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Full Length Research Paper

Knowledge and practice of mothers on child survival strategies in Odeda Local Government Area, Ogun State, Nigeria

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Abstract

The knowledge and practice of mothers on child survival strategies affects the survival of a child. This study is aimed at assessing the Knowledge and Practices (KaP) of child survival strategies among mothers in Odeda Local Government Area, Ogun State (OLGA). Two-hundred mothers and their under three year's children were selected for the study. A structured questionnaire was used to obtain information on the bio-data and socio-economic characteristics of the mothers. Anthropometric measurements were taken using standard equipment. KaP of mother on child survival strategies was assessed. Data was analysed using SPSS version 20. More than half (53%) of the children were male while 47% were female. About 12% of the mothers had no formal education. More than two-third (73%) of the mothers earn less than ₦30,000 per month. About 26% of the mothers had adequate knowledge on child survival strategies while about 10% had poor knowledge. About17.6% of the mothers practice child survival strategies adequately while about 55% had poor practices. Only 10.5% of the mothers know and use Zinc tablet in the management of diarrhoea. There is a significant relationship between the knowledge and practice of child survival strategies among the mothers. Educational level of the mothers significantly affects the practice of child survival strategies (p=0.001). It can be concluded from this study that the knowledge and practice of the mothers on the use of Zinc tablet, exclusive breastfeeding, GMP and vaccination was poor.

Keywords: Child survival, Children, Mothers, Knowledge, Practice

INTRODUCTION

Child survival strategies (CSS) is defined as the concentrated efforts by governments, the United Nations, organizations, and communities to use effective, low-cost solutions to protect children from illness during their first five years of life (Concern World, 2012). These includes; Exclusive breastfeeding for the first 6 months, continued breastfeeding through the first 2 years of life, use of insecticide-treated nets for malaria prevention, micronutrient supplementation (vitamin A, zinc), complementary feeding, immunization (especially Hepatitis B, measles and tetanus) and neonatal care (clean delivery and new-born temperature management), sanitation (clean water, waste disposal), growth Monitoring and promotion, family planning, prevention of mother-to-child transmission of HIV in countries with a high prevalence of HIV through administration of an antiretroviral drug, oral rehydration therapy for diarrhoea, antibiotics for neonatal sepsis, pneumonia and dysentery management, anti-malarial drug treatment (UNICEF, 2014).

Sub-Saharan Africa is the region with the highest rate of child mortality. India and Nigeria account for more than a third of child deaths worldwide. Nigeria is second on maternal mortality rate in the world with girls and women dying every day from complication of pregnancy and child birth(UNESCO, 2012). The wellbeing of a child is dependent on the mother to a large extent. Women have enormous impact on their families' welfare.

The knowledge of mothers is a pre-requisite to the practice of good and healthy life. Female illiteracy

adversely affect maternal and child survival rate.It has been reported that educational status of the mothers is a key factor in reducing child and infant mortality (Sanusi and Gbadamosi, 2009).Hence, this study is aimed at assessing the knowledge and practices of child survival strategies among nursing mothers in Odeda Local Government, Ogun State

METHODOLOGY

The study was carried out in Odeda Local Government Area of Ogun State. This study is descriptive and cross-sectional in design. Multi-stage sampling technique was employed in this study. Two wards were randomly selected from the ten wards in Odeda Local Government Area of Abeokuta and one community was randomly selected from each ward. Household listing was done in the two communities and 100 households with 0-3 years old child were randomly selected from each of the community. All together 200 respondents were selected for this study.

Nursing mothers and their children (0-3 years) with no reported chronic or acute illness are the respondents for this study. Those who were unwilling to participate in the study and household without an under three year old child were excluded from this study. A semi-structured questionnaire was used to elicit information from the mothers of under three years children in the selected households. The questionnaire asked questions on bio-data, socio-economic, knowledge and practice of the respondents on child survival strategies.

Anthropometric measurement

Anthropometric measurement of the children and the mothers were taken. An infantometer was used to measure the length (children that are not able to stand) and heightometer to measure the height (children that are able to stand) of the children and mothers. A sensitive calibrated bathroom weighing scale was used to measure the weight of the mothers and their children. Body Mass Index (BMI) of the mothers was calculated as weight (kg) divided by the square of height in meters.

