International Journal of
Current Multidisciplinary Studies
Available Online at http://www.journalijcms.com
Vol. 5, Issue,09(A), pp. 1058-1065,September,2019

IJCMS

RESEARCH ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF CHILD SURVIVAL STRATEGIES (CSS) AMONG MOTHERS ATTENDING IMMUNIZATION AND ANTENATAL CLINICS AT A SPECIALIST MATERNAL HOSPITAL, ENUGU, SOUTH EAST NIGERIA

Pat Uzo Okpala[1], Anthonia Emesowum[2], Peace Njideka Iheanacho[3], Elizabeth Agunwa[4], Ugochi A Nwajuo[5], Ikenna Okpala[6] and Chisom Joy Mbadugha[7]

[1]Department of Nursing, University of Nigeria Enugu campus, Enugu state, Nigeria
[2]Imo State University, Orlu Campus, Owerri
[3]Department of Nursing, University of Nigeria Enugu Campus, Enugu state, Nigeria
[4]Department of Nursing Sciences, Evangel University, Akaeze, Ebonyi State
[5]University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu, Nigeria
[6]Department of Family Medicine, University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu
[7]Department of Nursing, University of Nigeria Enugu campus, Enugu state, Nigeria

ARTICLE INFO

Received 06th June, 2019
Received in revised form 14th July, 2019
Accepted 23rd August, 2019
Published online 28th September, 2019

Keywords:

Child survival strategies, Knowledge, Factors, Practice

ABSTRACT

The study was on knowledge, attitude and practice of Child Survival Strategies among mothers attending immunization and antenatal clinics at Mother of Christ Specialist Hospital, Enugu. The objectives of this study were set and research questions formulated from them and both were according to the purpose of the study. Data was collected using structured questionnaire, organization and analysis of data was done using simple statistical methods. The study was conducted with 180 mothers attending immunization clinic in a Specialist Hospital, Enugu. The findings of the study revealed that there was high knowledge about of Child Survival Strategies with majority of the respondents defining it as those strategies adopted to enable children live free from diseases. The mothers were found to have positive attitude towards the practice of Child Survival Strategies with the mean of the statements >2. There was practice of these strategies by the mothers but those that were found to have completed the five doses of tetanus toxoid were small. Lack of time, finance and husband's interference were the main factors limiting their practice of these strategies. Health workers should continue to educate the public on these strategies so that there would be adequate knowledge especially in the rural communities.

INTRODUCTION

Worldwide, approximately four million newborns die every year before completing one month of life, and nearly 6.6 million under-five children die yearly, translating to about 18,000 under-five deaths everyday (United nations Children's Fund, UNIICEF, 2013).Every year, also, the United Nations Children's Fund (UNICEF) publishes the State of the World's Children, the most comprehensive and authoritative report on the world's most youngest citizens. Many countries still have very high under-five mortality particularly those in WHO African region with 6 out of the 7 countries in this region having an under-five mortality rate above 100 deaths per 1000 live births (World Health Organization, WHO, 2015).

In Nigeria, it is tragic that one in seven children die before their fifth birthday (WHO, 2015).According to the Maternal and Child Health Survey by the UNICEF in 2013, Nigeria loses about 2,300 under five year olds and 145 women of childbearing age in a day, making it the second largest contributor to the under-five and maternal mortality rate in the world. The 2014 edition of The State of the World's Children Report ranked Nigeria as the country with the 9th highest under-five mortality rate in the world, with 124 under-five children dying per 1,000 live birth (UNICEF, 2014).Currently, Nigeria is

*✉ ***Corresponding author:*** **Pat Uzo Okpala**
Department of Nursing, University of Nigeria Enugu campus, Enugu state, Nigeria

being ranked 13th with highest mortality in the world, with more than one million children dying annually from preventable diseases (UNICEF, 2016).Some of the West African countries that fared better than Nigeria include Senegal and Ghana with under-five mortality rates of 60/1000 and 70/1000 live births and ranking 43 and 36 respectively (UNICEF, 2014).

Inequities in child mortality between high-income and low-income countries remain large. Improvements in child survival and health have not been equally distributed and several countries and communities continue facing unacceptably high levels of child mortality. Significant gaps remain between the richest and poorest families, both between countries and within countries. Sub-Saharan Africa and Southern Asia countries are witnessing an increase in under-five mortality despite a drop from 32 percent in 1990 to 18 percent in2012 in the rest of the world (UNICEF, 2013).The risk of a child dying before completing five years of age is still highest in the WHO African Region (81 per 1000 live births), about 7 times higher than that in the WHO European Region (WHO, 2015). In 2015, the under- five mortality rate in low-income countries was 76 deaths per 1000 live births about 11 times the average rate in high-income countries (7 deaths per 1000 live births) (WHO, 2015).

