussain, 2019).

1.2 Nutritional Status Among Pregnant Women Globally

Globally, an estimated 15 million babies are born preterm and 20 million are born with low birth weight, mostly in underdeveloped countries (Diddana, 2019). Moreover, Mubashir, Ashwini and Dhanashree (2020) revealed that India contributed to about quarter of maternal deaths globally. India has distinct contribution to 20% of the global births. Furthermore, Mubashir, Ashwini and Dhanashree (2020) add that every year about 30,000,000 women are pregnant and about 27,000,000 among these go for delivery. About 1,360,000 mothers and newborn babies die globally. National Family Health Survey revealed that every third woman in India is undernourished (33% have low BMI) and every second woman is anemic (56.2%). If the mother is unable to gain optimal weight during pregnancy, then it means the nutrients transferred to the baby will be of low quality and quantity (Cogil, 2003). In another study conducted in North Eastern Ethiopia, it was observed that undernourished mothers were more vulnerable to diseases, encountered more miscarriages and gave birth to underweight children whose survival were at risk. The 2016 Ethiopian and Health Demographic Survey indicated that 22.4% of women of reproductive age were undernourished and 29% were anemic at the national level. (Gomez, Vara & Miron., 2020).

1.3 Nutritional Status Among Pregnant Women in Kenya

Research studies by WHO and UNICEF (2014) indicate that in most developing countries, micronutrient malnutrition has remained a major threat of public health attention. This has been attributed to the consumption of cereal based diets that are lacking in diversity. Similarly, a study conducted in Laikipia County, Kenya by Kiboi, Chege, Kimiywe (2016) revealed that the intake of folic acid, calcium and zinc among pregnant women were very low. Based on the MUAC circumference, 19.3% of the participants were found to be undernourished (MUAC<23cm).

1.4 Socio-Demographic Factors

1.4.1 Religion

According to Bocella, Carvalho and Czerkies (2017) religion is one of the social factors that conditions the diet of believers, as most religions set rules concerning the intake of certain foods and determine times for fasting. Comparatively a study conducted in Ethiopia assert that the practice of fasting during religious periods was dominant. Therefore, strategies should be put in place by the community and religious leaders to sensitize pregnant women on the importance of optimal nutrition and the necessity of consuming a healthy diet. (Bazzano, Ports & Mulugeta., 2018).

1.4.2 Social Status

A study by Gomez, Vara and Miron (2020) argue that pregnant women from high social class consume healthy and diversified diets because they can afford to purchase different foods from each and every food group as compared to those women in low social class.

1.4.3 Place of Residence

Research findings by WHO and UNICEF (2010) show that place of residence influences the dietary practices of pregnant women since some areas have poor climate with limited food production, thus the pregnant women in such areas are unlikely to consume diet rich in vitamins. Furthermore, Dongarwar and Salihu (2020) reveal that rural women are likely to experience still births, miscarriage, infant mortality as compared to urban women, this is because a large percentage of rural women are

illiterate and therefore, they have limited nutrition knowledge and limited access to infrastructural amenities.

1.4.4 Age

According to Diddana (2019) pregnant women who are older are likely to consume a more diversified diet compared to their counterparts who are much younger as they can easily access foods because they are employed or well-grounded in businesses.

1.4.5 Level of Education

A study by Biney and Nyarko (2017) report that pregnant women who are secondary school graduates and above are more likely to consume a more diversified diet than mothers who do not have formal education due to increased nutrition knowledge on optimal maternal nutrition.

1.5 Cultural Factors

Pregnant women from different communities have got diverse beliefs about foods appropriate for consumption during pregnancy (Bazzano, Ports & Mulugeta, 2018). A study conducted in the Eastern Cape, South Africa revealed that pregnant women avoid certain types of food due to the community beliefs and food taboos. The foods commonly avoided were meat and pumpkin. Most foods were avoided due to reasons associated with pregnancy outcomes, labor and undesirable body form for the baby (Chakona & Shackleton, 2019).

1.6 Maternal Knowledge, Attitudes and Perceptions (KAP)

Aishima, Begin and Aguayo (2020) assert that women who have good nutritional knowledge are more likely to consume a diversified diet compared to their counterparts with limited knowledge. Consequently, attitudes towards various groups of food comes from the different experiences one has after consuming a certain food, this makes the women prefer certain foods over others.

1.7 Economic Factors

1.7.1 Economic Status

Research findings by Super, Beulen, Koelen and Wagemakers (2021) report that pregnant women with low social economic status often fail to meet the dietary requirements for healthy nutrition. The dietitians can be able to play a key role in helping such women by providing reliable and relevant nutritional information, making healthy eating manageable and helping in identifying barriers and solutions for healthy eating.

1.7.2 Employment

According to WHO and UNICEF (2014) employment during pregnancy is associated with reduction in the risk of complications during pregnancy and at birth because of easy accessibility to health care. However, working in certain occupation may affect pregnancy outcomes, industries manufacturing chemicals, prolonged standing and heavy lifting.