Mid upper arm circumference (MUAC) of the children that were 6 months and above was measured using shakir's strip and they were classified into adequate nutritional status(>13.5cm), mild acute malnutrition (12.5 – 13.4cm), moderate acute malnutrition (11.5 – 12.4cm) and severe malnutrition (<11.5cm).

Data analysis

WHO anthro (2005) software was used for analysis of the anthropometric data. Using the WHO Z- Score categorization, height for age (stunting), weight for age (underweight) and weight for height (wasting) was categorized into adequate (-2 < z-score < +2), moderately malnourished (-3 < z-score < -2) and severely malnourished (z-score < -3).

Statistical Package for Social Sciences (SPSS) version 20 was used for statistical analysis. Descriptive statistics like frequencies, percentages, mean and standard deviation was done. Chi-square test was used to find association between variables.

Knowledge score

Knowledge of nursing mothers on Child Survival Strategies was based on correct answers to questions. An index was created and a score below 50% was categorized as inadequate knowledge, between 51% and 69% was categorized as moderate knowledge and a score above 70% as adequate knowledge (Seema, 2013).

Practice score

Practice of nursing mothers on Child Survival Strategies was based on correct practice of child survival strategies.An index was created and a score below 50% was categorized as inadequate practice, between 51% and 69% was categorized as moderate practice and a score above 70% as adequate practice (Seema, 2013).

RESULTS

Knowledge of mothers on child survival strategies

Knowledge of the mothers on child survival strategies was assessed. About a quarter (26%) of the mothers had adequate knowledge, 64% had moderate knowledge and about one –tenth (9.5%) of the mothers had poor knowledge on child survival strategies.

Practice of mothers on child survival strategies

Practice of the mothers on child survival strategies was assessed. Less than a quarter (17.6%) of the respondents had adequate practice, about 28% had moderate practice and more than half (54.9) had poor practice of child survival strategies. More than a quarter (33%) of the respondents initiated breast milk before one hour while more than half (67%) initiated breast milk after one- hour of delivery. About three quarter (73%) of the mothers fed their children with colostrum while 27% of the mothers didn't feed their children with colostrum. In this study only 24.6% of the respondents practiced

Table 1: Bio-data of the respondents

Variable	Frequency	percentage
Gender of Child		
Male	106	53
Female	94	47
Total	200	100
Marital Status of mothers		
Single	12	6.0
Married	178	89.0
Separated	10	5.0
Total	200	100
Ethnicity		
Yoruba	171	85.5
Hausa	8	4.0
Igbo	8	4.0
Others	13	6.5
Total	200	100
Family Type		
Monogamous	163	81.5
Polygamous	37	18.5
Total	200	100
Religion		
Christianity	137	68.0
Islam	61	30.5
Others	2	1.0
Total	200	100
Household size		
1 – 3 members	78	39.0
4 – 6 members	91	45.5
7 members and above	31	15.5
Total	200	100

Table 2: Socio-economic characteristics of the respondents

Variable	Frequency(n)	Percentage(%)
Educational level		
No formal education	23	11.5
Primary education not completed	11	5.5
Primary education completed	28	14.0
Secondary education not completed	27	13.5
Secondary education completed	41	20.5
OND/NCE	43	21.5
HND/BSc	27	13.5
Total	200	100
Occupation		
Full-time house wife	29	14.5
Trader	76	38.0
Artisan	34	17.0
Civil servant	58	29.0
Farmer	3	1.5
Total	200	100
Mother's Income		
< ₦10,000	88	44.0
₦11,000 - ₦30,000	59	29.5
₦31,000 - ₦60,000	29	14.5
₦61,000 - ₦100, 000	17	8.5
>₦100,000	7	3.5
Total	200	100

exclusive breastfeeding while about 75.4% of the mothers didn't practice exclusive breastfeeding for 6

Table 3: Relationship between knowledge and practice of child survival strategies among mothers

	Practice					
	Adequate N (%)	**Moderate n (%)**	**Poor n (%)**	**Total n(%)**	**X^2**	**p-value**
Knowledge						
Adequate	27(13.5)	18(9.0)	6(3.0)	51(25.5)		
Moderate	8(4.0)	37(18.5)	84(42.0)	129(64.5)		
Poor	0(0)	0(0)	20(10)	20(10)		
Total	35(17.5)	55(27.5)	110(55)	200(100)	43.238	0.001