As a result of the alarming increase in under-five mortality rates in developing countries, child survival strategies were introduced. Interventions were formed with the acronym-GOBIFFFA; namely growth monitoring, oral rehydration therapy, breast feeding, immunization, family planning, female education, food supplementation, and vitamin A supplementation. The child survival strategies and interventions are in line with the then Millennium Development Goals. Progress on all eight Millennium Development Goals is vital to the survival and well-being of children, and six of the goals have targets that relate directly to children's health. According to UNICEF, estimation based on the work of inter-agency group for child mortality estimation from 1990 to 2015 in Africa showed that West Africa, of which Nigeria is part, has an insufficient progress towards achieving the MDG4 (UNICEF, 2015). This means that the under-five mortality rate is 40 percent or more, and the average annual rate of reduction is between 1.0 percent and 3.9 percent (UNICEF, 2015).To reduce child mortality in sub-Saharan Africa, and to sustain the progress achieved in North Africa, greater effort is needed to meet the health-related MDGs.

Child survival in Nigeria is threatened by nutritional deficiencies and illnesses, particularly malaria, diarrheal diseases, acute respiratory infections (ARI) and vaccine preventable diseases (VPD), which account for majority of the morbidity and mortality in childhood (WHO, 2015). Malaria has been reported as the leading cause of childhood morbidity and mortality in Nigeria (UNICEF, 2011). Consequently, reports have indicated that the available vaccines today could prevent an estimated 25% deaths of children under the age of five (Habimana, 2012)

Reducing these inequities across countries and saving more children's lives by ending preventable child deaths are important priorities. In developing countries, child mortality rates related to respiratory and diarrheal diseases can be reduced by introducing simple behavioral changes such as hand washing with soap (3). This simple action can reduce the rate of mortality from these diseases by almost 50% (3). Immunization interventions in Nigeria still do not reach 30million children despite success in reducing polio, tetanus and measles (2). Measles and tetanus still kill more than one million children under 5 each year (2). ORT has helped to reduce diarrheal deaths in children by half, saving an estimated 1 million lives annually yet more than 2million children still die from diarrhoea related causes each year. Essential newborn care including immunizing mothers against tetanus, ensuring clean delivery practices in a hygienic birth environment, drying and wrapping the baby immediately after birth, providing necessary warmth and promoting immediate and continued breastfeeding, immunization and treatment of infections with antibiotics could save the lives of 3 million newborn annually (UNICEF, 2014). Similarly, improved sanitation and access to clean drinking water can reduce childhood infections and diarrhoea (Centre for Disease Prevention and Control, CDC, 2016). Over 40% of the world's populations do not have access to basic sanitation and more than one billion people use unsafe source of drinking water (Akuamoah, Pessah & Asamoah, 2010)

This persistent high under-five morbidity and mortality in rural communities suggest either lack of knowledge or low practice of child survival strategies by mothers and caregivers. Inadequate knowledge and practice of child survival strategies by caregivers, as well as myths and misconceptions contribute to child morbidity and mortality (Etokidem & Johnson, 2016). Unfortunately; various studies have also identified same compromising perception and ignorance towards CSS. In a study in Ibadan, data collected revealed inadequate knowledge and poor practice of CSS by mothers (Sanusi, & Gbadamosi, 2009). Ngwu, Ezeh and Iyiani (2014), showed that mothers had a very low perception of ways of improving children's health. For instance many of them were against feeding their infants with meat or eggs because of their cultural beliefs. They also had negative perceptions of the exclusive breastfeeding and immunization services in their communities. Similarly, Ene-Obong, Iroegbu and Uwaegbu (2011) found that seventy-one percent of the mothers perceived that diarrhea was caused by teething. The study showed evidence of unnecessary use of drugs and ignorance about their potential adverse effects.

There is clear evidence that perceptions of child care services is steeped in cultural beliefs and practices, the effect of which will hardly contribute to improving child survival. Perception is an important first step in the process of developing beliefs and attitudes which may eventually contribute to practice. The present study therefore, was conducted to empirically ascertain the knowledge, attitude and practice of Child Survival Strategies among mothers attending immunization and antenatal clinic at a Specialist Maternal and Child Hospital in Enugu, South-east Nigeria.

