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Strategies for Improving HealthCare Practices for Mothers of Pre-School Children in North-East, Nigeria

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ABSTRACT
The study identified strategies for improving healthcare practices for mothers of pre-school children in North-East, Nigeria. Seven objectives and research questions were formulated to guide the study. Seven null hypotheses were also formulated for testing at 0.05 % level of significance. Descriptive survey design was used for the study. The study population is comprised of 4,769. This included 35 Home Economics Teachers in Federal Colleges and 4,734 mothers from 36 registered pre-schools in North East, Nigeria. The instrument for data collection was a structured questionnaire that was developed by the researcher for both the mothers of pre-school children and the teachers of Home Economics. The questionnaire items were formulated based on the information gathered from the review of related literatures. The questionnaire was divided into two parts namely, part 1 and part 2. Part 1 elicited information from personal data of the respondents; while part 2 was structured into sections of possible strategies for improving health care practices of mother for pre-school children. The data collected from the respondents were analyzed using mean to answer the research questions and t-test to test the null hypotheses at 0.05 % level of significance. The findings of the study revealed ways of improving health care practices of mothers of pre-school children such as living in clean environment, acquiring more knowledge on different ways of improving the health of the pre-school children, focus on good nutrition, taking regular immunization against diseases, taking of good drinking water among others. Seminars and workshops should be organized for mothers on proper ways of taking care of pre-school children. The pre-school mothers should be educated on how to prepare nutritious recipes based on some inexpensive, locally available foods. The study recommends strongly also, the need for the local government council to promptly embark on an aggressive nutrition, health, and extension education. This will enhance the capacity of the women to feed and improve the nutritional health status of their children. Above all, government should provide funds for conducting research on maternal and child Health issues.
Keywords: Strategies, Health Care Practices, Mothers, Pre-School and Children.

INTRODUCTION

Good health is a state which individuals all over the world will like to achieve because it is necessary for effective and enjoyable living. World Health Organization (WHO), (1986) indicated that health is a resource for everyday life, not the objective of living. In addition, health is a positive concept emphasizing social and personal resources, as well as physical capacities. World Health Organization (2010) stated that overall health is achieved through a combination of physical, mental and social well being which together is commonly referred to as health triangle. Effiom, (2008) in describing heath, stated that the term health include not just the physical condition of the body, but also the state of the mind and the degree of enjoyment of life. Health is defined by Abanobi (2005) as soundness of mind and wholesome of emotions which make possible the highest quality of effective living and service. In this study, health is defined well catered for.

Every individual including the pre-school child requires a good healthy body in which to keep a sound mind. Pre-school children are children between the ages of 2-5 years. Huxley, (2006) described pre-school children as a whirlwind of activity. They are active explorers of the world around them, in

addition, they are more confident about using their bodies, they run smoothly, at moderate speeds, jump, climb and perform other "gross motor activities fairly well". Pre-school children can be described in terms of their cognition as "little explorers", they are seeking to understand how the world operates and functions (role playing). Pre-school age children are beginning to learn how to interact with their peers. At 3 and 4 years of age they engage in parallel play, pre-school children want to please adults, they need frequent approval and reassurance from primary care givers. Santrock, (2001) indicated that children are individuals in their formative years. According to him, these formative years in children is marked by high rate of growth and very high rate of physical and emotional development. He explained that their favourite activities include jumping, hopping, climbing, running as fast as they can and rolling. One of the fundamental needs of the pre-school child is good health care. According to United Nations International Children Emergency Fund (UNICEF), (2007) health care is the provision of services to maintain or improve people's health. Hahn and Mauer, (2005) described health care as the prevention, treatment and management of illness and the preservation of mental and physical well being through the services offered by the medical, Nursing and the allied health professions. Health care is described in this study as the provision of services to maintain and improve the health of the pre-school children by their mother. Health care is also described in this study as care giving to the pre-school children at home by their mothers to ensure their healthy living and development. A mother is a woman who has conceived, given birth to or raised a child in the role of a parent. They can be educated or illiterates. In this study, a mother is described as a woman who fulfills the main psycho-social role, in raining children and providing health care to pre-school children.

Nutrition related diseases are among the leading causes of the pre-school children's ill-health care in North East. It should be noted that good food and sound nutritional care are the corner stone upon which life balances (Tutare, 2002). For pre-school children to be active, it calls for high nutrients provision. The nutritional status of an individual is the health of that individual as conditioned by the quality of nutrients consumed and the body's ability to utilize those nutrients to meet its metabolic needs as described by Onimawo, Ukegbu and Abaoja (2007). It has been observed that pre-school children in North East are vulnerable from nutrition point of view. Many of these children are fed mainly on carbohydrates every day. The researcher interacted with some of the mothers of these children, the answers given shows that they cannot afford proteinous foods, while to some, feeding their children with carbohydrate foods three times a day is normal thing. Poor diet affects the health of the pre-school children in the sense that some of them suffer ill health as a result of the consumption of inadequate nutrients in terms of quantity and quality.

Good health practices are all the behaviours that are externally demonstrated by individual mothers which in some way influence their total health. Such behaviours include personal hygiene, grooming, nutrition and good dental practices Wayne & Dale, (2005). Good health practices promote healthy living. Health practices of mothers of pre-school children in North East influence the degree and extent of enjoyment of life and longevity of these children.

Justification for the Study

The commonest phenomenon in North East as far as children's health is concerned is the high rate of diseases among children. This often leads to infant mortality. The most vulnerable are the children of the illiterate mothers. Evidences from clinics revealed that mothers feed their children mainly with carbohydrate food. The researcher discovered that portentous foods like meat, fish, egg that can aid growth and development are not taken seriously among this group of people which can negatively affect the nutritional needs of the pre-school children and eventually leads to stunted growth.