Table 4: Nutritional Status of the Children and mother

Nutritional status	**Frequency (N)**	**Percentage (%)**
Height for age		
Adequate	138	69.3
Moderately stunted	35	17.2
Severely stunted	27	13.5
Total	200	100
Weight for age		
Adequate	158	79.0
Moderately underweight	25	12.5
Severely underweight	10	5.0
Overweight	5	2.5
Obese	2	1.0
Total	200	100
Weight for height		
Adequate	162	81.3
Moderately wasted	15	7.7
Severely wasted	10	4.5
Overweight	7	3.3
Obese	6	3.2
Total	200	100
MUAC		
Adequate Nutritional Status	62	48.1
Mild Acute Malnutrition	35	27.1
Moderate Acute Malnutrition	32	24.8
Severe Acute Malnutrition	0	0
Total	129	100
BMI of Mothers		
Normal		71
Underweight		7
Overweight		18
Obese		4

months

Almost half (47%) of the mothers completed immunization for their children, 54% didn't complete their child's immunization and about 2.7% didn't take their chid for immunization at all. The use of zinc tablets by the respondents for the management of diarrhoea was 10.6% while 89.5% 0f the respondents said they have never heard about the use of zinc in treatment of diarrhoea.

More than two-third (81.4%) of the respondent gave their child vitamin supplements and about 18.6% of the mothers didn't give their child vitamin supplementation. Eighty-four percent of the mothers said their child do sleep under insecticide treated mosquito net (ITN) while 16 % of the mothers said their children don't sleep under (ITN).

The prevalence of stunting, wasting and underweight were 30.7%, 12.2% and 17.5% respectively. Using the Mid Upper Arm Circumference index for malnutrition among children, it was observed that 27.1% of the children assessed were acutely malnutrition while 24.8% were with moderate acute malnutrition. There was no case of severe acute malnutrition. Majority (71%) of the mothers had adequate nutritional status based on their body mass index. Seven percent of them were

Table 5: Nutritional status of mother and children

Variable	Body mass index: Normal n (%)	underweight n(%)	overweight n(%)	obese	Total	p-value
Height for age						
Adequate	10(5)	96(48)	26(13)	6(3.5)	138(69)	0.279
Moderate	4(2)	21(10.5)	8(4)	0(0)	35(17.5)	
Severe	1(0.5)	24(12)	2(1)	0(0)	27(13.5)	
Total	15(7.5)	141(70.5)	36(18)	6(3.5)	200(100)	
Weight for age						
Adequate	12(6)	124(58)	16(8)	4(2)	158(79)	
Moderate	2(1)	12(6)	10(5)	2(1)	25(12.5)	
Severe	1(0.5)	4(2)	5(2.5)	0(0)	10(5)	
Overweight	0(0)	1(0.5)	4(2)	0(0)	5(2.5)	
Obese	0(0)	0(0)	1(0.5)	1(0.5)	2(1)	
Total	15(7.5)	141(70.5)	36(18)	7(3.5)	200(100)	0.001
Weight for height						
Adequate	12(6)	118(58)	28(14)	3(1.5)	162(81)	
Moderate	2(1)	13(6.5)	0(0)	0(0)	15(7.5)	
Severe	1(0.5)	5(2.5)	2(1)	1(0.5)	9(4.5)	
Overweight	0(0)	4(2)	3(1.5)	0(0)	7(3.5)	
Obese	0(0)	1(0.5)	2(1)	3(1.5)	6(3)	
Total	15(7.5)	141(70.5)	36(18)	7(3.5)	200(100)	0.036
Mid upper arm circumference (MUAC)						
Adequate	1(0.8)	42(32.8)	16(12.5)	2(1.6)	62(47.7)	
Acute	1(0.8)	28(21.9)	5(3.9)	1(0.8)	35(27.3)	
Moderate	7(5.5)	22(17.2)	1(0.8)	2(1.6)	32(25)	
Total	9(7)	92(71.9)	22(17.2)	5(3.9)	128(100)	0.003

Table 6: Relationship between practice of child survival strategies, educational level and nutritional status of child