METHODS

The design was a descriptive survey aimed at determining the knowledge, attitude and practice of Child Survival Strategies among mothers attending immunization and antenatal and immunization clinics at a Specialist MCH Hospital, Enugu. The

staff in this section included health professionals, semi-skilled and unskilled workers who render antenatal care services to individuals in Enugu and nearby towns and villages. The immunization clinic is held twice weekly while pregnant women are booked once every month. The target population consisted of all mothers collected from the record attending weekly immunization and antenatal clinics at the hospital, irrespective of age, sex, tribe, religion or economic status, and who have at least a child. All hundred and eighty (180) mothers collected from the records were used for the study because of the small population size. All mothers who met the inclusion criteria were studied which include; present at the time of the study, willing to participate in the study, are emotionally and mentally stable and have had at least a child were used.

The instrument used for data collection was a structured questionnaire which served as an interview guide. The questionnaire consisted of both open and closed ended questions. It was designed to provide alternatives for the respondents to choose the correct responses easily and also enable the respondents to express their own opinions by filling the information in the space provided for more details. The questionnaire consisted of five sections (A,B,C,D,E); Section A consisted of the items on respondent's socio demographic data and has 6 question items, Section B was on the knowledge of child survival strategies among mothers attending immunization and antenatal clinics of the Hospital and it is made up of 13 question items, Section C assessed the mother's attitude towards child survival strategies among the mothers and it is made up of 12 question items on a four point Likert scale of Strongly Agree (SA=4), Agree (A=3), Disagree (DA=2), and Strongly Disagree (SD=1);Section D assessed the practice of child survival strategies among mothers attending immunization clinic and it consists of 21 question items; and Section E which examined the factors that hinder the practice of child survival strategies among the mothers.

A pilot study was conducted using 10% of the sample size. The questionnaire was distributed to mothers attending antenatal and immunization clinics at a cottage hospital in the same town but was not the institution for study. The criteria for the selection of subjects for the study were met by the subjects. Reliability testing yielded a Cronbach's Alpha coefficient of 0.832 and an inter item (standardized) coefficient of 0.794. These being greater than 0.7 indicate that the reliability of the test instrument is very strong.

Ethical approval was obtained from the University Of Nigeria Teaching Hospital Health Research Ethical Committee. The principles of confidentiality, anonymity and voluntary participation were applied. Administrative permission was also secured from the Chief Medical Director of the hospital to collect data from the hospital. Oral consent was obtained from the mothers following explanation of the purpose, procedures and demands of the study to the participants.

A total of 180 copies of the questionnaire were distributed to mothers attending immunization and antenatal clinics at the Maternal and Child Hospital, Enugu on their days of their visit. Two undergraduates trained on the purpose of the study helped in the distribution of the questionnaire. A total of 180 questionnaires were distributed, 155 were returned making the return rate 86.1%. The questionnaire was distributed on four different occasions lasting for two weeks.

The data obtained from the questionnaire were analyzed using descriptive statistics according to the objectives of the study. Results were presented using frequency and percentages. All analysis was done using Statistical Packages for Social Sciences Version

RESULTS

Result on Table 1 showed that 7(4.5%) of respondents were between the ages of 18 – 2years, 28(18.1%) were between the ages of 23 – 27 years, 45(29%) were between 28 – 32years, 21(13.5%) were between 33 -37years, 1(0.6%) were between 38- 42years. The mean age was 28.96 and standard deviation of ± 4.367, 7(4.5%) were single, 144(92.9%) were married, 2(1.5%) were separated, 1(0.6%) had no formal education, 5(3.2%) attended primary school, 24(15.5%) attended secondary school, 124(80%) attended tertiary institution, 112(72.3%) had children between 1-3, 27(17.4%) had children between 4-7. 23(14.8%) were traders, 52(33.5%) were civil servants, 52 (33.5%) were students, 41(26.5%) were students and 26 (16.8%) were self- employed. 154(99.3%) were Christian while 1(0.6 %) were Moslems.

Table 1 Socio-demographic data of respondents n = 155

Variable	Frequency	Percentage
1.Age		
18-22	7	4.5
23-27	28	18.1
28-32	45	29.0
33-37	21	13.5
38-42	1	0.6
42-47	None	0
No response	53	34.2
Total	155	100.0
Mean±SD 28.96±4.367		
2. Marital status		
Single	7	4.5
Married	144	92.9
Separated	2	1.3
No response	2	1.3
3. Highest educational qualification		
No formal education	1	0.6
Primary school	5	3.2
Secondary school	24	15.5
Tertiary institution	124	80.0
No response	1	0.6
4. Number of children		
1-3	112	72.3
4-6	27	17.4
7-10	3	1.9
No response	13	8.4
5. Occupation		
Housewife	23	14.8
Trader	13	8.4
Civil servant	52	33.5
Student	41	26.5
Self-employed	26	16.8
6. Religion		
Christianity	154	99.3
Islam	1	0.6
Other	0	0

