

Nutritional Knowledge of Expectant Mothers in Degema Local Government Area of Rivers State, Nigeria

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Abstract

The study was focused on the nutritional knowledge of expectant mothers in Degema Local Government Area of Rivers State, Nigeria. A descriptive survey design was adopted for the study. The population of the study comprised of all the pregnant women in Degema Local Government Area of Rivers State. A sample size of 438 was used for the study. A multistage sampling technique was used to select the participants for the study. The instrument for the study was a standardized questionnaire with a reliability coefficient of 0.77. Data was analysed using percentage, Chi-square and binary logistic regression. The result of the study showed that more than half (55.1%) of the have good knowledge of nutrition. Variables such as age ($r = -0.067$) and religion ($r = 0.097$) had a very low relationship with nutritional knowledge. Marital status ($r = -0.229$) and occupation ($r = -0.219$) had a low relationship while educational status ($r = -0.604$) had a high relationship with nutritional knowledge. The result of the tested hypotheses showed that there was a significant relationship between nutritional knowledge and variables such as age ($p < 0.000$), educational status ($p < 0.000$), marital status ($p < 0.000$). It was concluded that; expectant mothers in Degema had a good nutritional knowledge and there was a significant relationship between socio-demographic characteristics of respondents and nutritional knowledge. Therefore, it was recommended that, health professionals should pay more attention to age, religion, educational status and marital status when designing health promotion interventions for pregnant women.

Keywords: Nutritional Knowledge, Expectant mothers, Degema

Introduction

Adequate nutritional knowledge during pregnancy is necessary to ensure affirmative pregnancy outcomes. According to Daba, Beyene, Fekadu and Garoma (2013), during pregnancy, maternal nutrition requires considerable attention because nutrition is a fundamental pillar of human life, health and development throughout the entire lifespan. Levy, Digman and Shirref (2012) defined nutrition as the science of food, its use within the body, and its relationship to good health. It includes the study of the major food components which include proteins, carbohydrates, fats, vitamins, minerals and water. However, as regards nutrition during pregnancy, Ojo and Briggs (2010) stated that, pregnancy is a time of tremendous physiological change that demands healthy dietary lifestyle choices because the growing foetus draws a lot of energy and nutrients from the mother to enhance physical and psychological development. In the same vein, Edris cited in Tenaw, Arega and Tachbele (2018) necessitated that; the pregnant woman's diet should include a substantial increase in calories, protein, calcium, folic acid, iodine and iron. In a recent study carried out by Amanuel and Tona (2018), it was reported that 60.7% of pregnant women had good nutritional practices. However, Okafor (2010) specified that, a pregnant woman's choices of food are determined by many

factors such as the availability of food in the locality, socio-economic status, and the knowledge the individual possess about the value of food.

Knowledge is the fact or condition of being aware of something or knowing something with familiarity gained through experience or association (Cheung, 2017). According to Tenaw, Arega and Tachbele (2018) nutritional knowledge refers to an individual's ability to remember and recall food and nutrition related terminology. Been Knowledgeable about nutrition during pregnancy was high in previous studies conducted in Malaysia (70%), Swaziland (67%), and Ethiopia (88.1%) (Mitra, Wan, Manan, Affizal & Mohd (2012); Masuku & Lan, (2014); Alemayehu & Tesema (2016) respectively). In Nigeria, good knowledge of nutrition (65.3%) was also reported (Kever, Martins, Lola, Dathini, Habu, Fatima & Sambo, 2015). However, McLeod, Campbell and Hesketh, (2011) stated that, socio-demographic factors such as educational status, age, and socio-economic status have been reported to affect the adoption of appropriate nutrition practices.

Education enhances nutritional knowledge, thereby influencing practices towards good nutrition (Whaling, Luginaah, Reid, Hekmat, Thind & Mwanga, 2012). Education is defined by Amaele (2010) as the development of the in-built potential of an individual to his/her own advantage and to the advantage of the society. The influence of education on nutrition cannot be overemphasized. This is evident in the finding of Alemayehu and Tesema (2016) that, there is a statistically significant association between educational status and nutrition.

Age can be referred to as the number of days, weeks, months or year an individual had lived. Carolan and Frankowska (2011) noted that, the increasing maternal age has become an issue of public health concern because women of advanced maternal age experience higher rates of pregnancy complications, obstetrical intervention, and severe maternal morbidity than younger mothers and this makes nutrition very important as it can affect the outcome of the pregnancy.