2. Research Methodology

Descriptive survey research design was used in the study. The study area was Njoro Sub County Hospital, Nakuru County, Kenya. The target population were pregnant women in Nakuru County, Kenya, more specifically, pregnant women attending Antenatal clinic at Njoro Sub County Hospital. Simple random sampling technique was used to select a sample of 80 pregnant women from the target population. Data was collected through questionnaires to obtain information from the respondents on determinants of their nutritional status. Data analysis was done using descriptive statistics by employing means and percentages.

3. Results and Discussion

3.1 Socio Economic and Demographic Characteristics

From the data analysis the mean age of the respondents was 25.13 with the minimum age being 19 and maximum age 34 years. According to the study most of the respondents were married (83.3%) with 16.7% being single. Among the respondents, Kikuyus had a percentage of 50%, Kalenjins 16.7% and other tribes an average 30.0%. Moreover, the study results show that maternal education was one of the determinants of maternal health knowledge, where 33.3% of the respondents attained primary education, 36.7% secondary education and 30.0% tertiary level. The results also indicate that the level of income of the respondents also contributed to their nutritional status where, 33.3% had no income, 20.0% earned less than ksh 4000, 26.7% earned ksh 10000 and 3.3% earned ksh 20000. Additionally, the respondent spent more money on food with the highest being 46.7% and the lowest 3.3%. Furthermore, 50% of the respondents owned land and practiced crop farming.

3.2 Nutritional Status

To assess the nutritional status of the pregnant women, the study used MUAC. A cut of <23 cm indicated undernourishment and those with a MUAC of >23cm were categorized as having adequate nutritional status (Cogil, 2003).

Table 1. Nutritional Status of the Respondents

	Mean	Minimum	Maximum	Percentile
MUAC	26.9	22.8	34.1	26.2%
Weight	65.9	46.5	99.5	63.95%

The results in Table 1 reveals that 3.3% of the 80 respondents had a MUAC of 22.8cm while the remaining 96.7% had good nutritional status (MUAC above 23 cm). The mean weight of the respondents was 65.9 kgs with a minimum weight of 46.5 kgs and a maximum weight of 99.5 kgs.

3.3 Nutrition Knowledge

The results in Figure 1 indicates the nutritional knowledge of pregnant women attending prenatal clinic at Njoro Sub County hospital Nakuru.

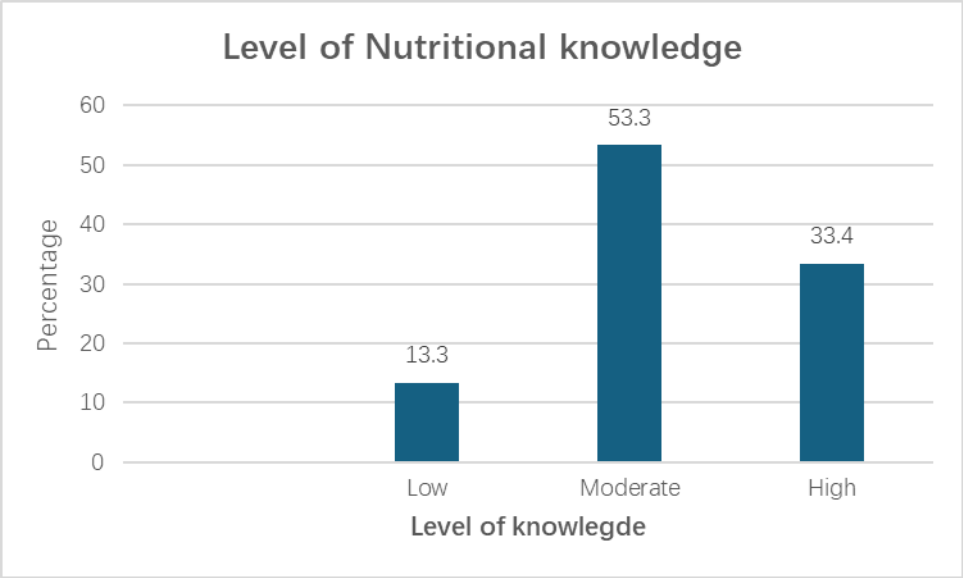

Figure 1. Respondents Nutrition knowledge

The findings in Figure 1 show that the overall nutrition knowledge of the respondents stood at 33.4% high, 53.3% moderate and 13.3% low. Thus, from the results, it is apparent that most of the respondents had good nutritional knowledge.

4. Conclusion and Recommendations

In conclusion, the result of the study reveals that the determinants of nutritional status of the respondents were maternal education, level of income, land ownership and crop farming. The findings show that the overall nutritional knowledge of the respondents was 33% high, 53.3% moderate and 13.3% low. Secondly, results indicate that a majority (90%) of pregnant women attending ANC at Njoro Sub County Hospital had good nutrient adequacy (>5 food groups) with only 10% having nutrient inadequacy. Thirdly, findings show that the nutritional status of the pregnant women was very good, standing at 96.7 % (MUAC above 23cm). Most of the respondent choose the food they consumed based on the availability, cost and preferences. The following recommendation were suggested in this study; first, health care workers should create awareness by providing nutrition education on the importance of optimal maternal nutrition, both to the baby and the mother. Secondly, pregnant women who have financial difficulties need to be identified and support provided for them in terms of

nutritious food. Finally, community health volunteers need to have a record and keep track of all pregnant women in the community to ensure that they seek early antenatal services.

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