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Knowledge and Practice of Under-Two Children Weaning among Mothers Attending Two Primary Health Care Centres in Port Harcourt Local Government Area of Rivers State

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Abstract

The study determined the knowledge and practices of under-two children weaning among mothers attending primary health care centres in Port Harcourt Local Government Area of Rivers State. The study used descriptive research design. The population for the study was 127 and applying census technique a sample size of 127 respondents was selected from these two primary health care institutions during the period. The instrument for data collection (primary source) was the questionnaire. The data collected were analysed using simple percentage and Chi-square statistics. Findings from the study revealed that the average knowledge level of mothers regarding under-two children weaning was averagely high (75.03%). Mothers' practices regarding under-two children weaning was also high with an average value of 69.82%. The perceived outcome on under-two children weaning practices on mothers and children revealed average value of 59.84%. There was no statistical difference between level of both knowledge and practices of mothers on under-two children weaning in the two centres ($p < 0.05$). It was recommended that nurses should continue to educate and train mothers on appropriate under-two children weaning practice techniques. Hospitals with government support should regularly organize programmes to educate and train mothers on under-two children weaning to improve their knowledge and practices including publishing of handbooks on them. Awareness on under-two weaning should be raised in children welfare clinics and community centres to improve mother's knowledge and practices regarding under-two children weaning.

Keywords: knowledge and practice, mothers, under-2 children, weaning

Introduction

Breastfeeding has been a usual and intermittent activities of mammalian animals. Undertaking this task in the most appropriate way is a matter of utmost importance. When a baby needs the extra nutrients and their body is ready to process those existing solids, the best foods to try with are those that are easily digestible and unlikely to cause an allergic reaction. Babies love feeding themselves, so offer them finger foods right from the get-go. It is very important to wean your baby rightly, for mothers to have a complete healthy baby that is free from various sickness, infections or malnutrition there is need to yield to the right weaning habit (i.e. weaning at the first 6months of child's life). However, for a baby to be healthy to adapt to weaning activities, necessary weaning knowledge and practice are often required. It was founded on the knowledge that babies have an inherent iron reserve that lasts for almost six months until it runs out, necessitating the consumption of iron-rich solid foods like pulses, meat, and fish.

On this premise, the American Academy of Pediatrics (2012) recommended feeding infants only breast milk for the first 6months after birth. Health professionals define weaning as: The period when breast feeding or formula feeding is gradually supplemented with other foods in the infant's diet. Weaning is also when a baby moves from breast milk to other sources of nourishment (Nemours, 2014). According to UNICEF (2012), starting a safe, nourishing complementary diet at the age of six months is essential for obtaining the best possible levels of growth, development, and health. The

process varies from culture to culture and is often regulated by the child's individual needs. It should be the usual practice in all antenatal clinics to enquire about the age and diet of the child at home, since the occurrence of pregnancy is a danger signal for the previous child, who now becomes weaned according to local practices. Healthy babies of weaning age are growing and developing very well in communities around the world. Shaili et al. (2014) explained the dangers of such practices that poor weaning practices during infancy and early childhood do result in malnutrition, contribute to impairment of cognitive and social development, poor school performance and reduced productivity fast, so great care has to be taken to see that they are getting enough of the right kind of food. According to Inayatii et al. (2012), prevalent behaviors in later life include inappropriate weaning from breast milk, early introduction of complementary feeding, and infant weaning with extra feeds of breast milk substitutes.

There may be many issues throughout the weaning process, and there is typically a knowledge gap on how and when weaning occurs. Children must receive adequate nourishment during infancy and the early years of life in order to grow and develop (Ashmika et al., 2013). It is well acknowledged that breastfeeding benefits both mothers and children, and that breast milk is the best source of nutrition for infants (ku & Chow, 2010). Halif (2011), reported that the World Health Organization (WHO) advises that newborns should be nursed exclusively for the first six months, following which supplemental foods should be offered until they are two years old or older. The child's growth and development are most influenced by the first two years of life. Any harm brought on by nutritional undernutrition at this time could result in hampered joint development, reduced academic success, and low economic production (Kimani-Murage et al., 2011). Weaning can be a dangerous time for babies. In many places babies of weaning age do not grow well. They often fall ill and get more infections, especially diarrhoea, than at any other time. Babies who are malnourished may get worse during the weaning period, and babies may become malnourished for the first time during weaning period.