Variables	Educational level X^2	p-values	MUAC X^2	p-value	mothers' income X^2	p-value
Child survival strategies						
Breastfeeding initiation	47.502	0.001	-	-	28.192	0.001
Colostrum feeding	26.773	0.001	-	-	-	-
Exclusive feeding	24.122	0.001	-	-	-	-
Use ORT	63.214	0.001	11.819	0003	30.834	0.001
Use of Zinc	54.655	0.001	-	-	-	-
Growth monitoring	75.646	0.001	-	-	31.833	0.001
Vitamin Supplementation	37.342	0.001	17.536	0.002	-	-
Use of ITN	26.723	0.001	24.057	0.001	-	-
Vaccination	-	-	28.462	0.001	-	-

underweight and 18% were overweight. Four percent of the mothers were Obese

Factor associated with practice of child survival strategies among the respondents

Table 6 shows that the practice of Child Survival Strategies is significantly associated with the nutritional status of the children. The educational level of the mothers had significant relationship with early introduction of breast milk, colostrum feeding, exclusive breastfeeding, the use of oral rehydration therapy for the treatment of diarrhoea, use of zinc tablets for treatment of diarrhoea, the use of insecticide treated nets, vitamin supplementation and also growth monitoring. This study revealed that there was a significant relationship between the mothers' income and growth monitoring, the use of oral rehydration therapy and early initiation of breast milk to infants within one hour

DISCUSSION

Studies have shown that few mothers had adequate knowledge with a lot of them having moderate or

incomplete knowledge on the key child survival strategies. Early initiation and exclusive breastfeeding (EBF) for six months has been found to be the key to child survival and quality care(UNICEF; WHO, 2014).Early initiation of breastfeeding serves as the starting point for the continuum of care for the mother and new born that can have long-lasting effects on health and development (WHO, 2008). It was observed that over a quarter (33%) of the respondents initiated breast milk before one hour in this study and three quarter (73%) of the mothers fed their children with colostrum. Awogbenja and Ugwuona (2010) reported that 28% of the mothers in Nasarawa state also gave their infants' breast milk before one hour. According to National Population Commission Report (2014), the prevalence of early initiation of breast milk before one hour in Ogun State was 30.8%. Early initiation of breast milk within one-hour of delivery strengthens the life long bond between mother and child and lays the foundation for optimal feeding (EBF),

The World Health Organisation defined exclusive breastfeeding as the period when an infant receives only breast milk from its mother or a wet nurse or expressed breast milk and no other liquid or solids with the exception of drops of syrups consisting of vitamins, mineral supplements or medicines(WHO, 2009). In this study only 24.6% of the respondents practiced exclusive breastfeeding which is higher than the prevalence of exclusive breastfeeding of 17% reported by the Nigeria Demographic and Health Survey (NPC, 2014). The improvement in the result could be as a result of improved sensitization by the government and health professionals to the general public on the importance of EBF. Breast feeding has been found to protect against diarrhoea, respiratory tract infections, bacterial infections and improve response to vaccines (Sanusi and Gbadamosi, 2009).

Immunization has turned many childhood diseases around by rendering one immune to a disease (Tagbo et al., 2013). Sanusi and Gbadamosi, (2009) reported that Nigeria's immunization rate is among the poorest. The result of study shows that less than half (47.4%) of the respondents had completed the immunization schedule corresponding to the age of their children at the time of this study. In Kaduna State, Oladipo and Ejembi (2013) reported that 23% of the nursing mothers completed the immunization schedule for their children. In contrast, a study Enugu State, reported that 95.2% of the mothers took their children to health facilities for routine immunization (Tagbo et al., 2014). There is need to raise more public awareness on the benefit of completing immunization schedule for a child and danger of incomplete immunization. The government should also ensure adequate supply of the vaccines at each stage in other to ensure full immunization for the children.

Diarrhoea is defined as the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual). Less than half (48.7%) of the respondents used Oral rehydration therapy as a home management of diarrhoea. In a study conducted in Ibadan on the knowledge and use of Oral rehydration therapy among mothers of under-five children, it was reported that 49.5% of the mothers used oral rehydration solution to manage diarrhoea among their children (Agbolade et al., 2015). The knowledge and practice of a mother on safety hygiene affect the growth and well-being of a child. A child with diarrhoea is usually menaced with secondary infection and the nutritional status of such child is compromised. A study in Zaria, reported a higher degree of malnutrition in children with diarrhoea when compared to children without diarrhoea (Alegbejo, 2011). It is important to emphasize the importance of continued feeding in addition to the use of ORS to mothers.