Findings on Table 2 shows that out of the 54(34.8%) had not heard of CSS, 101(65.2%) had heard of CSS. Out of these 101 who admitted to having heard about CSS, 13(8.39%) gottheir

information from the internet, 8(5.16%) from books, 9(5.8%) from friends, 9(8.9%) from media, and 61(60.4%) from health workers. 4 (3.9%) defined CSS as those interventions that do not necessarily save the lives of children, 2(1.9%) defined it as those practices undertaken by children, 38(37.6%) defined it as those strategies adopted to enable children live free from diseases. 22(21.8%) defined it as low cost interventions needed to save children, 33(32.7%) defined it as effective CSS designed to address the most common causes of child death. 2(1.9%) identified treatment with over the counter drugs as among the CSS, 11(10.9%) identified maternal and childhood immunization as among CSS, 2(1.9%) identified vitamin A supplementation as among the CSS, 4(3.9%) identified prevention of malaria with ITNs as among the CSS, 7(6.9%) identified EBF as among the CSS. 31(30.7%) identified maternal and childhood immunization, vitamin A supplementation, prevention of malaria using ITN, safe hygiene practices as among the CSS. A total of 61 (60.4%) of respondents were able to identify up to four strategies suggesting that they had good knowledge of CSS.

Table 3 showed that the respondents agreed to the statement health education on basic facts about child survival is necessary for all mothers with a Mean±SD3.32±0.681,I do not practice the strategies because i do not have time with a Mean±SD2.8581±0.825, It is right for all mothers to practice child survival strategies with a Mean±SD3.39±0.658, It is my responsibility to ensure I practice these strategies with a Mean±SD3.23±0.786, One can prevent childhood illnesses through the practice of these strategies with a Mean±SD3.25±0.735, The strategies are too cumbersome to learn and carry out with a Mean±SD2.51±0.863, I am satisfied with the outcome of the strategies with a Mean±SD3.0645±.82712, The child survival strategies do everything I would expect them to do with a Mean±SD3.01±0.714, the child survival strategies are simple to practice 2.99±0.709, I don't notice any inconsistencies as I practice the strategies with a Mean±SD2.88±0.772, The child survival strategies are very user friendly with a Mean±SD3.00±0.743, The strategies are cheap and affordable with a Mean±SD3.06±0.787. Their attitudes were found to be positive as the means were greater than 2.

Table 4 showed that143(92.3%) had taken tetanus toxoid, 62(40%) had not completed the five doses, 93(60%) had completed the five doses, 147(94.8%) immunize their children, 147(94.8%) undertake timely and complete immunization doses for children. 145(93.5%) gave vitamin A supplementation, 140(90.3%) made use of ITNs in prevention of malaria, 132(85.2%) slept under ITNs, 134(86.5%) practice EBF, 150(96.8%) washed their hands after using the toilet, 149(96.1%) before feeding babies, 148(95.5%) after handling waste and chemicals, 148(96.1%) when hands feel dirty,

Table 2 Knowledge of child survival strategies among mothers attending immunization clinic (n=155)

Questions	Frequency	Percentage
7. Have you heard of child survival strategies		
No	54	34.8
Yes	101	65.2
8. If yes, what was your source of information		
Internet	13	12.9
Books	8	7.9
Friends	9	8.9
Media	9	8.9
Health workers	61	60.4
All listed	1	1.0
Total	**101**	**100.0**
9.What is a child survival strategy?		
They are those interventions that do not necessarily save the lives of children	4	3.9
They are those practices undertaken by children	2	1.9
They are low cost interventions needed to save children	22	21.8
They are those strategies adopted to enable children live free from diseases	38	37.6
They are effective child survival strategies designed to address the most common causes of child death	33	32.7
No response	2	1.9
Total	**101**	**100.0**
10. Which of the following are among the child survival strategies?		
-Treatment of children with over-the-counter drugs		
-Maternal and childhood immunization	2	1.9
-Vitamin A supplementation	11	10.9
-Prevention of malaria using insecticide-treated net	2	1.9
-Exclusive breastfeeding	4	3.9
-Safe hygiene practices e.g. hand washing	7	6.9
-All except 'treatment of children with over the counter drugs.	1	0.9
-Vitamin A supplementation, exclusive breastfeeding, employing the services of traditional birth attendants and skilled birth attendants	13	12.8
-Maternal and childhood immunization, vitamin A supplementation, prevention of malaria using insecticide treated net, exclusive breastfeeding, safe hygiene practices, ORT with zinc supplementation and skilled birth attendants	3	2.9
-Maternal and childhood immunization, prevention of malaria using insecticide treated net, ORT with zinc supplementation and skilled birth attendants	3	2.9
-Maternal and childhood immunization Exclusive breast feeding	7	6.9
-All except' employing services of TBA and 'Treatment of children with over-the-counter drugs	3	2.9
-All listed'	31	30.7
-Maternal and childhood immunization, prevention of malaria using insecticide treated net, exclusive breastfeeding, ORT with zinc supplementation and skilled birth attendants	2	1.9
-Maternal and childhood immunization, vitamin A supplementation, Exclusive breast feeding and safe hygiene practices No response	3	2.9
Total	5	4.9
	4	3.9
	101	**100.0**

