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Maternal Education and Nutritional Compliance among Mothers of Under-Five in Abeokuta, Ogun State: Implications for Social Work Practice

Ajibola Abdulrahamon Ishola[1], Ajiboye Isaac Oyeleke [2]

ABSTRACT: This study investigated the influence of maternal education on nutritional compliance among mothers of under-five children in selected Hospitals in Abeokuta, Ogun State. The study was a descriptive survey design carried out at the Federal Medical Centre, Abeokuta; General hospital, Sokenu-Ijaye - Abeokuta; Sacred Heart Catholic Hospital, Lantoro; Olikoye Ransome Kuti Memorial Hospital, Asero and General Hospital, Odeda. Three hundred (300) mothers whose children are under five years old were conveniently sampled. Data was collected using a self-structured questionnaire. The result revealed that there was a significant association between education and nutritional knowledge (X2 (3) = 66.76, p< 0.05). Education was also associated with nutritional compliance behaviour among mothers (X2 (3) = 11.02, p< 0.05) while the level of nutritional knowledge was significantly associated with nutritional compliance behaviour among mothers (X2 (1) = 6.76, p< 0.05). It was concluded that nutritional knowledge and education significantly influence nutritional compliance among mothers of under-five and necessary recommendations were made. Its implications for social work practice were also discussed.

Keywords: maternal education, nutritional knowledge, nutritional compliance, children-under-five

1. Introduction

The major thrust of social work practice is to enhance human wellbeing, and one of the groups of people that are most vulnerable and whose wellbeing can be hampered are children under five years. Children in this category without adequate nutrition are liable to suffer from marasmus, kwashiorkor, goitre and death. Child malnutrition, particularly among under five years old children, is a widespread public health issue having international consequences. The immune system of children who are malnourished become weak, causing their bodies to have lower resistance to infection. As a result, they are more likely to die from common childhood conditions like diarrhea and respiratory tract infections; and for those who survive, due to their lower nutritional status, they are prone to recurring illness and faltering growth (Amuta, & Houmsou, 2009). Children, with chronic malnutrition, mainly when it occurs at an early age, rarely achieve their full potential of physical, intellectual, or cognitive development (UNICEF, 2012). An excellent diet with ideal degrees of nourishment and supplements is required to help keep up ideal health status for children under five years of age (Huybrechts, Briefel, Novak & Ziegler, 2008).

[1] *Department of Psychology, University of Ibadan, Nigeria*
[2] *Department of Social Work, University of Lagos, Nigeria*

Other than that, parents who have not been able to access education presents a noncomplementary diet to infants at the inappropriate time. An investigation done by Hendricks et al. (2006) uncovered that mothers who were able to access school education, began reciprocal sustenance at about the right time contrasted with those mothers who had no access to education.

As far as child nutrition is concerned, it is evident that parental involvement has a marked effect on food selection; when parents monitored children's food intake, the number of non-nutritious foods was lower (Eck, Klesges, & Hanson, 1989). Children, especially those who are under the age of five, are in the most vulnerable aspects of their lives because they are vulnerable to various growth and developmental milestone if not adequately cared. An essential aspect of their care is in their area of nutrition. Social workers working in healthcare system provide enlightenment programme that instructs nursing mothers on the care for their babies. An educational program tailored towards the nutritional aspect of babies can be of help in reducing malnutrition of the under-five children. It is against this background that this study is set to examine the influence of maternal education on the nutritional status of children.

The main objective is to examine the influence of maternal education on the nutritional status of children.

2. Research Hypotheses

1. $H0_1$: There is no significant relationship between education and maternal knowledge of infant nutrition.
2. $H0_2$: There is no significant relationship between education and mothers' nutritional compliance.
3. $H0_3$: There is no significant relationship between maternal knowledge of infant nutrition and mothers' nutritional compliance.