Zinc supplementation reduces severity, duration and recurrence of childhood acute diarrhoea. The use of Zinc supplementation is an adjunct therapy to ORT in the management of diarrhoea (Omuemu et al., 2012). The use of zinc tablets by the respondents for their children in the management of diarrhoea was 10.6%. It is important to advocate the use of zinc tablets to mothers for proper management of diarrhoea.

Growth Monitoring and promotion (GMP)is vital for early detection of growth faltering and illness in children (Sanusi and Gbadamosi, 2009). The result of this study shows that only 48.5% of the mothers visit the hospital regularly for GMP. Meanwhile, in a study carried out at Ibadan to know if the knowledge and practices of mothers on Child Survival Strategies affect their children's nutritional status, it was reported that only 7.5% of the mothers went to hospitals for the growth monitoring of their children (Sanusi and Gbadamosi, 2009). The low participation of GMP among mothers could be because most of them don't understand the growth chart and relevance of GMP to a child's development and nutrition. The advantages of GMP on children include reduced child mortality and improve nutritional status of the participating child.

Vitamin A deficiency is among the four micronutrient deficiency of public health significance. Among the intervention to combat Vitamin A deficiency are supplementation, diet diversification and fortification. Vitamin A supplementation has been said to reduce mortality by 23 % (WHO, 2004). From this study, 73.5% of the respondents claimed to have collected Vitamin A supplements for their children. Steve-Edemba (2014), in his assessment of vitamin A status of under-five children in Abuja, Nigeria reported that 84.5% of the children were given vitamin A supplements. According to National Population Commission (2014) statistics, it was reported that the use of vitamin supplements by nursing mothers among under-five children in Nigeria was forty-one percent.

Malaria is a vector disease that is endemic in most Sub-Saharan Africa especially Nigeria of which pregnant

women and under five children are at a high risk because their anti-malaria immunity are very low (Quattara et al., 2011). Insecticide-treated mosquito nets (ITNs) used for protection against mosquito bites has proven to be highly effective and cost-effective intervention against malaria. ITN has been found to reduce 20% of morbidity and mortality in under-five children within two years of use in Kenya (Atieli et al., 2011). More than 80% of the respondents were using insecticide treated nets. In a study carried out in the North Western part of Nigeria, the use of insecticide treated nets by the respondents was reported to be 57% (Sani et al., 2014). However, in a study conducted in Anambra, South East, Nigeria, it was reported that 44% of the respondents used insecticide treated nets of which only 23% used it always and 23% used it sometimes (Solomon et al., 2014). National Population Commission (2014) statistics revealed that 55% of households have at least one mosquito net and 50% have at least one insecticide-treated mosquito net (ITN).

Malnutrition at an early age (window of opportunity)can cause mental and physical retardation during childhood which can alter productivity in adulthood (Acharya *et al.,* 2015). The result from this study is close to the prevalence reported by NDHS, 2013 where stunting was 37%, underweight 29% and wasting 18% (NPC, 2014). Sanusi and Gbadamosi (2009) reported that the prevalence of stunting, underweight and wasting was 68%, 63.3% and 22% respectively in Ibadan. This result shows that there hasn't been much improvement in the nutritional status of under- five despite interventions. This could be as a result of non-compliance to the practice of child survival strategies and inappropriate infant feeding practices by mothers, which is a contributing factor to the prevalence of malnutrition

The prevalence of underweight was high among the mothers and stunting among the children. There was no significant relationship between the mothers' nutritional status and stunting among the children. Akorede and Abiola, (2013) reported a significant relationship between the mother's nutritional status and the child's nutritional status. Studies have shown that maternal nutrition can influence the risk of stunting in child and obesity in adulthood (Steyn et al., 2011).

The result of this study shows that the use of ORT, use of ITN, vaccination and Vitamin A supplementation affects the nutritional status of children. The effect of ORT use on the nutritional status shows that it is of utmost importance in the treatment of diarrhoea by helping to prevent dehydration. Also, the impact of infection such as malaria and other preventable diseases on the nutritional status of a child cannot be over-emphasized since infection and diseases causes' loss of appetite and lower immunity. The result of this study is similar to a study in Uyo, Eastern Nigeria which shows that the practice of Child Survival Strategies was significantly related with wasting among the children (Abasiattai et al., 2014).