Poor feeding and illness stop many children of weaning age from growing well. This shows up on the growth chart as poor weight gain or in more serious case as weight loss. Halif (2011) recommended a gradual weaning period from 6 months to two years, for this allowed for the child to still receive the benefits from breastfeeding, while also consuming the necessary nutrients from the complementary foods. Furthermore, studies have shown that, while complementary foods are being added to children's diets, over half of mothers (52%) abruptly weaned their children, just 11.6% did so gradually (Somiya, 2014). It is expected that food would be adequately prepared, have the necessary nutrients, and be served at the right temperature and with the right texture. Malnutrition and sickness may result from improper weaning techniques, a lack of awareness of the child's food needs, and improper weaning techniques. Thus, Somiya (2014) narrated that the weaning period is a vulnerable time when the child should be attentively cared for and observed so as to maintain healthy condition. Therefore, information gotten on weaning will improve mother's practice of weaning since the mother is the most important person as well as its psychosocial care and growth. Mother-infant relationship is the most vital formative relationship for the child.

The primary proximate causes of malnutrition in the first two years of life include ineffective breastfeeding and complementary feeding techniques, high rates of morbidity from infectious illnesses, and these factors together. Breastfeeding benefits a kid both now and in the future; it lowers infant mortality and infection rates, enhances mental and motor growth, and guards against obesity and metabolic illnesses later in life (WHO 2010). The WHO advised exclusively nursing during the first six months, starting from the baby's first hour of life, to meet the infant's nutritional needs and promote optimal growth, development, and health, according to Kimani-Murage et al. (2011). The majority of nutrition issues in rural areas were caused by improper use of weaning food; however, to complement breastfeeding and then completely wean off breast milk requires choosing light nutritious food with thicker food for easy absorption, then replacing light nutritious food with thicker food using hygiene practices when preparing them (Shadia et al., 2013). The factors that influence the breastfeeding and weaning processes vary by country. Infant feeding issues, such as unwillingness to eat, colic, diarrhea, and vomiting, can affect the weaning process (Ashmika et al., 2013). These elements provide difficulties for moms (Gonah & Mutambara, 2016), which may in turn have a direct or indirect impact on the feeding schedule.

The provision of timely, enough, and balanced weaning food is probably one of the most significant single and direct remedial approaches to fight baby malnutrition, according to the study by Shaili et al. (2014). The development of young children is influenced by the right timings, as well as the right quantity and quality in a clean atmosphere and enhanced mother engagement time. In addition, clinical studies of the effects of different frequencies of feeding and composition of meals on total daily energy intakes by fully weaned children indicated that both energy density and meal frequency independently affected children total daily energy intake. The researchers unintentionally identified that some mothers visiting primary health care facilities in the Port Harcourt Local Government Area of Rivers State seemed to lack the necessary expertise of weaning a kid. Therefore, the researchers decided to research mothers visiting primary health care centers in Port Harcourt Local Government Area of Rivers State regarding their knowledge and practices of weaning infants under the age of two. They did this because they were concerned about the impact of incorrectly practiced processes on the developmental stages of the children, which results in the deaths of ten million children under the age of five every year.

Research questions

- i) How well-informed are women using basic healthcare facilities in Port Harcourt Local Government Area on weaning young children?
- ii) How do mothers who visit primary health care facilities in Port Harcourt Local Government Area handle weaning infants under the age of two?
- iii) What are the perceived resultant effects of practices regarding under-two children weaning on lactating mothers and children in Port Harcourt Local Government Area?
- iv) What differences exist in the knowledge and practice of under-two children weaning among mothers attending Elekahia and Orogbum Primary Health Care Centres in Port Harcourt Local Government Area?

Hypotheses

Ho1: There is no difference in knowledge of mothers on under-two children weaning in Elekahia and Orogbum Primary Health Care Centres.

Ho2: There is no difference in the practice of mothers on under-two children weaning in Elekahia and Orogbum Primary Health Care Centres.