Furthermore, in some area in North East, there are still cultural and religious stereotypes that affect the full implementation and acceptance of such programs like immunization programme against diseases. Immunization is process of protecting children failure to take immunization can expose the children to diseases like measles, polio, and whooping cough. Poor food hygiene practices by mothers in North East are rampant. Some of the foods eaten raw like fruits and vegetables are not washed before being eaten because they are ignorant of both foods and personal hygiene. Food handled carelessly cause food poisoning and an unwashed hand is against food safety rules.

Inadequate medical health care of the pre-school children pose problem in North East. The non challant attitudes of mothers of pre-school children towards the health of these children and dirty environment is affecting their well being adversely because there is no medical checkups until when

these children are seriously infected with sickness and diseases. Therefore, there is need to find out the practices that mothers adopt and to evolve strategies for improving such practices.

Objectives of the Research

This research will be undertaken to investigate the strategies that could be used to improve the health care practices of mothers for pre-school children in North East, Nigeria. Specifically, the research intends to:

1. Find out present feeding practices of mother for pre-school children.
2. Determine the feeding practices of mothers for pre-school children.
3. Identify the environmental maintenance practices of the mother for pre-school children.
4. Identify the general hygiene practices of mothers for pre-school children.
5. Identify ways of improving the level of health care practices of mothers for pre-school children.

Research Questions

The following research questions will serve as a guide for the study:

1. What are the feeding practices that are presently utilized by mothers of pre-school children in North East?
2. What should constitute proper feeding practices of mothers for pre-school children in North-East?
3. What are the environmental maintenance practices of mothers of pre-school children in North East?
4. What are the general hygiene practices of mothers of pre-school children in North East?
5. What are the ways of improving the level of health care practices of mothers of pre-school children in North East?

Research Hypotheses

The following null hypotheses will guide the study and will be tested at 0.05% level of significance:

HO1: There will be no significant difference in the means responses of the mothers and Home Economics teachers on the present feeding practices of mothers for pre-school children in North East.

HO2: There will be no significant difference in the mean responses of the mothers for pre-school children and Home Economics teachers on what should constitute feeding practices of mothers for pre-school children in North East.

HO3: There will be no significant difference in the mean responses of the mothers for pre-school children and Home Economics teachers on the environmental maintenance practices of mothers for pre-school children in North East.

HO4: There will be no significant difference in the means responses of the mothers for pre-school children and Home Economics teachers on the general hygiene practices of mother's for pre-school children in North East.

HO5: There will be no significant difference in the means responses of the mothers for pre-children and Home Economics teachers on the ways of improving the level of health care practices of mothers for pre-school children in North-East.

METHODOLOGY

Design of the Study

The study adopted descriptive survey research design. This decision was based on the view of Osuala, (2005) that a survey research design is about people, their attitudes, opinions, motivation and other characteristics. The survey research design was adopted for the study since the study was designed to obtain information from the mothers of pre-school children and Home Economics Teachers in the area of study who are part of the entire population surveyed.

Area of the Study

This study was conducted across the 6 states of North East, Nigeria (Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe State). The study was conducted in these areas because there are many mothers of pre-school children in the areas who seem to lack the knowledge and skills of child health care practices.

Population of the Study

The population is comprised of 4,769. This included all the (35) Home Economics Teachers in Federal Colleges in North East and 4,734 mothers from 36 registered pre-school in North East of Nigeria.

Sample and Sampling Techniques

A multi-stage proportionate sampling was used to select a sample for the study from the large population of 4,769. In stage one; all the three senatorial zones of the six states was selected. In the second stage, two locations was selected (one urban and one rural location) from each of the three zones. The third stage involved a selection of two registered Nursery schools from each of the urban and rural locations in the three zones using random sampling technique.

A purposive selection of all the 35 Home Economics teachers of the secondary schools in the state was used for the study since they are few. The total number of sampled respondents was 255 (220 mothers of pre-school children from registered nursery schools and 35 Home Economics teachers) selected from all the six states.

Instrument for Data Collection

The instrument for data collection was structured questionnaire developed by the researcher for both the mothers of pre-school children and the teachers of Home Economics. The questionnaire served as interview schedule for non-literate mother of pre-school children. The questionnaire items were formulated based on the information gathered from the review of related literature. The questionnaire was divided into two parts namely, part 1 and part 2. Part 1elicited information from personal data of the respondents and part 2 was structured into sections of possible strategies for improving health care practices of mother for pre-school children in the North-East of Nigeria.

The questionnaire item for part 2 was formulated based on the 5-points likert scale. The questionnaire items for part 2 response categories was strongly agree, agree undecided, disagree, and strongly disagree. The responses categories were assigned numerical values of 5, 4, 3, 2 and 1 respectively.

Method of Data Collection

Copies of instrument were administered to the respondents by the researcher with the help of 6 research assistants. The researcher gave the research assistance from all the six states an orientation on the distribution and the collection of the instrument from the respective respondents while the researcher went round to ensure that the copies of the questionnaire are retrieved from the respondents and the research assistants.

Method of Data Analysis

The data collected from the respondents were analyzed using Mean to answer the research questions and t-test to test the null hypotheses at 0.05 % level of significance.

RESULTS

Research Question 1: *What are the feeding practices that are presently utilized by mothers of the pre-school children?*

The answer to this research question 1 is presented in Table 1.