3. Theoretical Framework

The theoretical framework that will guide this study is the knowledge, attitude and practice model. The model establishes that there is a strong interrelatedness between knowledge, attitude and practice. According to the model, an individual who is well informed about a cause of action and the implication has a very high chance of forming a positive attitude about the action. This attitude, if positive, will lead to a tendency to perform that behaviour. It implies that the knowledge of mothers about healthy nutrition for their children is a strong predictor of the attitude that the mothers will have about it. This implies that, if the mothers are aware of the enormous impact that adequate nutrition plays on their children's diet, they will develop very positive, health behaviour about it.

4. Maternal Education and Nutritional Knowledge

Mothers are individuals who are dependable to nourish their children and simultaneously sustain the eating practices of their youngsters. Poor wholesome status of children mirrors a lopsidedness in dietary intake and influenced by various ecological and financial factors, for example, low salary families (Hong, Banta & Betancourt, 2006), maternal education level (Hien & Hoa, 2009), child's introduction to the world request and term of breastfeeding (Kamal, 2011).

Among these variables, mother's education has been viewed as having a more prominent effect on the nutritional outcome of infants (Hien & Kam, 2008; Liaqat, Rizvi, Qayyum, Ahmed & Ishtiaq, 2006). This was empirically supported by Abdalla, Sulieman, El-Tinay and Khattab (2009) that though, low educational attainment among mothers was causing the variation in feeding. However, this does not suggest that children from mothers with higher educational attainment were healthier than those of women with low (Liaqat et al., 2006). Willey, Cameron, Norris, Pettifor, and Griffiths (2009) demonstrated that maternal education influenced child health and developmental milestones. It is shown that reduced odds of stunted were decreased with length of formal maternal education (Semba, 2008). Similarly, Ramli, Agho, Inder, Bowe, Jacobs, and Dibley (2009) demonstrated that maternal educational attainment, knowledge of nutrition, and lower poverty levels predicted lower stunted rates among children. In another approach, the low education level was demonstrated to affect the mother's ability to take care of their child in an appropriate way (Matthew, Amodu, Sani & Solomon, 2009). Despite these, the greater percentage of mothers, no matter their level of education, in the developing nations did not exclusively breastfeed their child for the first six months (Fewtrell, Morgan, Duggan, Gunnlaugsson, Hibberd, Lucas & Kleinman, 2007). Currently, exclusive breastfeeding is poorly practiced as most of the mothers are working and targeting higher household income. These have led to the rampant use of complementary feeding (infant formula) rather than exclusive breastfeeding (Tan, 2009). Education helps mothers to gain additional knowledge about the adequate intake of food for their children in terms of the correct quantity, quality and frequency.

5. Maternal Education and Nutritional Compliance

A mother's education level affects a child's nutrition through her choices and health-seeking skills related to nutrition, hygiene, preventive care and treatment of disease. The mother's responsibility to care for herself during pregnancy and her child through the most vulnerable stages of the life significantly results in under-five child malnutrition. Several studies have found out that mothers' education is associated with good nutrition practices and particularly under-five child nutrition (Babatunde & Qaim, 2010; Olwedo, Mworozi, Bachou & Orach, 2008; Webb & Block, 2004). With the increasing level of mother's education, the proportion of children who are malnourished goes down as found out in the Uganda Demographic and Health Survey of 2006 (UNICEF/MI, 2012). This result is consistent with the findings of Webb and Block (2004) that highlighted the importance of human capital investment in improving child nutrition status. This implies that educated mothers are better aware of the nutrition requirements of their children by providing improved health care (Babatunde, Omotesho & Sholotan, 2011).