Methodology

The study used descriptive research design with institutional setting. A total number of 127 mothers attending two primary health care centres in Port Harcourt Local Government Area of Rivers State constitute the study population (71 from Orogbum and 56 from Elekahia). Mothers who had children with ages from birth to 23 months were included whereas mothers whose previous child's age was less than 4 months were excluded. A sample size of 127 mothers was used based on sampling technique of enumeration or census. Stratified and systematic sampling techniques were applied. The instrument for primary source of data collection was the questionnaire. The pilot study was at Rumuigbo Health Care Centre. Use of Pearson Product Moment Correlation (mean method) coefficient gave reliability index of 0.77. The data from the 127 copies of the questionnaire were tallied, coded and presented using tables but analysed using percentage. Test statistics (Chi-square) were applied in the hypothesis testing.

Results

Tables 1 - 4 contained the results indicating response to the research questions.

Table 1

Knowledge of mothers regarding under-two children weaning

Variable (N=127)	Response	
	Yes (%)	frequency No (%)
Weaning as introducing supplementary food	95 (75)	32 (25)
Weaning basically from 6 months	71 (56)	56 (44)
Good weaning diet improve children immunity	110 (87)	17 (13)
Rice and pap as non-weaning diet	98 (78)	29 (22)
Proteinous diet not important when weaning	50 (39)	77 (61)
Physical development as one benefit of weaning	124 (98)	3 (2)
Poor weaning practice associated with child disease	119 (94)	8 (6)

Table 1 showed knowledge of under-two children weaning. Majority of mothers answered the question on knowledge of mothers regarding under-two children weaning in the affirmative and the item with highest affirmation so-answered by the mothers is 124 (98%). Again the mothers were knowledgeable on the fact that poor weaning practice is associated with presence of child diseases (119, 94%). Similarly, these mothers knew that appropriate weaning diet improve children immunity (110, 87%). These levels of knowledge were not surprising because they attend both antenatal and post-natal clinics. The average knowledge level was 75.03%.

Table 2

Mothers' practices regarding under-two children weaning

Variable (N=127)	Response	
	Yes (%)	Frequency No (%)
Giving children another food during weaning	100 (79)	27 (21)
Giving children proteinous food	77 (61)	50 (39)
Giving children vitamin supplements	121 (95)	6 (5)
Steadily increasing semi-solid food	85 (67)	42 (33)
Giving children any solid food	61 (48)	66 (52)
Giving children cereal and grains	88 (69)	88 (69)

Table 2 is mother's practice regarding under-two children weaning. Most of the mothers answered the question on mothers' practices regarding under-two children weaning in the affirmative. This position taken by these mothers were not unconnected with desired information acquired during attendance of both antenatal and post-natal clinics. The extent of practice is not in doubt, for these mothers were seen in health facility. The level of practice as expressed by these respondents is commendable, e.g. "Giving children vitamin supplements (121, 95%)", "giving children another food during weaning (100, 79%)", and "giving children cereal and grains (88, 69%)". The average practice level was 69.82%.

Table 3

Perceived outcome of under-two children weaning practice on mothers and children

Variable (N=127)	Response frequency	
	Yes (%)	No (%)
Weaning periods allow mothers ample time for other activities	52 (41)	75 (59)
Mothers hence have more leisure and rest	73 (57)	54 (43)
Improved maternal health possible	93 (73)	34 (27)
Mothers resume/start petty-trading for family support	86 (68)	41 (32)
Fostering mother-child relationship	78 (61)	49 (39)
Weaning periods allow mothers to feed baby well	87 (69)	40 (31)
Baby wellness better assured when properly weaned	99 (78)	28 (22)
Child social and motor skills developed during weaning	69 (54)	58 (46)
Solid foods help in the movement of the lips and jaw	67 (53)	60 (47)
Diarrhoea and malnutrition as common child condition during weaning	45 (35)	82 (65)
Obesity and metabolic diseases in later life obviated	89 (70)	38 (30)