Table 1: Mean Responses on the Feeding Practices that are presently utilized by Mothers of the Pre-School Children N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Always feed children with balanced diet daily	2.11	0.88	Disagree
2	Only feed children with balance diet when family income permits.	3.53	0.74	Agree
3	Vegetable are usually cut into tiny pieces for feeding the children.	3.02	0.95	Disagree
4	Eating overcooked vegetables	3.06	0.66	Disagree
5	Do not give children egg as part of any meal	3.61	0.69	Agree
6	Always give the children biscuits to school every day.	3.64	0.86	Agree
7	Feeding of children with more of carbohydrates than protein	4.00	0.89	Agree
8	Pre-school children are fed with left over foods.	3.72	0.73	Agree
9	Supervises children at meal times	2.31	0.85	Disagree
10	Feeding pre-school children without considering their age group and developmental stages	3.54	0.76	Agree
11	Buying water from hawkers for drinking and cooking	3.72	0.69	Agree

Research Question 2: *What should constitute proper feeding practices of mothers of pre-school children in all the six states in North East?*

The answer to this research question 2 is presented in Table 2.

Table 2: Mean Responses on what constitute proper feeding practices of mothers of pre-school children in North East N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Pre-school children's food should contain enough protein foods.	4.34	0.81	Agree
2	Pre-school children's food should be prepared with fresh ingredients.	4.16	0.70	Agree
3	Pre-school children should be fed with fruits.	4.25	0.65	Agree
4	Vegetables should be included in the pre-school children's meals.	4.42	0.90	Agree
5	Foods that are difficult to chew should be cut into smaller pieces for pre-school children.	4.24	0.61	Agree
6	Good quality snacks should be included in pre-school children meals..	3.98	0.73	Agree
7	Mothers should include milk drinks in children's meals.	3.79	0.74	Agree
8	Meal planning should be based on children's nutritional needs	3.95	0.89	Agree
9	Meal times should be supervised	4.09	0.75	Agree
10	Pre-school children should be fed with balanced diet always..	4.37	0.86	Agree
11	The size of their meals should not be too big for their age.	4.23	0.99	Agree
12	Pre-school children should not be fed with snacks always.	4.04	0.84	Agree
13	Pre-school children's food should be well garnished	4.08	0.69	Agree
14	Food served should be visually appealing	3.89	0.71	Agree
15	Pre-school children should not be fed with left over foods.	4.07	0.87	Agree

Research Question 3

What are the immunization practices of mothers of pre-school children in North East?

The answer to this research question 3 is presented in Table 3.

Table 3

Mean Responses on the Immunization practices of mothers of pre-school children in North East N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Not meeting the immunization schedule for their children	3.68	0.75	Agree
2	Self prescription of drugs for children to relief pain as a result of immunization.	3.53	0.82	Agree
3	Failure to bathe children for some days after immunization.	3.54	0.83	Agree
4	More concerned about the potential side effects of vaccines than the risk of the diseases they are design to prevent.	4.07	0.79	Agree
5	Failure to discuss with the doctors why a child should not be immunized.	3.56	0.75	Agree
6	Failure to complete children's immunization programme.	3.58	0.87	Agree

Research Question 4

What are the environmental maintenance practices of the mothers of pre-school children in North East?

The answer to this research question 4 is presented in Table 4**.**

Table 4: Mean Responses on the Environmental Maintenance Practices of the Mothers of Pre-School Children in North East N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Poor method of disposing refuse	4.02	0.75	Agree
2	Defecating indiscriminately	3.84	0.89	Agree
3	Keeping of domestic animals without proper house for them	4.01	0.81	Agree
4	Untreated sewage in the environment	3.82	0.74	Agree
5	Getting water from unkept environment	4.08	0.96	Agree
6	Leaving the environment unkept	3.98	0.91	Agree
7	Keeping refuse bin uncovered	4.07	0.95	Agree
8	Rearing of animals in the compound	4.13	0.84	Agree
9	Observing daily and weekly cleaning of the house.	3.28	0.74	Disagree
10	Keeping the refuse bin area clean always	3.19	0.83	Disagree
11	Leaving stagnant water in the environment	3.76	0.74	Agree
12	Sweeping the environment everyday	3.31	0.89	Disagree

Research Question 5: *What are the general hygiene practices of mothers of pre-school in North East?*

The answer to this research question 5 is presented in Table 5.

Table 5: Mean Responses on the General Hygiene Practices of Mothers of Pre-school in North East N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Interaction with animals	3.76	0.75	Agree
2	Washing of hands after using toilet.	2.82	0.84	Disagree
3	Provision of liquid soap for pre-school children	2.17	0.95	Disagree
4	Indiscriminate defecation and urine	3.53	0.72	Agree
5	Negligence in taking proper care of pre-school children body.	4.03	0.91	Agree
6	Washing of hands before eating.	3.23	0.80	Disagree
7	Disinfection of areas where animals are kept	2.45	0.83	Disagree
8	Regular Vaccination of animals.	2.04	0.71	Disagree
9	Covering of waste basket with lid	2.31	0.75	Disagree
10	Wrapping of kitchen wastes in bags before disposal.	2.06	0.90	Disagree
11	Giving pre-school children left over foods.	3.54	0.82	Agree
12	Cleaning of finger nails always	2.73	0.87	Disagree
13	Washing of dirty plates always	3.02	0.73	Disagree
14	Regular Cleaning of the cooking areas.	2.74	0.92	Disagree

Research Question 6: *What are the clothing care practices of mothers of pre-school children in North East?*

The answer to this research question 6 is presented in Table 6.

Table 6: Mean Responses on the clothing care practices of mothers of pre-school children in North East N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Washing of pre-school children's clothes regularly	3.59	0.75	Agree
2	Leaving children's clothes torn with spoilt zippers and buttons	3.54	0.99	Agree
3	Leaving stain on clothing for a longer period.	3.64	0.76	Agree
4	Storing together of dirty and clean clothes.	3.60	0.75	Agree
5	Ironing of children's clothes after washing.	2.57	0.87	Disagree
6	Sorting clothes before washing.	2.53	0.70	Disagree
7	Dressing children to suit the weather	2.99	0.79	Disagree
8	Providing suitable storage for children's clothing.	2.34	0.83	Disagree
9	Putting clothes that need to be washed in a dirty clothes basket	3.63	0.74	Agree
10	Having clean clothes ready to wear whenever the pre-school children needs them	2.67	0.92	Disagree
11	Checking hang tags and labels on the garments before buying clothes for the pre-school children.	2.34	0.82	Disagree
12	Checking and mending the pre-school children's clothes before washing.	2.09	0.86	Disagree

Research Question 7: *What are the ways of improving the level of health care practices of mothers of pre-school children in North East?*

The answer to this research question 7 is presented in Table 7.

