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Socio-Cultural Predictors of Protein Energy Malnutrition among Breast-Feeding Mothers in Osogbo Metropolis, Nigeria

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Abstract
This study investigated perceived socio-cultural predictor of Protein Energy Malnutrition (PEM) among breast-feeding mothers in Osogbo metropolis, Nigeria. The research design used for this study is descriptive survey. The population for this study is the breast feeding mothers in Osogbo metropolis while hundred (100) respondents were sampled from two health facilities within the metropolis. Three self developed and structured questionnaires were used as instrument for data collection viz: Social Factors and Childhood Protein Energy Malnutrition Questionnaire (SFCPEMQ) with reliability coefficient of 0.832, Cultural Factors and Childhood Protein Energy Malnutrition Questionnaire (CFCPEMQ) with reliability coefficient of 0.862, and Childhood Protein Energy Malnutrition Questionnaire (CPEMQ) with reliability coefficient of 0.940. Two hypotheses were raised to give focus to the study. Descriptive statistics of frequency counts and percentages was used to analyze the demographic data of the respondents while the hypotheses were analyzed using regression analysis. All hypotheses were analyzed at 0.05 level of significance. The result showed that socio-cultural factors are significant predictors of PEM among breast feeding mothers; therefore it was recommended that maternal education should be given priority so that mothers will have relevant nutritional knowledge.
Keywords: Protein Energy Malnutrition, malnutrition, culture, mortality.

Introduction

Protein Energy Malnutrition (PEM) among young children is one of the most common problems in many developing countries and one of the major causes of high child mortality rates. Although the food situation in Nigeria is generally regarded as not too un-favourable in that certain foods are grown locally to provide for the population, however, even self sufficiency in food production only will not sufficiently address the problem of hunger or the calorie gap unless accompanied by adequate knowledge.

Piercecchi-Marti, Louis-Borrione, Bartoli Sanvoisin Panuel, Pelissier-Alicot and Leonetti (2006) stated that malnutrition develops when the food ingested does not meet the high protein and energy needs of the child. PEM results from various factors including inadequate intake of nutrients, abnormal gastrointestinal assimilation of the diet, and stress response to acute injury or chronic inflammation (Al-Mekhlafi, Surin, Atiya, Ariffin, Mahdy and Abdullah, 2008). Torún and Chew (1994) opined that the term malnutrition is usually used to describe PEM, the comprehensive term of PEM is universally accepted and its severe forms are called marasmus, kwashiorkor and marasmic kwashiorkor. Severe PEM still affects 2-3% of the paediatric population globally; the World Health Organization has estimated that 182 million children, representing 32.5% of all preschool children under 5 years of age in developing countries are malnourished (World Health Organization, 2000).

According to Kandala, Madungu, Emina, Nzita and Cappuccio (2011), malnutrition prevents children from reaching their full physical and mental potential. Health and physical consequences of prolonged states of malnourishment among children are delay in their physical growth and motor development and lower intellectual quotient (IQ). About 54% of deaths among children of this age group are believed to be associated with malnutrition in developing countries, in sub-Saharan Africa, 41% of under-five children are malnourished and deaths from malnutrition are increasing on daily basis in the region (Food and Agriculture Organization, 2008). Clinical features of zinc deficiency like poor appetite, growth failure, skin lesions, diarrhea, poor wound healing and impaired immune response are also observed in children with severe PEM (Singla, Chand, Kumar and Kachhawaha, 1996). Malnutrition is widespread in Nigeria which is partly due to inadequate food and nutrient supply (Babatunde, Olagunju, Fakayode and Sola-Ojo, 2011).

Culture is a fuzzy set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioural conventions that are shared by a group of people, and that influence (but do not determine) each member's behaviour and his/her interpretations of the meaning of other people's behaviour (Spencer-Oatey, 2008). In some Zambian cultures, male toddlers may eat with their fathers, eating with a father may mean fewer meals than a female child who is always with a mother and mother may pass on whatever she has herself throughout the day; more energy expenditure in boys because of playing more may be a cause for the higher prevalence of malnutrition in boys than girls (Nzala, Siziya, Babaniyi, Songolo, Muula and Rudatsikira, 2011).