Socio-economic status refers to the financial status of an individual in the society. Thurgood, Avery and Williamson (2009) stated that, some women may live with chronic levels of malnutrition related to financial strain, all of which may contribute to complications in pregnancy. Kever, Martins, Lola, Dathini, Habu, Fatima and Sambo (2015) showed in their study that poverty/poor socio-economic status was a major factor affecting nutritional practices of pregnant women. Rivers State, with its attendant high cost of living had deterred most pregnant women on good nutrition. Particularly, young female individuals who married early and could not further their education because of the burden of giving birth and keeping the home are at risk for poor nutritional knowledge and practice. This study therefore investigates the nutritional knowledge of expectant mothers in Degema Local Government Area of Rivers State, Nigeria.

Methodology

Research Design

The research design adopted for this study is a descriptive survey design. According to Elendu (2010), the descriptive cross-sectional design is one that generates data from a selected population, studying and describing events as they occur in their natural setting at a particular time. This research design was successfully used by Amanuel and Tona (2018) to investigate nutritional practices and associated factors during pregnancy. Hence, it is considered appropriate for this study.

Population of the Study

The study population comprised of all the pregnant women in Degema Local Government Area of Rivers State. Although a definite figure was not found for the number of pregnant women in Degema but a population projection of 108,481 was found for women of child bearing age in Degema Local Government Area (National Population Council, 2016).

Sample Size and Sampling Technique

The sample size of 438 was determined using the Taro Yamane formula:

$$n = \frac{N}{1+N(e)^2}$$

A multistage sampling procedure was used. The first stage is a simple random sampling technique to select five primary health centres, at the second stage a non-proportionate sampling technique was used to ascertain the number of persons to be selected from each of the health centres, and the third stage involved the selection of the respondents using the purposive sampling technique.

Instrument for data collection

A standardized questionnaire was adopted from Ojiugo (2010). Section A addressed the socio-demographic characteristics of the respondents. It consisted of six (6) items. Section B addressed the knowledge of nutrition while section C was designed to illicit responses on the nutritional practices.

Method of Data Analyses

The data collected were analyzed using the statistical package for social sciences (SPSS) version 20.0 and data were presented using simple percentage, Chi-square and binary logistic regression for relevant variable at 95% confidence interval and 0.05 alpha level.

Results

Table 1: Nutritional knowledge of expectant mothers

Knowledge	Score	Frequency	Percentage
Good	>6	232	55.1
Poor	≤6	189	44.9
Total	12	421	100.0

Mean knowledge = 6.87±2.98

Table 1 revealed the nutritional knowledge of respondents. The finding of the study shows that 232(55.1%) of the respondents scored above 6 which was assumed to be good knowledge and 189(44.9%) scored ≤6 which was assumed to be poor knowledge. Based on the mean knowledge of nutrition, respondents are said to have good knowledge (55.1%).

Table 2: Relationship between nutritional knowledge and socio-demographic characteristics

Items	Knowledge		Total	r-value	Decision
	Good	Poor			
Age				-0.067	Very low
15-24years	41(32.5)	85(67.5)	126(100)		
25-34years	102(83.6)	20(16.4)	122(100)		
35-44years	60(56.1)	47(43.9)	107(100)		
45 and above	29(43.9)	37(56.1)	66(100)		
Total	232(55.1)	189(44.9)	421(100)		
Educational status				-0.604	High
No formal education	8(12.5)	56(87.5)	64(100)		
Primary	8(13.6)	51(86.4)	59(100)		
Secondary	108(58.1)	78(41.9)	186(100)		
Tertiary	108(96.4)	4(3.6)	112(100)		
Total	232(55.1)	189(44.9)	421(100)		
Occupation				-0.219	Low
House wife	29(22.3)	104(77.7)	133(100)		
Self-employed/business	152(66.4)	77(33.6)	229(100)		
Employed with pay	51(86.4)	8(13.6)	59(100)		
Total	232(55.1)	189(44.9)	421(100)		
Religion				.097	Very low
Christianity	208(56.5)	160(43.5)	368(100)		
Islam	16(55.2)	13(44.8)	29(100)		
Traditional worshiper	8(33.3)	16(66.7)	24(100)		
Total	232(55.1)	189(44.9)	421(100)		

Table 2 reveal the relationship between nutritional knowledge and the socio-demographic characteristics of respondents. The table show that age ($r = -0.067$) and religion ($r = 0.097$) have a very low relationship with nutritional knowledge. Low relationship was found between marital status ($r = -0.229$), occupation ($r = -0.219$) and nutritional knowledge. There was a high relationship between educational status ($r = -0.604$) and nutritional knowledge.

Table 3: Binary Logistic Regression analysis showing relationship between age and nutritional knowledge

Age	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR	
							Lower	Upper
15-24	Ref		60.575	3	.000			
25-34	.485	.313	2.413	1	.120	1.625	.881	2.998
35-44	-	.348	28.914	1	.000	.154	.078	.304
≥45	-.488	.315	2.393	1	.122	.614	.331	1.139
Constant	.244	.248	.965	1	.326	1.276		

* Significant.