Table 7: Mean Responses on the ways of improving the level of health care practices of mothers of pre-school children in North East

N = 253

S/N	Item statements	Mean	S.D	Remarks
1	Living in clean environment	4.48	0.85	Agree
2	Acquiring more knowledge on different ways of improving the health of pre-school children.	4.26	0.81	Agree
3	Focus on good nutrition	4.42	0.84	Agree
4	Taking regular immunization against diseases.	4.37	0.87	Agree
5	Taking of good drinking water.	4.34	0.96	Agree
6	Regular medical check up	4.12	1.02	Agree
7	Strict adherence to cleanliness	4.29	0.72	Agree
8	Observation and detection of signs and symptoms of diseases..	3.92	0.82	Agree
9	Having knowledge of food value, how to plan, and cook to meet the nutritional needs of the children	3.87	0.84	Agree
10	Prevention of stagnant water in the surroundings	3.88	0.83	Agree
11	Observing safety rules at home	3.91	0.76	Agree
12	Providing three nutritious meals and snacks at intervals of every 2-3 hours for the pre-school children	3.95	0.71	Agree
13	The environment should be free of hazards such as electrical cords and containers of hot foods.	4.14	0.86	Agree
14	Maintaining good food, personal and kitchen hygiene.	3.95	0.76	Agree
15	Using of clean clothes	3.96	0.91	Agree

Testing of Hypotheses

Hypothesis 1

There will be no significant difference in the mean responses of mothers of preschool children and Home Economics teachers on the present feeding practices of mothers of pre-school children in North East.

Table 8: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the present Feeding Practices of Mothers of Pre-school Children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Always feed children with balanced diet daily	1.91	1.06	2.14	0.84	0.22	NS
2	Only feed children with balance diet when family income permits..	4.17	0.92	3.42	1.14	1.02	NS
3	Vegetable are usually cut into tiny pieces for feeding the children	3.97	1.01	3.20	1.30	0.08	NS
4	Eating overcooked vegetables	4.11	1.30	3.25	0.75	0.04	NS
5	Do not give children egg as part of any meal	4.20	0.93	3.28	0.83	1.20	NS
6	Always give the children biscuits to school everyday.	3.91	1.17	3.36	1.01	0.60	NS
7	Feeding of children with more of carbohydrates than protein	4.14	1.24	3.97	1.18	0.85	NS
8	Pre-school children are fed with left over foods	4.29	1.20	3.63	0.91	0.23	NS
9	Supervises children at meal times.	2.03	0.92	2.35	1.01	1.08	NS
10	Feeding pre-school children without considering their age group and developmental stages	4.11	1.07	3.23	1.20	1.04	NS
11	B						

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Key: *S_1^2 = Variance of Home Economics Teachers;S_2^2 = Variance of Mothers of Pre School Children;X_1 = Mean of Home Economics Teachers; X_2 = Mean of Mothers of Pre School Children*
Df = 251; P = 0.05; T tab = 1.96; SG = Significant; NS = Not Significant

Hypothesis 2

There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on what should constitute feeding practices of mothers of pre-school children in North East.

Table 9: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on what should Constitute Feeding Practices of Mothers of Pre-school Children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Pre-school children's food should contain enough protein foods	4.57	0.50	4.30	1.14	1.34	NS
2	Pre-school children's food should be prepared with fresh ingredients.	4.63	0.64	4.09	1.13	1.20	NS
3	Pre-school children should be fed with fruits.	4.69	0.47	4.18	0.71	0.70	NS
4	Vegetables should be included in the pre-school children's meals..	4.77	0.42	4.36	0.65	0.34	NS
5	Foods that are difficult to chew should be cut into smaller pieces for pre-school children.	4.54	0.50	4.19	1.11	1.01	NS
6	Good quality snacks should be included in pre-school children meals..	4.40	0.65	3.91	0.71	0.06	NS
7	Mothers should include milk drinks in children's meals.	4.54	0.83	3.67	0.83	0.18	NS
8	Meal planning should be based on children's nutritional needs	4.66	0.87	3.84	0.74	0.13	NS
9	Meal times should be supervised.	4.63	0.48	4.00	0.91	1.08	NS
10	Pre-school children should be fed with balanced diet always..	4.66	0.48	4.33	0.81	1.04	NS
11	The size of their meals should not be too big for their age	4.66	1.12	4.16	1.03	0.61	NS
12	Pre-school children should not be fed with snacks always	4.29	0.65	4.00	0.72	0.22	NS
13	Pre-school children's food should be well garnished	4.60	0.64	4.30	0.81	0.80	NS
14	Food served should be visually appealing	4.63	0.88	3.78	1.13	0.44	NS
15	Pre-school children should not be fed with left over foods.	4.43	0.84	4.01	0.71	0.12	NS

Hypothesis 3

There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the immunization practices of mothers of the pre-school children in North East.

