

KNOWLEDGE, ATTITUDE AND PRACTICE OF CHILD NUTRITION AMONG WOMEN IN SOUTHWEST NIGERIA

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ABSTRACT

The study investigated knowledge, attitude and practice of child nutrition among women in Southwestern Nigeria. Two hundred and forty women were selected by systematic random sampling from ante-natal clinic in primary health centres in selected 10 local government areas in Oyo (4), Ekiti (3) and Osun State (3) based on probability proportionate sample to size with 90, 75, and 75 women interviewed from each of the States respectively. Data were collected using structured questionnaire which included 50 points-knowledge, 16 points-practice and 5-points Likert-attitudinal scales. Mean age of women was 33 ± 7.7 years, 69.6% were married, mean household size was 5.10 ± 2.4 and mean number of children under-five was 2.90 ± 1.49 . Half (50.4%) were educated and majority (67.5%) engaged in petty trading. The mean monthly income was ₦20, 330 \pm 17,052. Information sources included radio (75.4%) and television (54.2%). Post Hoc Test of multiple comparison on the basis of nutrition knowledge was significantly higher in Oyo than Ekiti (Mean difference = 3.24, $p = 0.018$) and Osun States (Mean difference = -5.00, $p = 0.004$). However, nutrition knowledge was not significantly different in Ekiti and Osun States. Nutrition education intervention programmes directed at women will foster change in knowledge, attitude and practice of child nutrition.

Key words: knowledge, attitude and practice of child nutrition.

Background Information

UNICEF, (2000) report revealed that the prevalence of malnutrition among children under 5 years of age in Nigeria is significantly higher when compared to most other developing countries. The major micronutrient malnutrition identified includes iron deficiency, vitamin 'A' deficiency and iodine deficiency disorders. The report also identified significant disparity in nutritional status in terms of mothers' education and literacy. Association between maternal literacy and nutritional status of young children is crucial for nutrition security among Nigerian households. An analysis of survey data from 17 developing countries, for example, confirms a positive association between maternal education and nutritional status in children 3–23 months old, although a large part of these associations is the result of education's strong link to household economics (Cleland *et al.*, 1988). Low status of women is considered to be one of the primary determinants of under-nutrition across the life cycle. Women's low status can result in their own

health outcomes being compromised, which in turn can lead to lower infant birth weight and may affect the quality of infant care and nutrition.

The nutrition situation in Nigeria is the result of several adverse and interrelated factors (social, economic and environmental) acting in synergy. In Nigeria, there is considerable food shortage and nutrient deficiency. There was no comprehensive national estimate of the magnitude of the problem until publication in 1992 of the report of the National Demographic and Health Survey (NDHS) (FOS, 1990). However, there have been some micro studies based on small study samples, using varying theoretical and methodological perspectives. The latter were insufficient for the purposes of policy formulation, programme development or for monitoring of any intervention programmes. It is against this background that the research attempts to determine knowledge, attitude and practice on child nutrition among women in South-western Nigeria by providing answers to the following research questions:

1. What are the socio-economic characteristics of the child bearing women?
2. What is the respondent's knowledge of child nutrition in the study area?
3. What is the respondent's attitude towards child nutrition in the study area?
4. What is the respondent's child nutrition practice in the study area?

Objective of the Study

The general objective of the study is to determine the knowledge, attitude and practice of child nutrition among women in Southwestern Nigeria.

The specific objectives of the study are to:

- (i) identify the socio-economic characteristics of the child bearing women in the study area.
- (ii) assess the respondents' level of child nutrition knowledge in the study area.
- (iii) determine respondents' attitude to child nutrition messages in the study area.
- (iv) describe the respondents' child nutrition practice in the study area.

Research Hypotheses

The hypothesis tested was stated in null:

- (i) There is no significant difference in respondents' child nutrition, knowledge, attitude and practice across Oyo, Osun and Ekiti States.

Methodology

Study Area

The study was carried out in southwestern part of Nigeria. The southwestern zone lies between latitudes 5°N and 9°N with an area of 114,271 square kilometres. This comprises Oyo, Ogun, Ondo, Osun, Ekiti, Edo, Delta and Lagos States. This is approximately 22% of Nigeria. This area covers about 114,271 km² (approximately 12% of Nigeria's total land area). It is bounded in the North by Kwara and Kogi States, in the East by Rivers and Niger States, in the South by Atlantic Ocean and in the West by Republic of Benin. The 2006 census put the population of southwestern zone at 21,974,678 (National Population Commission (NPC, 2006).