According to Torún and Chew (1994); National Department of Health, South Africa (2003), ignorance is directly associated with poor infant and child rearing practices, misconceptions about food, inadequate feeding during illness (especially infectious diseases and diarrhoea), improper food distribution among family members,

poor maternal care and high birth rates; inadequate weaning practices and poor infant feeding practices lead to low protein and energy intake.

Gernaat, Dechering and Voorhoeve (1998) stated that sub-Saharan Africa bears the brunt of PEM in the world, on the average, the PEM associated mortality in sub-Saharan Africa is between 25% and 35%. In Nigeria, 22% to 40% of under-five mortality has been attributed to PEM with an average mortality rate of 22% over a five year period among 803 children admitted for PEM in a Nutritional Rehabilitation Center (Ibekwe and Ashworth, 1994). Similarly, in a hospital based study in North-Eastern Zambia involving children below the age of five years, Gernaat, Dechering and Voorhoeve (1998) documented an overall mortality rate of 25.8% among 288 children admitted for various types of severe/complicated malnutrition. PEM was associated with high rate of mortality; hence, preventive strategies need to be emphasized (Ubesie, Ibeziako, Ndiokwelu, Nzoka and Nwofor, 2012).

According to Ajieroh (2010), the 2003 Nigeria Demographic and Health Survey revealed that 38% of under-five children in Nigeria are stunted, 29% underweight and 9.2% wasted. About 50% of children aged 12 to 15 months are underweight in Africa and more than one third of children less than five years are stunted (Benson and Shekar, 2006). Such high prevalence of malnutrition leads to high mortality and morbidity, poor school attainment, and low productivity later in life (Alderman, Hoddinott and Kinsey, 2003).

Faruque, Ahmed, Ahmed, Islam, Hossain, Roy, Alam, Kabir and Sack (2008) submitted that about 60% of all deaths occurring among children aged less than five years in developing countries could be attributed to malnutrition. Children that are malnourished tend to have increased risk of morbidity and mortality and often suffer delayed mental development, poor school performances and reduced intellectual achievement (Babatunde, Olagunju, Fakayode and Sola-Ojo, 2011). The improvement of nutrition therefore, is the main prerequisite for the reduction of high infant and under five mortality rates, the assurance of physical growth, social and mental development of children as well as academic achievement (Anwar, Khomsan, Sukandar, Riyadi and Mudjajanto, 2010). National Institute of Public Cooperation and Child Development (1994) hinted that mere economic development or even the adequacy of food at household levels is no guarantee for a stable and satisfactory nutritional status. Based on this premise, this study investigated socio-cultural predictors of Protein Energy Malnutrition among breast-feeding mothers in Osogbo Metropolis, Nigeria.

Statement of the Problem

Experience shows that malnutrition and ill-health are traceable partly to economic causes and partly to educational factors, even while living in poverty, the health and nutrition status would be appreciably better if people know what to do about it. Many factors which can help in improving the nutritional status are like small family norms, avenues for employment, safe drinking water, a clean environment, appropriate farm and food policies including prices, subsidies and land reforms, knowledge about sound feeding practices and eating habits, time to time monitoring of child growth, management of primary health services, reduction in the workload of women, and women supportive socio-cultural norms (Gulati, 2010). Globally, PEM continues to be a major health burden in developing countries and the most important risk factor for illnesses and death especially among young children (Ubesie, Ibeziako, Ndiokwelu, Nzoka and Nwofor, 2012). Hence, the researcher investigated socio-cultural factors as predictors of Protein Energy Malnutrition among breast feeding mothers in Osogbo metropolis, Nigeria.

Methodology

This study investigated perceived socio-cultural predictor of Protein Energy Malnutrition (PEM) among breast-feeding mothers in Osogbo metropolis, Nigeria. The research design used for this study is descriptive survey. The population for this study are the breast feeding mothers in Osogbo metropolis while one hundred and twenty (120) respondents were sampled from two health facilities within the metropolis, that is, Osun State Specialist Hospital, Asubiaro and Ladoke Akintola University Teaching Hospital all in Osogbo, out of which only ninety seven (97) properly filled and returned their questionnaires thereby giving 80.8% response rate. Three self developed and structured questionnaires were used as instruments for data collection designed according to the variables tested in the study in four likert scale format. The questionnaires were validated by experts in health education. The reliability coefficient of the instrument were obtained using Cronbach Alpha, viz: Social Factors and Childhood Protein Energy Malnutrition Questionnaire (SFCPEMQ) with reliability coefficient of 0.832, Cultural Factors and Childhood Protein Energy Malnutrition Questionnaire (CFCPEMQ) with reliability coefficient of 0.862, and Childhood Protein Energy Malnutrition Questionnaire (CPEMQ) with reliability coefficient of 0.940. Two hypotheses were raised to give focus to the study. Descriptive statistics of frequency counts and percentages was used to analyze the demographic data of the respondents while the hypotheses were analyzed using regression analysis. All hypotheses were analyzed at 0.05 level of significance.