Table 3 presented perceived outcomes of practices on weaning of under-2 children for the mothers and children. As persons receiving health talks during regular visits to health facilities, these mothers' responses showed affirmative regards for the stated variables/items except quite minimal for "diarrhoea and malnutrition as common child condition during weaning, 45(35%)". The first four items, e.g. 'possibly improved maternal health (93, 73%)' and 'mothers resume/start petty-trading for family support (86, 68%)' were the outcomes for the mothers. The next two: 'fostering mother-child relationship' (78, 61%) and 'weaning periods allow mothers to feed baby well (87, 69%)' were outcomes for both mothers and children. The rest, e.g. 'baby wellness better assured when properly weaned (99, 78%)', 'preventing obesity and metabolic diseases in later life (89, 70%)' and as 'period of child social and motor skills development (69, 54%)' were the outcomes for children. The average perceived outcomes of practices on weaning of under-2 children for the mothers and children was $76 \div 127 = 59.84\%$.

Table 4

a) Comparison of the knowledge on under-2 children weaning among mothers

Orogbum (N=71)			Elekahia (N=56)		
Yes	No	Total	Yes	No	Total
53	18	71	41	15	56
56	15	71	45	11	56
48	23	71	34	22	56
61	10	71	49	7	56
55	16	71	43	13	56
28	43	71	16	40	56
69	2	71	55	1	56

$\chi^2_{\text{calculated}}=0.06$, $\chi^2_{\text{critical}} = 12.59$, $p < 0.05$, Failed to reject H_0

b) Comparison of the practice of under-two children weaning among mothers

Orogbum (N=71)			Elekahia (N=56)		
Yes	No	Total	Yes	No	Total
56	15	71	44	12	56
43	28	71	34	22	56
68	3	71	53	3	56
23	48	71	37	19	56
37	34	71	27	29	56
49	22	71	39	17	56

$\chi^2_{\text{calculated}}=0.43$, $\chi^2_{\text{critical}} = 11.07$, $p < 0.05$, Failed to reject H_0

The statistical analysis, chi-square applied showed no difference between knowledge of mothers on under-2 children weaning in either Orogbum or Elekahia Primary Health Centre (Table 4a). In the

same vein, no difference between practice of mothers on under-2 children weaning in either Orogbum or Elekahia Primary Health Centre (Table 4b).

Discussion

The introduction of a soft, digestible diet that is sufficient in calories, protein, and other nutrients is necessary for weaning. Some researchers have applied the word ‘infant’ in weaning beyond the medically reserved one year, but this work noted this anomaly and preferably used the term: “under-two children”. A mixture of legumes and cereals with the quality protein-source like meat, makes a balanced form of protein. Energy intake has to be regulated.

Mothers’ knowledge on under-two children weaning --This study noted that majority of the mothers answered the questions on knowledge of mothers regarding under-two children weaning in the affirmative and that they had high knowledge of under-two children weaning. Findings, therefore, were ‘physical development as one benefit of weaning’ (98%), ‘poor weaning practice association with child diseases’ (94%), ‘good weaning diet linked to improved children immunity’ (87%), ‘rice and pap as non-weaning diet’ (78%) and ‘weaning as introducing supplementary food’ (75%). These findings were as expected by the researchers. Hasnain et al. (2013) investigated knowledge and practices of mothers for complementary feeding in babies visiting Paediatric Outpatients Department of Jinnah Hospital, Lahore, Pakistani. The present research has an average of 75.03% on knowledge of under-two children weaning which correlates with Hasnain et al. (2013) as they noted that the correct knowledge of initiation of complementary feeding was found in 54% of mothers. Furthermore, their study found that the overall knowledge of 24% mothers was good and 28% had poor knowledge of complementary feeding. It should be noted that the present study focused on mothers attending both antenatal and post-natal clinics, which status accounting for higher knowledge compared to Hasnain et al. (2013) research on mothers who merely visited Paediatric Outpatients Department. The just concluded research finding on knowledge was similar to finding of Akpor et al. (2020) in which majority of the mothers had good knowledge of feeding and weaning.