Decision rule: Correct identification of 4 or more items on the list of CSS components is regarded as good knowledge otherwise, inadequate knowledge.

Table 3 Attitude towards child survival strategies (n=155)

S/N	Items	SA(%)	A(%)	D(%)	SD(%)	Mean±SD
11	Health education on basic facts child survival is necessary for mothers	62(40.0)	86(55.5)	1(0.6)	6(3.9)	3.32±0.681
12	It is right for all mothers to practice child survival strategies	73(47.1	71(45.8)	9(5.8)	2(1.3)	3.39±0.658
13	I do not practice the strategies because i do not have time	12(7.7)	29(18.7)	83(53.5)	31(20.0)	2.8581±0.825
14	It is my responsibility to ensure i practice these strategies	62(40.0)	73(47.1)	13(8.4)	7(4.5)	3.23±0.786
15	One can prevent childhood illnesses through the practice of these strategies	60(38.7)	80(51.6)	9(5.8)	6(3.9)	3.25±0.735
16	The strategies are too cumbersome to learn and carry out	21(13.5)	51(32.9)	66(42.6)	17(11.0)	2.51±0.863
17	I am satisfied with the outcome of the strategies	50(32.3)	73(47.1)	24(15.5)	8(5.2)	3.0645±.82712
18	The child survival strategies do everything I would expect them to do	36(23.2)	88(56.8)	26(16.8)	4(2.6)	3.01±0.714
19	the child survival strategies are simple to practice	35(22.6)	86(55.5)	30(19.4)	3(1.9)	2.99±0.709
20	I don't notice any inconsistencies as I practice the strategies	32(20.6)	79(51.0)	38(24.5)	6(3.9)	2.88±0.772
21	The child survival strategies are very user friendly	36(23.2)	91(58.7)	21(13.5)	7(4.5)	3.00±0.743
22	The strategies are cheap and affordable	46(29.7)	80(51.6)	22(14.2)	7(4.5)	3.06±0.787

Decision rule: Mean ≥ 2- Positive attitude
Mean < 2- Negative attitude

Table 4 Practice of Child survival strategies (n=155)

Questions	Frequency	Percentage
Maternal and Childhood Immunization		
23. Taken tetanus toxoid?		
No	12	7.7
Yes	143	92.3
24. Completed the five doses for tetanus toxoid?		
No	62	40.0
Yes	93	60.0
25. Immunize children?		
No	8	5.2
Yes	147	94.8
26. Timely complete immunization doses for children?		
No	10	6.5
Yes	145	93.5
Vitamin A Supplementation		
27. Gives vitamin A supplement		
No	10	6.5
Yes	145	93.5
Prevention of Malaria using Insecticide Treated Net		
28. Prevention of malaria using insecticide treated net		
No	15	9.7
Yes	140	90.3
29. Sleep under insecticide treated net		
No	23	14.8
Yes	132	85.2
Exclusive Breast Feeding		
30. Practice exclusive breastfeeding		
No	21	13.5
Yes	134	86.5
Hand Washing		
31. When do you wash your hands		
After using the toilet	5	3.2
No	150	96.8
Yes		
32. After changing baby nappies		
No	6	3.9
Yes	149	96.1
33. Before feeding baby		
No	8	5.2
Yes	147	94.8
34. When hands feel dirty		
No	7	4.5
Yes	148	95.5
35. After handling wastes and chemicals		
No	6	3.9
Yes	149	96.1
ORT with Zinc Supplementation		
36. Gives ORT during diarrhea episodes to children		
No	7	4.5
Yes	148	95.5
37. Can prepare local ORT		
No	26	16.8
Yes	129	83.2

Table 4 Practice of Child survival strategies (n=155)