Southwestern Nigeria is predominantly an agrarian area with rainforest and derived savanna vegetation. Agriculture is the major source of livelihood of the inhabitants of the zone. Common tree crops in the area include cocoa, oil palm and cashew, while arable crops such as yam, cassava, maize and rice also thrive well in the zone. The vegetation of this zone is mainly dictated by rainfall pattern which ranges from 1,300mm annual mean in Oyo and Osun states to 1,900mm in Delta and Edo states. The vegetation zone includes mangrove, rain forest and derived savannah.

Study Population: Women of child bearing age with at least one child who registered at primary health centre for ante natal care constitute the population for the study.

Sampling Procedure and Sample Size

Multi-stage sampling technique was used to draw the sample for the study. From the six States in the southwest; three States (Oyo, Ekiti and Osun) were randomly selected. Purposive sampling was used based on available and functioning primary health centre to select four LGAs from the 33 LGAs in Oyo State, three LGAs from Osun with 30 LGAs and three LGAs from the 16 LGAs in Ekiti States. A sampling frame of women who registered for ante natal at the primary health centre domicile in the selected LGAs was developed and systematic random sampling technique was used to select 50% of the average attendance of women at clinic days (240 women) based on probability proportionate sample to size with 90, 75, and 75 women interviewed from each of the States respectively. A total of 240 women were therefore interviewed.

Results and Discussions

Descriptive Report of Respondents' Socio-economic Characteristics

Table 1 indicates majority of the women are within the middle age range of 31-40 years across the States, while the modal class was 31 – 40 years (63.75%) with the mean age of 33 years. Of this number, 65.56%, 56.00% and 57.33% represent Oyo, Ekiti and Osun States respectively. This proportion revealed that most of the respondents are bearing children when still safe for them. The percentage of old respondents (>50 years) is relatively small at about 0.42% of

the total. In a related study by Upadhyay, Kumar, Raghuvanshi and Singh (2011), it was also reported that women in their child bearing age are of average age of 31.23 ± 7.03 . The finding is also similar to those of Bukusuba, Kikafunda, and Whitehead (2010) and Mwangome (2006).

The profile of the respondents by marital status indicated in Table 1 shows that 69.58% of them were married, 20.00% were single parents, and 6.67% were divorced. It is imperative from the finding that the respondents have social obligation to provide their household nutrition and dietary needs. This finding agrees with the Nigeria Social Marketing effectiveness study (2006), who submitted that married people are likely to support their family with nutrition balance and dietary requirements because they consider the role as their social responsibility. The study also reveals that 12.92% completed primary education, 28.33% had secondary while 50.41% had tertiary education. Also, data across the States revealed that Oyo (60.00%), Ekiti (38.67%) and Osun (50.67%) had tertiary education. This shows that majority of the respondents are literate. This trend shows the effect of the Universal Free Primary Education of the 1980's and the current Universal Basic Education of the 1990s in the area of study. The advantage of this is that adoption and utilization of ideas and technologies inherent in the nutrition intervention will be easily diffused among the respondents. Upadhyay, Kumar, Raghuvanshi and Singh (2011), reported that a high proportion of women could read and write relevant information on nutrition.

The study also shows that more respondents were civil servants, followed by artisans, ranging from hairdressing, tailoring to agricultural produce processors. The implication is that they will be able to support their households and cater for their children by providing good and adequate nutrition required for growth and development. Their level of education provides them the opportunity to be employed into government work force as teachers, clerks, nurses, health attendants and cleaners. CTA (2006) annual report indicated that empowered household has greater potentials to cater for their family than those without jobs. Osilesi, *et al* (1994) in the study of national nutrition monitoring, confirms that occupation is a determinant of good dietary intake among households in Nigerian

communities. It therefore implies that occupation that generates more income is expected to facilitate households to meet dietary needs.

The result (Table 1) indicates that the respondents also engaged in several other income-generating activities. These included farming, petty trading, farm produce processing and teaching. However, majority of the respondents (67.53%) were involved in petty trading when compared to other income generating activities. This is also reflected across the States; Oyo (73.33%), Ekiti (62.67%) and Osun (65.33%). Babatunde (2009) reported that most rural families have truly multiple income sources (Babatunde, 2009). The implication of this finding is that, to meet household dietary needs, other sources of income are required.