According to Lisa and Lawrence (2000), the education of a mother has several potentially positive effects on the quality of care of children and consequently malnutrition. More educated women are better able to process information, acquire skills and model positive caring behaviours. More educated women tend to be better able to use healthcare facilities to interact effectively with health care providers, to comply with treatment recommendations and to keep their living environment clean. Mother's education is associated with more efficient management of limited household resources, higher utilization of available health care services, better health-promoting behaviours, lower fertility as well as child-centred caring practices. All this consequently results in

a reduction in malnutrition among under-five children (Nguyen and Kam, 2008). In Abeokuta and its environs, it is essential to conduct this study as it will provide empirical knowledge and a body of literature about the peculiarities of maternal education and nutritional compliance of mothers of children under-five years old.

6. Method

A descriptive design was used for this study. The participants include mothers of under-five children attending five hospitals that include Federal Medical Centre, Abeokuta; General hospital, SokenuIjaye - Abeokuta; Sacred Heart Catholic Hospital, Lantoro; OlikoyeRansomeKuti Memorial Hospital, Asero and General Hospital, Odeda. Purposive sampling technique was used to select a total of 300 respondents for the study. Data was collected using a Self-structured questionnaire. Clearance was obtained from the Research and Ethical Committees of the Federal Medical Centre, Abeokuta.

Furthermore, permission to carry out the study was obtained from the parents. The data collected were analyzed using the percentage, mean and standard deviation to analyze the demographic characteristics of the respondents. For the inferential statistics, chi-square analysis was used to test the hypothesis at 0.05 level of significance.

7. Results

Table 1: Crosstab of Mothers's education and maternal knowledge of infant nutrition.

		Maternal Knowledge		Total	Chi-Square	df	Sig.
		Poor	Good				
Education level	No schooling	14 (63.6%)	8(36.4%)	22(100.0%)			
	Primary education	1(33.3%)	2(66.7%)	3(100.0%)	66.76	3	.000
	Secondary education	9(16.4%)	46(83.6%)	55(100.0%)			
	Tertiary education	12(5.5%)	208(94.5%)	220(100.0%)			
Total		36 (12.0%)	264 (88.0%)	300 (100.0%			

(X^2cal = 66.76, df = 3, p< 0.05)

The result in Table 1, revealed that there was a significant association between education and Maternal knowledge of infant nutrition. The larger percentage of respondents with and tertiary education reported good knowledge about infant nutrition (χ^2 (2) = 66.758, p< .05). The result shows that there is a significant relationship between mothers' level of education and maternal knowledge of infant nutrition. The null hypothesis is therefore rejected (X^2cal = 66.758, X^2crit = 7.18 at 0.05 level of significance). The findings indicate that there is a significant association between mothers' educational attainment and knowledge of hygienic, nutritional behaviour.

Table 2: Crosstab of Mothers knowledge and education and Mothers' nutritional compliance.

		Mothers' nutritional compliance		Total	Chi-Square	df	Sig.
		Compliant	Non-compliance				
Education level	No schooling	3 (13.6%)	19 (86.4%)	22 (100.0%)	11.02	3	.000
	Primary education	2(66.7%)	1(33.3%)	3 (100.0%)			
	Secondary education	16 (29.1%)	39 (70.9%)	55 (100.0%)			
	tertiary education	33 (15.0%)	187 (85.0%)	220(100.0%)			
Total		54 (18.0%)	246 (82.0%)	300 (100.0%)			

(X^2cal = 11.02, df = 3, p< 0.05)

Table 2 revealed that there was a significant association between mothers' education and nutritional compliance. The larger percentage of respondents with primary (66.7%) and secondary (15%) and tertiary education (85%) reported more compliance than mothers without any formal schooling. The results show that there is a significant relationship between mothers' level of education and Mothers' nutritional compliance. The null hypothesis is therefore rejected (X^2cal = 11.02, X^2crit = 7.81 at 0.05 level of significance).

Table 3: Crosstab of Mothers knowledge and Mothers' nutritional compliance.