Questions	Frequency	Percentage
38. Gives zinc supplementation together with ORT during diarrhea episodes to children		
No	23	14.8
Yes	132	85.2
Skilled Birth Attendant Utilisation		
39. Makes use of well-equipped hospital during pregnancy and delivery		
No	8	5.2
Yes	147	94.8
40. Makes use of professionally trained and skilled workers during pregnancy and delivery		
No	7	4.5
Yes	148	95.5
Infant Nutrition/Complementary Feeding		
41. Introduces solid foods at six months to babies		
No	27	17.4
Yes	128	82.6
42. Combine six classes of food (protein, carbohydrate, fats, and oil, mineral salt, vitamin, and water) in their right proportion		
No	12	7.7
Yes	143	92.3

Decision rule: indication of practice of 10 items and above on the practice scale is regarded as good practice, otherwise, bad practice

Table 5 Factors that hinder the practice of Child Survival Strategies Frequency

Educational background	2	1.3
-Finance factor	5	3.2
-Religious background	1	.6
-Lack of time	8	5.2
-Unavailability of materials	1	.6
-Husband interference	1	.6
-Cultural background, lack of time, distance, and husband interference	3	1.9
-Educational background, cultural background, lack of time, unavailability of materials, husband interference	9	5.8
-All the factors listed	33	21.3
-Educational background, cultural background, lack of time, and distance	5	3.2
-Educational background, finance factor, religious background, lack of time, husband interference	10	6.5
-Cultural background, lack of time, distance, and unavailability of materials	3	1.9
-Educational background, finance factor, and unavailability of materials	5	3.2
-Educational background, cultural background, lack of time, distance, husband interference	8	5.2
-Educational background, finance factor, and husband interference	2	1.3
-Educational background, finance factor, lack of time, unavailability of materials and husband interference	14	9.0
-Lack of time, unavailability of materials, and distance	4	2.6
-Educational background, finance factor, cultural background, lack of time, and distance	13	8.4
-Educational background, cultural background, and unavailability of materials	1	.6
-Finance factor, cultural background, lack of time, distance, and husband interference	10	6.5
-Financial factor, religious background, background, unavailability of materials, distance	7	4.5
-Cultural background, religious background, lack of time, distance	3	1.9
No response	7	4.5
` Total	155	100.0

148(95.5%) gave ORT during diarrhea episodes, 129(83.2%) could prepare local ORT, 132(85.2%) gave zinc supplementation together with ORT during diarrhea episodes. 147(94.8%) made us of well-equipped hospital during pregnancy and delivery, 148(95.5%) made use of professionally trained and skilled workers during pregnancy and delivery 128(82.6%) introduced solid foods at six months to babies, 1143(92.3%) combined the six classes of foods in their right proportion.

From findings presented in Table (5), 2(1.3%) reported educational background as a hindrance to practice of CSS, 5(3.2%) reported financial factor, 1(0.6%) reported only religious background, 8(3.2%) reported `lack of time, 1(0.6%) reported only unavailability of materials, 1(0.6%) reported husband interference, 33(21.3%) reported educational

background, financial factor, lack of time, unavailability of materials and husband interference, 13(8.4%) reported educational background, financial factor, cultural background, lack of time and distance, 10(6.5%) reported financial factor, cultural background, lack of time, distance and husband interference.

DISCUSSION

Findings from the first objective showed that more than half of the respondents (62.2%) have heard of CSS, with health workers as their main source of information (60.4%). Majority of the respondents have adequate knowledge of the CSS. The adequate knowledge of mothers about these strategies is as a result of health education given to mothers during their visits to the hospital as evidenced by majority claiming that their main source of information was health workers. The number of those that have not heard of the CSS was discovered to be due the name given to the collection of these activities called "Child survival strategies" because in as much as they have not heard they were still able to identify some of these strategies. The findings of these studies were in line with the study conducted in Ibadan by Sanusi and Gbadamosi, (2009) where more than half(68.2%) of their respondents were aware of CSS. It is also in agreement with the work by Adeyinka, Oladimeji, Adeyinka, &Aimakhu , (2012) , where almost (99%)all of the respondents were aware of immunization as a CSS, and also obtained information from health workers.