The respondents' profile of monthly income in Table 1 shows across the states under investigation that barely (43.33%) earned ₦10,000 - ₦20,000 monthly and (32.08%) take home was less than ₦10,000 monthly. The implication of this is that income can significantly influence the dietary intake. There is high tendency for a better dietary intake when a household generates more income. Olawoye, (2003) in a keynote address delivered at the annual congress of Nigerian Rural Sociological Association titled Food Security and Rural Development in a Deregulated Economy submitted that rural households can achieve food security if they are empowered to generate more income through provision of basic amenities to sustain the rural life style

In terms of the respondents' religious inclination, majority of them are Christians. This is about 71.66% of the total. Islam has 15.42%, while the traditionalists constituted a mere 0.83% of the respondents. Religious belief has no influence on the nutrition dietary intake in the study area. Adeniran (2000) in a similar study of the effect of communication media on immunization programme in Oyo State asserted that religion is not a significant feature for communication media on immunization programme.

Table 1 shows that majority of the respondents (65.42%) have between 1 and 3 children, (33.75%) 4-6, while only (0.84%) have between 7 and 10 children. This is a clear pointer that women will need to foster more proactive nutritional intervention that will help the children

to maintain and sustain good dietary intake to ensure their growth and development. UNICEF, (2006) in an evaluation of social marketing campaign of vitamin 'A'-fortified food of the fortification programme in Nigeria, found that families with fewer children are more committed to their family with respect to household dietary intake. Ojule, *et al* (1998) asserted that in a traditional southwestern Nigeria community, uncontrolled child birth is responsible for negative inadequate consumption of minerals and vitamins which consequently result to nutrient deficiency related diseases among households. The implication is that the higher the number of children to cater for within a household, the greater the responsibility required meeting their dietary needs.

Table 1 shows that the highest (52.08%) has 4-6 family size, 7-10 family size (25.83%) and 22.08% are with 1-3 family size. The mean family size is five which clearly indicates fairly high dependency ratio. This however, may be responsible for poor feeding habit considering

income size and family size. The implication is that the respondents have more responsibility to make their family healthier through the provision of good dietary intake. UNICEF, (2006) in an evaluation of social marketing campaign of vitamin 'A'-fortified food fortification programme in Nigeria, found that family size of less than six are more committed to their family with respect to household dietary intake. Results also reveal that majority of the respondents (80.83%) claimed not to belong to any group, while (19.17%) were members of one group or the other, among this category, (69.57%) belong to community-based association group and (30.43%) were in religious-based groups. Group dynamics have been found to be instruments of change in the recent time. Membership of groups may influence the adoption behaviour of the rural households, as in the case of high level of adoption of agricultural innovation among co-operators was reported by Adeyeye, (1986) and Ladele, (1990).

Table 1: Socio-economic Characteristics of Child Bearing Women

Variable Descriptions	Oyo n = 90		Ekiti n = 75		Osun n = 75		All Respondents n = 240	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Age (Years)								
<20	3	3.3	2	2.7	1	1.3	6	2.5
21-30	27	30.0	22	29.3	31	41.3	80	33.3
31-40	59	65.6	51	68.0	43	57.3	153	63.8
>50	1	1.1	0	0.0	0	0.0	1	0.4
Marital Status								
Divorced	9	10.0	2	2.7	5	6.7	16	6.7
Single	20	22.2	9	12.0	19	25.3	48	20.0
Parent/Separated	3	3.3	4	5.3	2	2.7	9	3.8
Widowed	58	64.4	60	80.0	49	65.3	167	69.5
Married								
Education Attainment								
No formal education	2	2.2	5	6.7	3	4.0	10	4.2
Pry (uncompleted)	2	2.2	5	6.7	3	4.0	10	4.2
Pry (completed)	11	12.3	10	13.2	10	13.3	31	12.9
Secondary school	21	23.3	26	34.7	21	28.0	68	28.3
Tertiary	54	60.0	29	38.7	38	50.7	121	50.4
Primary occupation								
Trading	13	14.4	4	5.3	6	8.0	23	9.6
Artisan	29	32.2	30	40.0	31	41.3	90	37.4
Civil service	46	51.1	29	38.7	31	41.3	106	44.2
Farming	2	2.2	12	16.0	7	9.3	21	8.8

Table 1 Contd.