Table 10: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the immunization practices of mothers of the pre-school children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Preventing children from recommended immunization schedule.	3.89	1.05	3.42	1.12	1.02	NS
2	Self prescription of drugs for children to relief pain as a result of immunization.	4.11	0.78	3.43	0.72	1.01	NS
3	Failure to bathe children for some days after immunization.	3.83	0.75	3.38	0.79	1.00	NS
4	More concerned about the potential side effects of vaccines than the risk of the diseases they are design to prevent.	4.31	0.84	4.03	0.95	0.41	NS
5	Failure to discuss with the doctors why a child should not be immunized.	4.17	0.99	3.50	0. 69	1.01	NS
6	Failure to complete children's immunization programme.	3.94	1.12	3.49	0.73	0.06	NS

Hypothesis 4: There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the environmental maintenance practices of mothers of pre-school children in North East.

Table 11: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the environmental maintenance practices of mothers of pre-school children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Poor method of disposing refuse	4.17	0.74	3.99	0.50	0.02	NS
2	Defecating indiscriminately	3.74	0.45	3.85	0.57	1.02	NS
3	Keeping of domestic animals without proper house for them	3.91	0.84	4.03	0.63	0.01	NS
4	Untreated sewage in the environment	3.77	0.65	3.83	0.66	0.24	NS
5	Getting water from unkept environment	4.11	0.45	4.07	0.65	1.30	NS
6	Leaving the environment unkept	3.91	0.50	3.99	0.69	0.06	NS
7	Keeping refuse bin uncovered	4.03	0.61	4.08	0.72	0.15	NS
8	Rearing of animals in the compound	4.06	0.60	4.14	0.70	0.13	NS
9	Observing daily and weekly cleaning of the house.	2.49	0.50	3.41	0.64	1.41	NS
10	Keeping the refuse bin area clean always	2.89	0.76	3.47	0.74	1.34	NS
11	Leaving stagnant water in the environment	3.37	0.82	3.82	0.67	0.26	NS
12	Sweeping the environment everyday	2.31	0.72	3.24	0.74	0.11	NS

Hypothesis 5: There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the general hygiene practices of mothers of pre-school children in North East.

Table 12:The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the General Hygiene Practices of Mothers of Pre-school Children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Interaction with animals	4.37	0.87	3.67	1.39	0.42	NS
2	Washing of hands after using toilet.	2.40	1.55	2.89	1.32	1.06	NS
3	Provision of liquid soap for pre-school children	2.14	1.26	2.18	0.89	0.08	NS
4	Indiscriminate defecation and urine	2.37	1.30	3.48	1.12	0.34	NS
5	Negligence in taking proper care of pre-school children body.	4.31	1.13	3.98	0.98	1.01	NS
6	Washing of hands before eating	2.51	1.42	3.34	1.25	0.86	NS
7	Disinfection of areas where animals are kept	1.97	1.33	2.53	1.20	0.50	NS
8	Regular Vaccination of animals.	2.00	1.39	2.04	.928	0.23	NS
9	Covering of waste basket with lid.	1.91	1.14	2.37	1.14	1.18	NS
10	Wrapping of kitchen wastes in bags before disposal.	1.74	0.96	2.11	.887	1.34	NS
11	Giving pre-school children left over foods.	4.17	1.09	3.44	1.21	0.55	NS
12	Cleaning of finger nails always	2.17	1.33	2.82	1.23	0.43	NS
13	Washing of dirty plates always	2.46	1.52	3.10	1.25	0.65	NS
14	Regular Cleaning of the cooking areas.	2.37	1.17	2.80	1.17	0.11	NS

Hypothesis 6: There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the clothing care practices of mothers of pre-school children in North East.

Table 13: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the Clothing Care Practices of Mothers of Pre-school Children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Washing of pre-school children's clothes regularly	2.54	1.40	3.18	1.45	0.55	NS
2	Leaving children's clothes torned with spoilt zippers and buttons	3.51	1.31	3.20	1.17	1.31	NS
3	Leaving stain on clothing for a longer period.	3.63	0.33	3.29	1.14	0.70	NS
4	Storing together of dirty and clean clothes.	4.20	1.18	3.28	1.18	0.99	NS
5	Ironing of children's clothes after washing	1.83	1.09	2.69	1.27	1.20	NS
6	Sorting clothes before washing	1.86	1.08	2.63	1.14	0.76	NS
7	Dressing children to suit the weather	1.83	1.09	3.17	1.32	0.45	NS
8	Providing suitable storage for children's clothing	2.06	1.23	2.38	1.11	0.33	NS
9	Putting clothes that need to be washed in a dirty clothes basket	3.74	1.40	3.14	1.33	1.18	NS
10	Having clean clothes ready to wear whenever the pre-school children needs them.	2.09	1.54	2.77	1.34	1.34	NS
11	Checking hang tags and labels on the garments before buying clothes for the pre-school children.	2.06	1.37	2.38	1.20	0.54	NS
12	Checking and mending the pre-school children's clothes before washing.	1.97	1.78	2.11	1.10	0.61	NS

Hypothesis 7: There will be no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the ways of improving the level of health care practices of mothers of pre-school children in North East.

Table 14: The t-test Analysis of the Mean Responses of the Mothers of Preschool Children and Home Economics Teachers on the ways of improving the Level of Health Care Practices of Mothers of Pre-School Children in North East

S/N	Item statements	X_1	S^2_1	X_2	S^22	t-cal	Remarks
1	Living in clean environment	4.66	0.48	4.45	0.89	0.42	NS
2	Acquiring more knowledge on different ways of improving the health of pre-school children	4.60	0.49	4.20	0.84	1.42	NS
3	Focus on good nutrition	4.54	0.50	4.40	0.88	0.70	NS
4	Taking regular immunization against diseases	4.66	0.68	4.33	0.89	0.33	NS
5	Taking of good drinking water	4.66	0.48	4.29	1.01	1.10	NS
6	Regular medical check up	4.51	0.50	4.05	1.07	0.76	NS
7	Strict adherence to cleanliness	4.60	0.49	4.24	1.13	0.85	NS
8	Observation and detection of signs and symptoms of diseases	4.37	0.64	3.85	1.25	0.13	NS
9	Having knowledge of food value, how to plan, and cook to meet the nutritional needs of the children	4.43	0.65	3.78	1.38	1.38	NS
10	Prevention of stagnant water in the surroundings	4.54	0.50	3.78	1.40	1.34	NS
11	Observing safety rules at home.	4.57	0.50	3.80	1.33		NS
12	Providing three nutritious meals and snacks at intervals of every 2-3 hours for the pre-school children	4.37	0.64	3.89	1.23	0.81	NS
13	The environment should be free of hazards such as electrical cords and containers of hot foods.	4.54	0.50	4.08	1.22	1.22	NS
14	Maintaining good food, personal and kitchen hygiene	4.63	0.49	3.84	1.20	1.31	NS
15	Using of clean clothes	4.63	0.49	3.85	1.19	1.02	NS