Similarly, the findings of this present study could be compared to those of another study done by Ukibe, Mbanugu , Ukibe and Ikeakor, (2013), where majority of the women were fully aware of the use ITNs during pregnancy, and that of Asekun, Olarinmoye, Onobuwa, Adebimpe, and Ifeoluwapo, (2014) where their overall respondents had good knowledge of hand washing. However, the finding of this study is in contrast with the findings of another study by Asakitipi (2010) where less than half of their respondents were knowledgeable about ORT as indicated by describing the treatment correctly. The finding of this study is also comparable to that of a related study by Alex- Hart and Okoh, (2015) which found that only 29.3% of the respondents had good level of knowledge of home management of diarrhea while only 33.8% had good level of skill. On the other hand, in a related study in Cross River State by Etokidem & Johnson, (2016), the CSS known to almost the respondents was ORT and their commonest source of information was health talk in health facility. The adequate knowledge about ORT in both studies could be attributed to the effectiveness of health education given to mothers during their antenatal visits by the health workers. The present study findings indicate a need for enlightenment programmes to the public through the use of media, churches, women groups and any other means possible. This is to target those women who have not heard about this important concept and those who have inadequate knowledge. There is quite a substantial number, almost 40%, who claimed they have not heard about CSS. When this is joined to those who had inadequate knowledge of CSS, the result shows more than half (58.7%) of the respondents in this study did not have adequate knowledge of CSS. Adequate knowledge of these strategies is expected to be a good predictor of their utilization.

The findings revealed that mothers had positive attitude towards CSS as indicated by a mean > 2. Their positive attitude may have been due to the value and importance they placed on the strategies as an effective means of saving their children from childhood diseases. This is in line with the study (15) were majority had good attitude to immunization with 84.3% having attitude score of 75% and above. It is also in line with the study of Asekun, *et al*, (2014)) where as many of the respondents showed positive attitude in favour of hand washing. However, this finding does not agree with the findings of a study carried out in Enugu State by Ngwu *et al*, (2014) which found that there was negative perception of EBF and immunization services in their communities. The difference would be attributed to the cultural and religious factor which was shown to negatively affect the attitudes of the community members in this other study. It could also be linked to the fact that the respondents in this present study are more enlightened than those of the other study. This suggests there is need for proper dissemination of information by health workers to counter rumors concerning these CSS, especially in the rural areas. Awareness should also be created to correct some of the cultural and religious factors that affect the practice of these strategies.

Also, findings of this study revealed that majority of the respondents practiced most of the components of CSS; 92.3% had taken tetanus toxoid, 94.8% immunized their children, 94.8% had undertaken timely and complete immunization doses for children. Majority of the respondents gave vitamin A supplementation, made use of ITNs in prevention of malaria, slept under ITNs, practiced EBF, gave ORT during diarrhea episodes, could prepare local ORT and gave zinc supplementation together with ORT during diarrhea episodes. Almost all of the respondents made use of well-equipped hospital during pregnancy and delivery, visited professionally trained and skilled workers during pregnancy and delivery introduced solid foods at six months to babies and combined the six classes of foods in their right proportions. This extent of practice can actually be expected from this population, being mostly an urban population and being women already attending antenatal and immunization clinics in a specialist MCH facility. The findings on practice of the strategies could also be attributed to the educational background of the respondents in this current study as 80% of the respondents reported that they attained up to tertiary level of education. Higher educational attainment has been associated with greater uptake and utilization of health services. This finding is consistent with similar studies (Adeyinka *et al*, 2012; Samusi & Gbadamosi, 2009; Sobo, Oladoyinbo, &Akintola, 2016).The educational level of a mother was a found to a major determinant of their practices of child survival strategies elsewhere (Sobo *et al*, 2016). However, the present findings do not quite agree with some CSS previous study findings (Alex-Hart & Okoh, 2015; Bashar, 2012; Ukibe *et al*, 2013). For example some respondents in the present study still felt that using over the counter medications and delivering with TBAs were part of CSS. This is indicative of lack of knowledge and has important implications for the individual women and their families. The findings call for a targeted approach to enlightening the women and indeed the general public about this important concept and those who have inadequate knowledge. Women should be made to understand that some of these services are free especially in

health centers. Female education has been identified as an important CSS and is probably one of the most important factors that determines acceptance and utilization of health practices in developing countries (Sobo *et al*; 2016)**.** This will go a long way in reducing child morbidity and mortality in our various communities and the world at large.

Furthermore, the fourth objective showed that lack of time, financial factor and husband interference were the major factors affecting their practice of CSS. Other factors found include, cultural factors, religious factors, unavailability of materials. Time is an important factor because a mother that is so much occupied will find it difficult to implement these strategies, in terms of finance, if the hospital is so demanding and the terrain rough or not accessible, the transport fare might add to the cost. Nevertheless, the strategies that are performed at home are low cost and should be encouraged. Some husbands can be authoritative and become an obstacle to the achievement of these strategies. Educational, cultural and religion factor seriously affect the practice of these strategies. Being that the strategies were actually practiced by majority of the respondents in this study, educational background which was reported here could be seen as a positive factor that enhanced the practice of various strategies and not a hindrance. As already pointed out earlier, educational attainment is a major positive influence on service utilization. The findings are in line with the study of Asekun *et al*, (2014) that educational status and religion were found to affect the degree of practice of hand washing. It is also in line with findings of another study (Ngwu *et al*; 2014) that many were against feeding their infants with meats or eggs because of cultural beliefs. It also concurred with the study of (Bashar, 2012), which revealed that Muslim women from male headed families were less likely to use skilled assistance at delivery and that parental education and birth order were strong predictions for the use of skilled assistance at delivery. Home visits should be carried out at the community level to combat the factor of lack of time and husband interference by making them know the importance of the practice of these strategies in the lives of the children.