Mothers’ practices regarding under-two children weaning -- In this study most mothers answered the question on practice of mothers regarding under-two children weaning in the affirmative. Such findings include ‘giving children vitamin supplements’ (95%), ‘giving children another food other than milk during weaning’ (79%), ‘giving children cereal and grains’ (69%), ‘steadily increasing semi-solid food’ (67%), and ‘giving children proteinous food’ (61%). These findings came as expected by the researcher. The average practice level in this study was 69.83%. This high level was not unconnected with regular attendance in health talks during antenatal and post-natal clinics as in the case of these mothers. The level is higher compared with the work of Hasnain et al. (2013) revealing practiced level of only 43% whereas only 7% women had good overall practice. But they investigated mothers visiting Paediatric Outpatients Department most of whom probably had not received health talks. This study has a correlation with Akpor et al. (2020) who investigated feeding and weaning practice of mothers of under-five children in selected primary health care centres in Ado-Ekiti, Nigeria. Findings from their study revealed that main practice of feeding of the children by the mothers was at about 6-7months. Also, Akpor et al. (2020) found that the major type of weaning practiced by mothers was abrupt weaning, which was not the focus of this study.

The just concluded finding is averse to the work of Molla et al. (2017) who investigated complementary feeding practice and associated factors among mothers having children 6 to 23 months of age. They found that about 43.5% were not feeding their children complementary meal appropriately which was bound to have negative implication on the health of their children. There was a statistical significance of inappropriate complementary feeding practices with mothers’ occupation, postnatal care service, media exposure and mother’s decision on how the money is used, their study further showed.

Perceived outcomes of under-two children weaning practice on mothers and children

Findings were ‘possibly improved maternal health’ (73%) and ‘mothers resuming/starting petty-trading for family support’ (68%), ‘weaning periods allowing mothers ample time for other activities’,

'mothers thus having more leisure and rest', were the outcomes for the mothers. Others are 'fostering mother-child relationship' (61%) and 'weaning periods allowing mothers feed baby well' (69%) as beneficial outcomes for both of them. The children outcomes were 'baby wellness better assured when properly weaned' (78%), 'preventing obesity and metabolic diseases in later life' (70%), 'period of child social and motor skills development' (54%) and 'solid foods help in the movement of the lips and jaw' (53%). The researcher did not expect perceived outcomes of practice on weaning of under-2 children for the mothers and children of about 60% on average but 59.84% was obtained. There is dearth of recent information on outcomes of practice on weaning of under-2 children for the mothers and children, thus limiting comparative studies.

Difference in knowledge and practice levels on under-2 children weaning among mothers in two health centres

Using chi-square for statistical analysis to determine any differences between level of knowledge of mothers in Orogbum and Elekahia Primary Health Care Centres showed no difference. Similarly, statistical analysis to determine any differences between level of practice of mothers on under-2 children weaning in Orogbum and Elekahia Primary Health Care Centres revealed no difference. The lack of difference is not unconnected with the related contents of health talk and respondents being city dwellers whose residences were in utmost contiguity. There is still dearth of present studies of related comparative works in this area.

Conclusion

According to the study's findings, "under-two children weaning knowledge and practice are reasonably high, as evidenced in 75.03% average for knowledge and average practice level of 69.82% among women attending primary health care centers in Port Harcourt Local Government Area of Rivers State. This amount of practice made some desirable results possible. These include amongst others: 'possibly improved maternal health', 'mothers resume/start petty-trading for family support', 'weaning periods allowing mothers ample time for other activities', 'fostering mother-child relationship', 'weaning periods allowing mothers feed baby well', 'baby wellness better assured when properly weaned', and 'preventing obesity and metabolic diseases in later life'. There was no significant difference in knowledge and practice of mothers on under-two children weaning in Elekahia and Orogbum Primary Health Care Centres.

Recommendations

The following suggestions were made based on the study's findings:

- i. Children welfare clinics and community centers should create awareness about weaning young children to help mothers' understanding and practices in this area.
- ii. Nurses should educate and train mothers on appropriate under-two children weaning practice.
- iii. Hospitals should regularly organize programmes to educate and train mothers on under-two children weaning to improve their knowledge and practices.
- iv. There is need for publishing of handbooks and magazines concerning the knowledge and practice of under-two children weaning among mothers.
- v. Government should sponsor programmes to create more awareness on the knowledge and practices of under-two weaning among mothers.

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