DISCUSSION

The findings of this study in Tables 1-14 revealed that 7 feeding practices that are presently utilized by mothers of the pre-school children in North East. These feeding practices include only feed children with balance diet when family income permits, do not give children egg as part of any meal, always give the children biscuits to school every day, feeding of children with more of carbohydrates than protein, pre-school children are fed with left over foods, feeding pre-school children without considering their age group and developmental stages and buying water from hawkers for drinking and cooking. These findings were in agreement with the opinion of Omuemu and Ofili, (2007) that feeding children without considering their ages is the common practice among rural parents. The author also added good feeding is one of the most vital needs of the children because they are in a growing stage. If a child does not feed well according to the authors, it will not only hamper optimum growth but can also result in sickness. Also these findings were in line with the opinion of Mwada and Nwokonkwo, (2005) that feeding children with too much carbohydrate disturb their rate of development. The author added that feeding a child with carbohydrate all the time leads to malnutrition and health problems.

The findings of this study revealed that 15 constitutes of proper feeding practice of mothers of pre-school children in North East. Pre-school children's food should contain enough protein foods and be prepared with fresh ingredients. They should be fed with fruits, vegetables and foods that are difficult to chew should be cut into smaller pieces for pre-school children. Good quality snacks should be included in pre-school children meals, mothers should include milk drinks in children's meals, meal planning should be based on children's nutritional needs, meal times should be supervised and pre-school children should be fed with balanced diet always. These findings were in agreement with the opinion of Roger, (2002) that mothers of pre-school children who care about their children will want to feed them well to give them a good start in life. A child who is to grow into a healthy adult needs a balanced diet. In line with the above, Minett, (2000) stated that children who eat a balanced diet are more likely to develop a strong well formed body, have energy to keep warm and their bodies keep healthy, this will help them to grow to their full potential height and maintain a suitable weight for their height and age. The findings were also in consonance with the opinion of Minett, (2000) that pre-school children should be offered milk, protein foods e.g meat, fish, cheese, eggs, beans vegetables raw or cooked, bread, whole grain, cereals, potatoes and rice during the day in their diet to keep them in good health.

The findings of this study revealed 6 immunization practices of mothers of pre-school children in North-East. These include not meeting the immunization schedule for their children, self prescription of drugs for children to relief pain as a result of immunization, failure to bathe children for some days after immunization, more concerned about the potential side effects of vaccines than the risk of the diseases they are design to prevent, failure to discuss with the doctors why a child should not be immunized and failure to complete children's immunization programme. These findings were in line with the opinion of Zara (2004) that some pre-school children are not adequately immunized which is principally due to the failure of their mothers to complete their children's immunization programme. Also the findings were in agreement with the opinion of Sage (2007) that some mothers sometime fail to bathe children for some days after immunization.

The findings of this study revealed 9 environmental maintenance practices of the mothers of pre-school children in North East. These findings include poor method of disposing refuse, defecating indiscriminately, keeping of domestic animals without proper house for them, untreated sewage in the environment, getting water from unkept environment, leaving the environment unkept and keeping refuse bin uncovered. These findings were in agreement with the opinion Nyanko, (2004) that one of the factors affecting the health of the pre-school children is poor environment as a result of indiscriminate defeacation and dirty water. Also in consonance with the opinion of Nnedinso, (2007) that many poisonous substances in the environment can harm people, especially children. The author stated that these poisonous substances may lead to certain diseases transmitted by any of the following agents – water, air, food and insects. The author further stated that drinking unclean water often leads to the spread of cholera, diarrhea, dysentery and other water borne diseases. The findings were also in line with Nyanko, (2004) who further stated that if the community sources of water is polluted or contaminated in the environment by industrial waste or as a result of not being treated, children become victims of diarrhea, typhoid fever and cholera.

The findings of this study revealed 4 general hygiene practices of mothers of pre-school in North East. Among the findings are: interaction with animals, negligence in taking proper care of pre-school children body, giving pre-school children left over foods and indiscriminate defecation and urine. This was in agreement with the opinion of Glenco (2002) that indiscriminate defecation and urine sometimes common among some parents which can lead to sickness of children. These findings were also in consonance with the opinion of Sorte et al (2011) that interaction with animals is a fun but animal can introduce certain types of infections especially in the area that less attention is given to animal care.

The findings of this study revealed 5 clothing care practices of mothers of pre-school children in North East. These findings include washing of pre-school children's clothes regularly, leaving children's clothes thorned with spoilt zippers and buttons, leaving stain on clothing for a longer period and storing together of dirty and clean clothes. These findings were also in consonance with the opinion of Plate and Eubanks, (1994) that parents of pre school children should wash their clothes regularly. These also in line with the opinion of Anyakoha and Eluwa, (1999) that mothers should wash children's clothing with mild soap and rinse children's clothing thoroughly to remove all washing powder otherwise, the child's tender skin is liable to be irritated.