Variable Descriptions	Oyo n = 90		Ekiti n = 75		Osun n = 75		All Respondents n = 240	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Other income generating activities								
Petty Trading	66	73.3	47	62.7	49	65.3	162	67.5
Artisan	5	5.6	3	4.0	7	9.3	15	6.3
Civil service	2	2.2	11	14.6	10	13.3	30	12.5
Teaching	16	17.8	12	16.0	6	8.0	31	12.9
Farming	1	1.1	2	2.7	3	4.0	2	0.8
Estimated monthly income (Naira)								
< 10,000	29	32.2	27	28.0	21	28.0	77	32.1
10,000 – 20,000	41	45.6	32	42.7	32	42.7	104	43.3
21,000 – 40,000	10	11.1	6	8.0	12	16.0	28	11.7
40,000 – 50,000	3	3.3	4	5.3	1	1.3	8	3.3
50,000 – 60,000	1	1.1	2	2.7	3	4.0	6	2.5
>60,000	6	6.7	4	5.3	6	8.0	17	7.1
Religion								
Christianity	71	78.9	64	85.3	41	54.7	172	71.7
Islam	19	21.1	10	13.3	33	44.0	37	15.4
Traditional	0	0.0	1	1.3	1	1.3	2	0.8
Family size								
1-3	21	23.3	13	17.3	19	25.3	53	22.1
4-6	41	45.6	45	60.0	39	48.0	125	52.1
7-10	28	31.1	17	22.7	17	22.7	62	25.8
Number of children								
1-3	69	76.7	49	65.3	39	52.0	157	65.4
4-6	21	23.3	26	34.7	34	45.3	81	33.8
7-10	0	0.0	0	0.0	2	2.7	2	0.8
Group Membership								
Yes	13	14.4	14	18.7	19	25.3	46	19.2
No	77	85.6	61	81.3	56	74.7	194	80.8
Group Types								
Association	8	61.5	10	71.4	14	73.7	32	69.6
Clubs	5	38.5	4	28.6	5	26.3	14	30.4

Source: field survey, 2009

Respondents' Knowledge of Child Nutrition

The result of respondents across the States in Table 2 reveals that there was a knowledge gap in nutrition with respect to dietary intake. About half of respondents (45.4%) across the three States

scored between 0 – 10 points. The implication of this finding points to the fact that there is low level of knowledge of Vitamin A rich foods, protein, minerals, fat and oil among the respondents. Therefore; it is paramount to carry out awareness campaign in this respect particularly at the community levels. This will ensure child nutrition education at the

grassroots and promote dietary change that will accommodate consumption of vitamin rich food, thereby reducing children population afflicted by vitamin A deficiency and iodine deficiency disorders. This involves the use of multiple communication channels that will elicit better nutrition behavioural change.

Table 2 Distribution of Respondents' Child Nutrition Knowledge

State	Child nutrition knowledge			Mean score
	Knowledge score	Frequency	%	
Ekiti n=75	0 – 10	35	46.7	25.85
	11 – 21	21	28.0	
	22 – 31	07	09.3	
	32 – 41	07	09.3	
	42 – 51	05	06.7	
Osun n=75	0 – 10	33	44.0	26.53
	11 – 21	21	28.0	
	22 – 31	11	14.7	
	32 – 41	07	09.3	
	42 – 51	03	04.0	
Oyo n=90	0 – 10	41	45.6	36.49
	11 – 21	24	26.7	
	22 – 31	19	21.1	
	32 – 41	04	04.4	
	42 – 51	02	02.2	
Across the three States n=240	0 – 10	109	45.4	22.76
	11 – 21	67	27.9	
	22 – 31	38	15.8	
	32 – 41	20	08.3	
	42 – 51	06	2.5	

Source: field survey, 2009

Respondents' Child Nutrition Attitude

The data obtained across the States in Table 2 reveals that respondents' child nutrition attitude was low, with majority (45.5%) of respondents scoring between 41 and 76 points with the mean score of 119.7 respectively. It is clear from this result that respondents did not have favourable attitude to child nutrition.

Exposure to nutrition messages is therefore necessary in order to develop good attitude to child nutrition. Neumark-Sztainer, (2003) in social marketing intervention of adolescent girls aged 14-16 with focus on overweight/obese girls and those "at risk" of becoming overweight reported high favourable disposition to social marketing mix of price, product, position and promotion.

Table 3 Distribution of Respondents' Attitude to Child Nutrition

State	Child nutrition attitude before the intervention			Mean score
	Score	frequency	%	
Ekiti n=75	41 - 76	33	44.0	133.61
	77 - 112	21	28.0	
	113 - 148	11	14.7	
	149 - 184	06	08.0	
	185 - 220	04	05.3	
Osun n=75	41 - 76	35	46.7	132.33
	77 - 112	25	33.3	
	113 - 148	09	12.0	
	149 - 184	05	6.7	
	185 - 220	01	1.3	
Oyo n=90	41 - 76	38	42.2	128.70
	77 - 112	25	27.8	
	113 - 148	14	15.6	
	149 - 184	09	1.0	
	185 - 220	04	4.44	
Across the three States n=240	41 - 76	106	45.46	127.67
	77 - 112	71	28.10	
	113 - 148	33	13.22	
	149 - 184	21	9.09	
	185 - 220	09	4.13	

Source: field survey, 2009

Respondents' Child Nutrition Practice

Data obtained across the States as indicated in Table 3 show that respondents who scored between 0 and 4 form the majority (51.8%). This implies that the respondents exhibited poor child nutrition practice, which could be attributed to

low knowledge and attitude of child nutrition. The introduction of child nutrition messages on radio, video and chart in Oyo, Osun and Ekiti States respectively can effectively improve the consumption of minerals and vitamin rich-food of the respondents.