On bivariate analysis the study showed a significant relationship between age and nutritional knowledge (X^2 -value = 74.120, $df = 3$, $p = 0.000$). On binary logistic regression the result of the study shows that those aged 25-34 years were 1.625 times (OR = 1.625: 95%CI = 0.881-2998) more likely to be knowledgeable about nutrition compared to those aged 15-24 years. The result further demonstrated that as respondents age ≥ 45 increases nutritional knowledge decreases (B = -0.488).

Table 4: Binary Logistic Regression analysis showing relationship between educational status and nutritional knowledge

Edu. Status	B	S.E.	Wald	df	Sig.	Odds ratio(OR)	95% C.I for OR	
							Lower	Upper
None	Ref		96.913	3	.000			
Primary	5.242	.634	68.328	1	.000	17.000	4.537	65.985
Secondary	5.148	.636	65.626	1	.000	18.125	5.534	59.118
Tertiary	2.970	.530	31.362	1	.000	19.500	6.895	55.147
Constant	-3.29	.509	41.898	1	.000	.037		

* Significant.

On bivariate analysis the study shows a significant relationship between educational status and nutritional knowledge (X^2 -value = 180.609, $df = 3$, $p = 0.000$). On binary logistic regression the result of the study shows that those who had primary education were 17 times (OR = 17.000: 95%CI = 4.537-65.985) more likely to be knowledgeable about nutrition compared to those who had no formal education. The result further demonstrated that as respondents educational status increases nutritional knowledge also increases (B = 2.970).

Discussion of Findings

The finding of this study show that more than half 55.1% of the have good knowledge of nutrition. The good knowledge found in this study can be attributed to the emphasis on nutrition made by health professionals during antenatal visits of expectant mothers. The findings of this study is similar to that of Nguyen, Sanghvi, Kim, Tran, Afsana, Mahmud, Aktar and Menon (2017) which showed that more than half (52.67%) of the respondents had good knowledge of nutrition. The finding of this study is also similar to that of Amanuel and Tona (2018) where more than half of the study participants had good dietary knowledge. The finding of this study is in support of Masuku and Lan (2014) which also showed that more than half of the respondents had average knowledge of nutrition. The findings of this study in in keeping with that of Kever, Martins, Lola, Dathini, Habu, Fatima and Sambo (2015) where it was reported that more than half of the study respondents had knowledge of dietary practices. This finding is also in agreement with that of Mirsanjari, Muda, Ahmad, Othman, Mosavat and Mirsanjari (2014) which showed that more that more than half of the respondents had good knowledge of nutrition. The findings of this study is a bit different from that of Alemayehu and Tesema (2016) were majority (88.1%) of the respondents had knowledge of good nutritional practices. The findings of this study is also different from that Ojiugo (2010) which showed that majority (83.16%) had knowledge of nutrition. The finding of this study is also different from that of Nchang, Mugyia, Tanya, Njotang and Ndombo (2016) where majority (92%) of mothers had knowledge on good maternal nutrition. However, the findings of this study is at variance with that of Tenaw, Arega and Tachbele (2018) which showed that only 27% of the respondents had knowledge of nutrition. The difference in the sample size in the two studies might be implicated for the variations found in present and previous studies.

The findings of this study showed that age ($r = -0.067$) and religion ($r = 0.097$) have a very low relationship with nutritional knowledge. Low relationship was found between marital status ($r = -0.229$), occupation ($r = -0.219$) and nutritional knowledge. There was a high relationship between educational status ($r = -0.604$) and nutritional knowledge. The result of the tested hypotheses showed that there was a significant relationship between age, educational status, and nutritional knowledge ($p < 0.05$). The findings of this study similar to that of Mirsanjari, Muda, Ahmad, Othman, Mosavat and Mirsanjari (2014) which showed that occupation ($p < 0.05$), and educational level ($p < 0.05$) had significant association with nutrition knowledge.

The findings of this study corroborates that of Masuku and Lan (2014) which showed that educational level ($p < 0.001$) was a predictor of nutritional knowledge. The findings of this study is in line with that of Kever, Martins, Lola, Dathini, Habu, Fatima and Sambo (2015) which showed that there was an association between age ($p < 0.05$) and nutritional knowledge.

Conclusion/ Recommendations

It was concluded that nutritional knowledge of expectant mothers was good and there was a relationship between socio-demographic characteristics of respondents and nutritional knowledge. It was recommended therefore that, health professionals should pay more attention to age, religion, and educational status of women when designing health promotion interventions for pregnant mothers.

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