The findings of this study revealed 13 ways of improving the level of health care practices of mothers of pre-school children in North East. These include living in clean environment, acquiring more knowledge on different ways of improving the health of pre-school children, focus on good nutrition, taking regular immunization against diseases, taking of good drinking water, regular medical check up, strict adherence to cleanliness and observation and detection of signs and symptoms of diseases. These findings were in agreement with the findings of Ogana (2005) that the pre-school mothers should observe the health of their children since they spend more time with them. Also a mother should be able to detect signs and symptoms of diseases in a child she is in regular contact with e.g high body temperature, water eyes with pus, ear discharge, watery stool and constant vomiting or spitting, the child should be taken to the hospital without any delay. These also in line with the finding of United Nations International Children Emergency Fund (UNICEF), (2000) that proper feeding promote growth and development, that a child is properly fed if he is getting the correct types of food components and enough quantity.

There was no significant difference in the mean responses of the mothers and Home Economics teachers on the present feeding practices of mothers of pre-school children in North East. The implication of the findings is that the opinions of the respondents are not differed significantly on each present feeding practice items. There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on what should constitute feeding practices of mothers of pre-school children in North East. The implication of the finding is that the knowledge of the respondents did not significantly affect their opinions on what should be constitute of feeding practices of mothers of pre-school children in North East.

There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the immunization practices of mothers of the pre-school children in North East. The implication of the finding is that the knowledge of the respondents did not significantly affect their opinions on each item. There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the environmental maintenance practices of mothers of pre-school children in North East. The implication of the findings may also be attributed to the fact that all findings identified are environmental maintenance practices of mothers of pre-school children in North East.

There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the general hygiene practices of mothers of pre-school children in North East. The implication of the findings may also be attributed to the fact that all findings identified are general hygiene practices of mothers of pre-school children in North East. There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the clothing care practices of mothers of pre-school children in North East. The implication of the findings may also be attributed to the fact that all findings identified are clothing care practices of mothers of pre-school children in North East.

There was no significant difference in the mean responses of the mothers of pre-school children and Home Economics teachers on the ways of improving the level of health care practices of mothers of

pre-school children in North East. The implication of the findings is that the knowledge of the respondents did not significantly affect their opinions at each level of health care practices of mothers of pre-school children in North East.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, the following conclusions were drawn: ways for improving health care practices of mothers of pre-school children such as living in clean environment, acquiring more knowledge on different ways of improving the health of the pre-school children, focus on good nutrition, taking regular immunization against diseases, taking of good drinking water, regular medical check up, strict adherence to cleanliness, observing and early detection of signs and symptoms of diseases, having knowledge of food value, how to plan, and cook to meet the nutritional needs of the children, prevention of stagnant water in the surroundings, observing safety rules at home, providing the nutritional needs and snacks at intervals of every 2-3 hours for the pre-school children, using of clean clothes should be adopted in disseminating improvement of health care practices information. Meal dwellers should be educated on the need to improve health care practices of mothers of pre-school children.

Based on the findings of this study, the researcher made the following recommendations for improving health care practices of mothers of pre-school children in North East.

1. Seminars and workshops should be organized for mothers on proper ways of taking care of pre- school children.
2. The pre-school mothers should be educated on how to prepare nutritious recipes based on some inexpensive, locally available foods.
3. The study recommends strongly the need for the local government council to promptly embark on an aggressive nutrition, health, and extension education. This will enhance the capacity of the women to feed and improve the nutritional health status of their children.
4. Adequate nutrition and nutrition education during pregnancy and lactation should be intensified in the rural communities. Health centres and personnel in these areas should be equipped and empowered to offer nutrition intervention and counselling to these mothers.

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REFERENCES

Abanobi, O. C. (2005). Wellness and Illness state. Owerri Nigeria; Published by Opinion Research and Communications Inc.

Afro, B. C. (1999). The impact of the Navrongo community healthy and family planning project. Paper presented at the Annual meeting of the population Angeles, California, 23-35.

Akinyaju, (2005). Fundamentals of Human and Applied Nutrition. Lagos: Concept publications.

Albala, and Montanari, M. (2000). Food Systems and Models of Cilization. A culinary History from Antiqity to the present, J. L. Flands and Montari eds, Kenya: Penguin Books.

Aphan, B. K. (2003). The Dilemma of the Nigerian Rural Environment Journal of Women of Colleges of Education (JOWICE) 10351-356.

Atijegbe, G. A. (2006). The Role of Women in Diet for Youth Development. Journal of Women in Colleges of Education (JOWICE): 10:351-356.

Berger, K. S. (2005). The Developing Person through the life span. Sixth Edition Catherine Woods: Worth publishers.

Brownson, M. Anyakoha, E. U. (2008). Strategies for enhancing maternal and child health (MCH) Education Programme for Expectant and Nursing mothers in Federal Capital Territory (FCT) Abuja Nigeria. Journal Home Economics Research (JHER) 9 () 246- 249.

China, M. A. Ohuzor, A. J. & Adiela, A. (2009). Challenges of Unhygienic Environment on the physical health of children (Age 0-6 years). A paper presented at the 10th Annual National Conference of Home Economics Research Association of Nigria (HERAN). University of Nigeria, Nsukka, Sept., 2009.

Effiom, T. P. (2005). The vitality of Women in Health care and National Development. Journal of Women in Colleges of Education (JOWICE). 12(1): 151-153.

Ekaete, I. A. (2008). A case study of the Nutritional status of Children of low income families in Samaru village of Ahmadu Bello University, Zaria. Journal of the Home Economics Research. 9(1): 24-27.

Estes, J. W. (2008). Food as Medicine in History, in Nutrition and Health Cambridge World History of Food Vol. 2 KF Kiple and KC Ornelas eds. Cambridge: University press.