References

Adeyinka, Oladimeji, Adeyinka, & Aimakhu (2012), Household survey of perception of mothers with children under 5 years of age to immunization in Igbo-Ora, Oyo state. *Journal of research studies 5(1)*, 88-91.

Akuamoah L.S, Pessah D.A, & Asamoah, F. (2010), Millennium Development Goal 4 and the Knowledge of mothers on the prevention of diarrhea among mothers on the prevention of diarrhea among children under five years. *International Research Journal of Medicine and Medical Sciences, 1(3),* 80-84.

Alex- Hart B.A & Okoh A.N (2015), Awareness and status of tetanus toxoid vaccination among female undergraduate students in Nigeria University. *International Journal of Tropical Disease and Health, 7(1),* 6-15.

Asakitipi A.E. (2010), Acute diarrhea: mother's knowledge of ORT and its usage in Ibadan Metropolis. *Nigeria.Ethno med, 4(2)* 125-130.

Asekun, Olarinmoye, Onobuwa, Adebimpe, & Ifeoluwapo (2014),Knowledge, attitude and practice of hand washing among mothers of under-five children in Igbona area of Olorunda Local Government in Osogbo, Osun State, Nigeria: *Journal of medical sciences. 4(1)*, 33-36.

Bashar (2012), *Determinants of the Use of Skilled Birth Attendants at Delivery by Pregnant Women in Bangldesh*. Sweden: Umea International School of Public Health.

Centre for Disease Prevention and Control, CDC, (2016). *Hand washing: clean hands saves live*. United States: Department Of Health And Human Services.

Eneobong N.H, Iroegbu C.U & Uwaegbute A.C (2011), Perceived causes and management of diarrhea in young children in Enugu. *Nig J Paediatr, 5(2)*, 99-110.

Etokidem, J. A & Johnson, O. (2016). Child Survival Strategies: Assessment of Knowledge and Practice of Rural Women of Reproductive Age in Cross River State, Nigeria. Hindawi Publishing Corporation. *Journal of Tropical Medicine*. http://dxi.org/10.1155/2016/5098463

Habimana P. (2012), progress in implementing the child survival strategies in the Africa region, *t Afr. Health monitor issue 1(1),* 18-23.

Ngwu C.N, Ezeh C.A, & Iyiani C (2014), Knowledge of infant nutrition among mothers in Enugu State, South Eastern Nigeria: implication for schoolwork practice. *International of Academic Research in Progressive Education and Development 3(1),* 112-115.

Sanusi, R. A. & Gbadamosi, A. O. (2009). Do Mothers' Knowledge and Practice of Chlid Survival Strategies affect the Nutritional Status of their Children? *Pakkistan J. of Nutrition*. 8(9):1506-1511.

Sobo, A.A, Oladoyinbo, C. A &Akintola, O. S. (2016). Knowledge and Practice of Mothers on Child Survival Strategies in Odeda Local Government Area, Ogun State, Nigeria. *Journal of Research in Nursing and Midwifery (JRNM)* 5(3): 055-062. http://www.interesjournals.org/JRNM

Ukibe S.N, Mbanugu J.I, Ukibe N.K & Ikeakor I.C (2013): Levels of awareness and use of insecticide treated bed nets among pregnant women attending antenatal clinics in Anambra state, south eastern Nigeria. *Journal of Public Health And Epidermiology 5(9)*, 391- 396.

UNICEF (2011), *Pneumonia and Diarrhoea*: Tackling the deadliest diseases in the world. United States: pp 12-14

UNICEF (2015) *Progress and challenges in immunization coverage*. Retrieved from www.Unicef.org/ immunization on 2nd June, 2016.

UNICEF (2016). *Child health and community health systems*. United States: pp 18- 24.

UNICEF, (2013). Levels and Trends in Child Mortality. Report 2013 Estimates Developed by the UN Inter Agency Group for Child Mortality Estimation, United Nations Children's Fund, New York, NY, USA.

UNICEF, (2014). *The State of the World's Children*. United States

World Health Organization, WHO (2015). *Vitamin A supplementation in infants and children 6-59months of age, Switzerland*: Department Of Nutrition For Health And Development.