Table 3 Distribution of Respondents' Child Nutrition Practices

State	Child nutrition practice		Mean score
	Score	%	
Ekiti n=75	0-4	50.6	11.77
	5-9	28.0	
	10-14	14.7	
	15-19	6.7	
Osun n=75	0-4	50.6	10.73
	5-9	24.0	
	10-14	16.0	
	15-19	09.3	
Oyo n=90	0-4	52.2	14.02
	5-9	32.2	
	10-14	12.2	
	15-19	33.3	
Across the three States n=240	0-4	51.3	13.27
	5-9	28.3	
	10-14	14.2	
	15-19	6.3	

Source: field survey, 2009

Differences in respondents' Nutrition knowledge, attitude and practices across the study area

Results on Table 4 show that there is a significant difference in nutrition knowledge ($F = 1.341$; and $p = 0.134$) while respondents' nutritional attitude ($F = 1.451$; and $p = 0.043$) and practice ($F = 1.251$; and $p = 0.123$) reveals that there is no significant difference across Oyo, Osun and Ekiti States. The result therefore implies that a nutritional attitude and practice of women across South-western Nigeria is the same. This could be an indication of similarity these two States share as a result of geographical

location and cultural background, as well as similar policy environment, which tend to affect their attitude and practice the same way.

A post Hoc Test of multiple comparison of the States of Oyo, Ekiti and Osun, (in pairs) on the basis of their knowledge of nutrition show that knowledge of nutrition was significantly higher in Oyo than Ekiti (Mean difference = 3.24, $p = 0.018$) and Osun States (Mean difference = -5.00, $p = 0.004$). The study however showed that Ekiti and Osun States were not significantly different in their knowledge of nutrition in the study area. In order to allow knowledge of nutrition to translate into practice, there should be a follow up programme, incorporated into intervention programmes aimed at influencing people's knowledge, attitude and eventual practice.

Table 4a: Analysis of variance on the difference among the States in their knowledge, attitude and practice of Child nutrition

Variable		SS	Df	Mean square	F	Sig.
knowledge	Between Groups	45.380	2	34.74	1.451	0.043 (S)
	Within Groups	18274.176	237	38.15		
	Total	14634.555	239			
Attitude	Between Groups	47.380	2	30.34	1.341	0.134 (NS)
	Within Groups	18974.123	237	45.65		
	Total	14534.555	239			
Practice	Between Groups	60.380	2	30.19	1.251	0.123 (NS)
	Within Groups	15174.176	237	49.751		
	Total	15234.555	239			

Source: field survey, 2009

Table 4b: Post Hoc test of difference in respondents' knowledge of nutrition in the sampled States of southwestern Nigeria

States	Mean	Mean difference	P	Sig.
Oyo	165.99	3.24	0.018	S
Ekiti	162.75	-3.24		
Oyo	165.99	5.00	0.004	S
Osun	160.99	-5.00		
Ekiti	162.75	1.76	0.054	NS
Osun	160.99	-1.76		

Conclusions

The study concludes that low level of knowledge among women in Southwestern Nigeria could have given rise to unfavourable attitudes to nutritional practices among them. However, attitude is the driving force for the adoption and non-adoption of a particular innovation. Therefore, unfavourable attitude could be the reason behind low level of nutrition practices among women in Southwestern Nigeria. The low level of nutrition practice among women across Southwestern Nigeria is an indication that respondents lacked basic information on the importance of child nutritional practices. With adequate access to information, women would have good knowledge, as well as form an informed attitude towards child nutrition which is expected to influence their child nutrition practices.

Recommendations

Based on the empirical findings obtained from this study, the following recommendations are made.

- Designed agricultural or nutrition intervention programme should include follow up component to ensure sustainable nutritional knowledge, attitude and practice.
- Government and non government agencies should establish agriculture or nutrition support centres where community members can access information that will enhance knowledge, attitude and practice in various fields.
- There is the need to influence the attitude and practice in Southwest Nigeria through series of extension training targeted towards women who are the major stakeholders in food preparation and management.

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