Gasua, A. M. &b Abdullsalmi, (2004). Child Immunization against killer disease versus cultural and religious stereotypes in Bade Local Government Area of Yobe State. Journal of Women in Colleges of Education North East Zone (JOWICENEZ).

Good, B. (1994). Medicine Rationality and Experience: An anthropological perspective. Cambridge, UK: Cambridge University press.

Hasler, D. (1998). Nutrition and Wellness. New York: Glencoe McGraw-Hill,

Hinderbrand, V. (2000). Parenting Rewards and responsibilities. New York: Glencoe McGraw Hill.

Horby, A. S. (2006). Oxford Advanced Learner's Dictionary of Current English 7th Edition. Oxford: University Press.

Ibrahim, G. (2004). Health of the Child: Predicament of a typical school child. Journal of Women in Colleges of Education. North East Zone (JOWICENEZ) 1(10):55.

Kambayari, A. (2004). Environmental Pollution and its effects on the Health of Women in Colleges of Education North East Zone. Journal of women in Colleges of Education. North East Zone (JOWICENEZ) 1. (1): 150 -151.

Kerstern, & Kersten (2001). Marriage and family: Studying close relationships. New York: Row publishers.

Lamb, M.E. (1998). Non-Parental Child Care Context Quality. New York: John Willey and Sons.

Lukas, A. O. & Gills, H. M. (2003). Health Medicine for the Tropics. 4th Edition London: Book power.

Maslow, A. H. (1980). Motivation and Personality. New York: Community College City University Press.

Mba, P. E. (2001). Nutrition and Academics performance. Journal of Women in Colleges of Education. 5:5-7.

Minett, P. M. (2001). Child Care and Development. 3rd Edition London: Great Britain Butler and Tanner Ltd.

Nwada, M. & Nwokonkwo, C. W. (2005). Improving Weaning diets with legumes. A paper presented at the conference of Women in Colleges of Education (WICE) Abuja 4-6.

Njoko, I. & Okoroafor, C. I. (2008). Unhygienic Environment on Children. A paper presented in Home Economics Research Association of Nigeria (HERAN) University of Nigeria, Nsukka.

Nnadiso, O. (2007). Nutrition for the vulnerable group. Nigerian journal of Nutritional Sciences. 29 Ambik Press Benin City, Nigeria.

Nzelum, V. N. (2003). Education of girls a sure way to effective good health awareness by the next millennium. Journal of Women in Colleges of Education. 1(1): 84-86.

Ogana, B. C. (2005). Nutrition and Child survival: The Fate of the Nigeria Child. Journal of Home Economics Research (HERAN) 6(1): 23-24.

Okeke, B. I. (2004). Learning Activities for Development of pre-school children in Anambra State. Journal of Home Economics Research 5 (3): 2-5.

Olaitan, S. O. & Akpan, A. E. (2003). Children Development and Family life Education. Nsukka: Nudu printing and publishing company.

Olua, E. B. & Igbo, C. A. (2008). Improving the Practices adopted by Mothers in the Management of their children in Urban and Rural Areas in Umuahia, Abia State. Nigeria journal of Nutrition Science 28(2): 30-33.

Olua, E. B. & Igbo, C. A. (2008). Improving the Practices adopted by Mothers in the Management of their children's clothing in Enugu State. Journal of Home Economics Research (JHER) 9:227.

Onimawo, I. A., Ukaegbu, P.O. and Abaoja, N. (2007). Assessment of Nutritional status of pre-school children in urban and rural area in Umuahia, Abia State. Nigeria Journal of Nutritional Sciences 29(1) 20-22.

Onimawo, I. A., Ukaegbu, P.O. and Abaoja, N. (2007). Assessment of Nutritional status of pre-school children in urban and rural area in Umuahia, Abia State. Nigeria Journal of Nutritional Sciences 28(2): 30-33.

Onyechi, U. A. and Ugwuja, V. C. (2008). Pre-School children: Their Eating pattern, Anthropometric measures and Health status. Nutrition Society of Nigeria. 29(1): 44-47.

Opera, R. M. (2006). The rights of the child. Journal of Women Colleges of Education North East Zone. (JOWICENEZ) 1(2): 74-75.

Osuala, E. C. (2001). Foundation of Vocational Education. Enugu: Cheston Agency Ltd.

Papalia, D. E. (2001). Foundation of Vocational Education. Enugu: Cheston Agency Ltd.

Papalia, D. E. (2001). Human Development. 8th Edition. New York: McGraw-Hill Americana.

Sage, T. W. (2009). An introduction to early childhood. 2nd edition London: SAGE publication Ltd.

Santrock, H. (2011). Theories of clothing. Unites States of America: Ezine publishers.

Santrock, J. W. (2001). Child Psychology. The Modern Science. 2nd Edition. New York: John Willey and sons inc.

Sorte, K. Daeschel, I. & Amador, C. N. (2011). Nutrition Health, and Safety for young children Library of Congress: Peason Education, Inc.

Suma, B. M. (2008). Women Health care and National Development in Nigeria in the 21st century. Journal of Women in Colleges of Education (JOWICE) 12(1): 13-15.

Trollope-Kumur, K. (2011). Theories of Health and Illness. Retrieved from www.healththorieskutrl.com on 10-6-2011.

Tutare, J. Z. (2002). Fundamentals of Nutrition for Schools and Colleges. 1st edition Yola, Nigeria: Paraclete publishers.

United Nations International Children Emergency Fund (UNICEF) (2000). The State of the World's Children. New York: Oxford University press.

United Nations International Children Emergency Fund (UNICEF) (2007). States of the World's Children. New York: Oxford University press.

Wayne, A.P., Dale, B. H., Elle., B. (2005). Understanding your health. Published by McGraw-Hill Companies Inc.

World Health Organization (WHO, 1986). Concepts of Health Behaviour. New Delhi: Research Health paper No 13, SERO.