This study revealed that the educational level of a mother is a big determinant of their practices of child survival strategies. Studies have shown that educational status of the mothers is significantly associated with their practice of exclusive breastfeeding (Lucen et al., 2012; Sahar et al., 2014). However, Ukegbu et al., (2011) reported that there was no significant relationship between mother's education and practice of exclusive breastfeeding. This result is not unexpected since female education has been identified as an important child survival strategy and is probably one of the most important factor that determinesthe acceptance and utilization of health practices in developing countries.

This study revealed that mothers' income significantly affected growth monitoring practices, the use of oral rehydration therapy and early initiation of breast milk within one hour after delivery. A study among mothers in Nigeria and Ghana reported a similar result that there is a significant relationship between the Socio-economic status of the mothers and early initiation of breast milk (Adeyinka et al., 2008). This could be due to the fact that mothers will need money for the purchase of oral rehydration salt either the ready to use type or the home made ones and money will be needed by the mothers for transportation to the clinics for routine GMP.

However, there was no significant relationship between the Socio-Economic status of the mothers and colostrum feeding, exclusive breastfeeding, the use of zinc tablets in the management of diarrhoea, the use of insecticide treated nets, and vitamin supplementation.

This could be because the practice of colostrum feeding and exclusive feeding does not need the mothers' purchasing power. Also the knowledge of the mothers on the use of zinc tablet in the management of diarrhoea is low which could be a contributing factor to the reason for non-use and purchase by mothers.

However government interventions on the distribution of ITN and vitamin A supplementation may have reduced the mother's purchasing power for this ITN and vitamin A supplements.

It can be concluded from this study that the knowledge of the mothers on each of the child survival strategies (CSS) is high but there practice is low. It is important that enlightenment on each of these strategies should be continuous and persistence since transformation of a new knowledge to practice takes time.

REFERENCES

Abasiattai MA, Etiobong AE, Eno N, Ukeme EE (2014). Knowledge and practice of exclusive breastfeeding among antenatal attendees in Uyo, Southern Nigeria. Gaziantep Med J Vol. 20(2):130-135

Acharya J, Teijlingen E, Murphy J Hind M (2015). Study on Nutritional Problems in Preschool Aged Children of Kaski District of Nepal. JMRH.Vol 1. Numb 2. Pp. 97-118

Adeyinka T, Falaye A, Aremu O, Adedeji T (2008). A Hospital-Based Assessment of Breast-Feeding Behaviour and Practices among Nursing Mothers in Nigeria and Ghana. Pakistan J. of Nutrition Vol. 7(1):165-171

Agbolade MO, Dipeolu IO, and Ajuwon AJ (2015). Knowledge and Use of Oral Rehydration Therapy among Mothers of under-five children in a Military Barrack in Ibadan, Nigeria. Afr. J. Biomed. Res. Vol 18(1):7-15

Akorede JQ, Abiola MO (2013). Assessment of Nutritional Status of Under Five Children in Akure South Local Government, Ondo State, Nigeria. IJRRAS Vol 14(3):21-29

Alegbejo JO (2011). Diarrhoeal Disease and Maternal Response To Child Survival Strategies. J. of Med. and Applied Biosciences. Vol 3: 28-36

Atieli EH, Zhou G, Afrane Y, Lee MC, Mwanzo I, Andrew K G, Guiyun Y (2011). Insecticide-treated net (ITN) ownership, usage, and malaria transmission in the highlands of western Kenya. Parasites and Vectors 4: 113.