		Mothers' nutritional compliance		Total	Chi-Square	df	Sig.
		Compliant	Non-compliance				
Education level	Poor	9(25.0%)	27(75.0%)	36 (100.0%)			
	Good	45(17.0%)	219 (83.0%)	264 (100.0%)	6.76	1	<.05
Total		54 (18.0%)	246 (82.0%)	300 (100.0%			

(X^2cal = 6.76, df = 1, p< 0.05)

Result in Table 3, revealed that there was a significant association between knowledge of infant nutrition and Mothers' nutritional compliance. The larger percentage of respondents with good knowledge of infant nutrition reported the highest compliance rate. This shows that there is a significant relationship between knowledge of infant nutrition and Mothers' nutritional compliance. The null hypothesis is therefore rejected (X^2cal = 6.76, X^2crit = 3.84 at 0.05 level of significance). These findings are similar to the findings of Maziya-Dixion et al., (2004) that maternal knowledge plays significantly in mothers nutritional value and decision to implement nutritional information. Also, the findings support the study of Block and Peracchio (2006) that there are significant associations between nutrition knowledge and nutritional decisions.

8. Discussion

The result shows that there is a significant relationship between mothers' level of education and maternal knowledge of infant nutrition. The findings indicate that there is a significant association between mothers' educational attainment and knowledge of hygienic, nutritional behaviour. This finding is similar to Spronk, Kullen, Burdon, and O'Connor (2014) that education improves the knowledge and nutritional habit of mothers of the infant. In addition to that, the finding supports the study of Bonsmann and Wills (2012) that mothers with secondary and tertiary education have more access to knowledge and information than mothers who did not attend any formal schooling. The null hypothesis is, therefore rejected. This finding is similar to the findings of Miller and Cassady (2012) that education is particularly useful when deciding on nutritional value and the decision to implement nutritional information. Also the finding supports the study of Walker, Holte, Spratford, Oleson, Van Buren, Bentler, Roush, and Moeller (2014) that maternal education has a significant influence on the outcome of the children as child mortality rates are about five times higher among the less educated group due to several factors such as better hygiene, improved nutrition and feeding practices, and timely medical intervention. The null hypothesis is, therefore rejected. This finding is similar to the findings of Maziya-Dixion, Akinyele, Oguntona, Nokoe, Sanusi and Harris (2004) that maternal knowledge plays significantly in mothers' nutritional value and decision to implement nutritional information. Also, the findings support the study of Nuss, Freeland-graves, Clarke, Klohe-lehman, and Milani (2007) that there is a significant association between nutrition knowledge and nutritional decisions.

9. Conclusion

The study examined the role of knowledge and education in nutritional compliance for mothers of under-five years old children. Mothers' educational status and nutritional knowledge were associated with dietary compliance, despite the increasing non-compliance among mothers with lower educational levels in urban centers. Factors that determine the decisions of parents to adhere to health recommendations for their infant were greatly influenced by education and nutritional knowledge. Mothers suspected to be poorly compliant may require specialized and repeated education at an early stage of child development. These mothers have to be encouraged to do something good for their child's immediate and future health.

10. Implications of study to social work practice

This study has implications for social work practice as it emphasis the professional obligation of social workers in bringing about positive changes in the nutritional needs of children under five as they belong to the vulnerable members of the society. More importantly, the role of the social worker in influencing social policy that could be actualized through awareness creation in issues affecting infant nutrition among policymakers and the general populace. The right attitude toward nutritional value among mothers is also created through nutritional education and the development of capacities for problem-solving. The elimination of cultural practices that are detrimental to the development of infants can be achieved through social work activities that involve enlightenment campaigns/programmes using pamphlets, radio and TV jingles to educate mothers on best practices in infant nutrition.

11. Recommendations

1. There is a need for aggressive promotion of nutritional knowledge and compliance in the urban centers.
2. Mothers should be encouraged to give a choice of foods for their children, especially from animal protein, fruits, and vegetable groups in urban communities.
3. Health care providers and community-level service providers should be trained to provide counselling and support to women during pregnancy, delivery, immediate postpartum, up to the moment their children are about two years of age.

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