Awogbenja, MD, Ugwuona FU (2010). Feeding Practices and Nutritional Status of Under- Five Children In Nasarawa State, Nigeria. J. Sci. Res. Vol. 6 (1):23-35

Concern Worldwide (2012). Focus on Rwanda-CHILD SURVIVAL; How can we ensure that all children survive the first five years of life? Retrieved from *http//www.who.int/countries/rwa/rwa/en*

Lucen Afrose, Bilkis Banua, Kazi R Ahmeda and Khurshida Khanoma (2012). Factors associated with knowledge about breastfeeding among female garment workers in Dhaka city. WHO South-East Asia Journal of Public Health, Vol. 1(3):249-255

National Population Commission (NPC) [Nigeria] and ICF International. (2014).Nigeria Demographic and Health Survey. Abuja, Nigeria, and Rockville, Maryland, USA, pp 32-256

Oladipo Aina and Clara Ladi Ejembi (2013).Article topic socioeconomic status of women and immunization status of under five children in northern Nigeria- a case study of poliomyelitis in Kaduna state. 1st Annual International Interdisciplinary Conference, Azores, Portugal, Ahmadu Bello University, Zaria Nigeria. pp 785-789

Omuemu VO, Ofuani IJ, Kubeyinje IC (2012). Knowledge and Use of Zinc Supplementation in the Management of Childhood Diarrhoea among Health Care Workers in Public Primary Health Facilities in Benin-City, Nigeria. Intel. J. of Child Health and Nutrition, Vol. 10(5):68-88

Quattara A, Giovanna R, Constant VA E, Jürg U, Marcel T, Mamadou D2, Benjamin G K (2011).Malaria knowledge and long-lasting insecticidal net use in rural communities of central Côte d'Ivoire.Malaria Journal, 10:288. Pg 1.

Sani AF, Emmanuel BA, Naphtali RS, Pukuma MS (2014). Malaria Prevalence and Insecticide Treated Nets Usage in Argungu (North Western Nigeria), International J. of Innovation and Scientific Research, Vol. 6(2):149-154

Sanusi RA, Gbadamosi AO (2009). Do Mothers' knowledge and practice of Child Survival Strategies affect the Nutritional Status of their children. Pakistan J. of Nutrition Vol. 8(9):1506-1511

Sahar ME, Sahar ML (2014). Knowledge , altitude and practices of Saudi women regarding breastfeeding at Makkah Al Mukkaramah. Journal of biology, agriculture and healthcare. Vol 4(9): 56-64

Seema H, Muhammed A, Raana A (2013). Knowledge and practices of mothers for complementary feeding in babies visiting pediatrics outpatient department of Jinnah hospital, Lahore. Biomedica Vol. 29(1):221-230

Solomon NU, Lawrence CI, James IM, Alphonsus CO, Nkeiruka RU (2014). Knowledge, altitude and practice of pregnant women concerning the use of insecticide treated net (ITN) in Anambra state, Sout-east Nigeria. J. of applied med. sci. Vol 4(7): 23-34

Steve-Edemba CL (2014). Assessment of Vitamin A Status of Under-Five Children in Orphanages of Federal Capital Territory, Abuja, Nigeria. Journal of Biology, Agriculture and Healthcare, Vol. 4(7):23-34

Steyn NP, Labadarios D, Nel J (2011). What is the nutritional status of the obese mothers in South Africa? Nutrition. Vol 27(9):904-911.

Tagbo BN, Uleanya ND, Nwokoye IC, Eze JC and Omotowo IB (2012). Mothers'Knowledge, Perception and Practice of childhood Immunization in Enugu. Niger J Paed, Vol. 39 (3):90-96

Ukegbu AU, Ukegbu PO, Onyeonoro UU, Ubajaka CF (2011). Determinants of breastfeeding patterns among mothers in Anambra State, Nigeria. SA Journal of Child Health, Vol. 5(4):112-116

UNESCO (2012). Key messages and data on girls and women education and literacy. Retrieved http://www.biomedcentral.com/1471-2393/11/30

UNICEF (2014). Committing to Child Survival: A Promise Renewed; Progress Report 2014 retrieved from *http//www.unicef.org/ Committing to Child Survival: A Promise Renewed; Progress Report 2014*

WHO (2004). Family and community practices that promote child survival, growth and development. A REVIEW OFTHE EVIDENCE

WHO (2008). Indicators for assessing infant and young child feeding practices Part 1 Definitions. Conclusions of a consensus meeting held 6–8 November 2007 in Washington, DC, USA retrieved from *http//www.who.int/gho/indicatorregistry*

WHO (2009). Infant and young child feeding. Model chapter for textbooks for medical students and allied health professionals

WHO, UNICEF (2014). Early initiation of breastfeeding. Retrieved from http//:www.worldbreastfeedingweek.org/2004/pdf/wbw2014-bf-newborn-brochure. Accessed 19/3/2016