Results

Hypothesis 1: There will be no significant relative effect of socio-cultural factors (nutritional knowledge, occupational demand, poverty, food taboo, beliefs and customs) on Protein Energy Malnutrition among breast feeding mothers in Osogbo metropolis, Nigeria.

Table 1: Regression Table on relative contribution of Socio-Cultural Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t.	Sig.
	B	Std. Error	Beta		
Constant	9.834	3.428		2.869	.005
Nutritional Knowledge	.467	.183	.257	2.546	.013
Occupational Demand	-.099	.243	-.037	-.406	.686
Poverty	.134	.132	.091	1.016	.312
Food Taboo	-.142	.196	-.064	-.725	.470
Beliefs	.148	.170	.092	.868	.387
Customs	.811	.203	.402	3.997	.000

The table above shows that only two of the independent variables are independently significant. Customs has the highest contribution with 40.2% (β=0.402, t=3.997, P<0.05), followed by Nutritional Knowledge with 25.7% contribution (β=.257, t=2.546, P<0.05), followed by Beliefs with 0.92% contribution (β=.092, t=.868, P>0.05), followed by Poverty with 0.91% contribution (β=.091, t=1.016, P>0.05), followed by Food Taboos with -0.64% contribution (β= -0.064, t= -0.725, P>0.05), followed by Occupational Demand with -0.37% contribution (β= -0.037, t= -0.406, P>0.05). Therefore, the hypothesis that says there will be no significant relative effect of socio-cultural factors (nutritional knowledge, occupational demand, poverty, food taboo, beliefs and customs) on Protein Energy Malnutrition among breast feeding mothers in Osogbo metropolis, Nigeria is hereby rejected.

Hypothesis 2: There will be no joint effect of independent variables on the dependent variable.

Table 2: Composite effect of all the independent variables on the dependent variable

R = 0.618
Multiple R = 0.382
Multiple R^2 adjustmed = 0.341
Standard Error Estimate = 5.25504

Analysis of Variance

Model	Sum of Square	df	Mean Square	F	P
Regression	1536.632	6	256.105	9.274	.000
Residual	2485.388	90	27.615		
Total	4022.021	96			

The table above shows that the linear combination of the effect of socio-cultural factors (nutritional knowledge, occupational demand, poverty, food taboos, beliefs and customs) on Protein Energy Malnutrition among breast feeding mothers in Osogbo metropolis was significant. (F(6,90)=9.274, P<0.05). The independent variable also yielded a coefficient of multiple regression (R) of 0.618 and a multiple regression square (R^2) of 0.382. Hence, the hypothesis that says there will be no significant joint contribution of the independent variables on the dependent variable is hereby rejected.

Discussion of Findings

Studies have shown that children of poor families are more prone to suffering malnutrition and factors such as the season, prolonged exclusive breastfeeding (for longer than six months) and cultural factors (clothing that covers the body), poverty and poor socio-economic status have been reported for causing nutritional problems in developing communities (Li, Guo, Shi, Li, Anme and Ushijima 1999; Odunayo and Oyewole, 2006). Similar studies by De Waal and Whiteside (2003); Brabin (2003) revealed that the causes of malnutrition include inadequate nutritional intake as a result of insufficient or inappropriate supply of food, early cessation of breastfeeding, cultural and religious beliefs, poor sanitation, increased armed conflicts and chronic diseases.

Furthermore, Katz, Mahlberg, Honig and Yan (2005) submitted that dietary choices are influenced by parents' nutritional ignorance, preference for alternative foods and true or perceived food allergies. Cultural factors including language and religion have an influence on the type of habits that people exhibit, including food habits; community factors equally have an impact including individual and household factors (Gunda, 2007). Other studies by United Nations International Children's Emergency Fund (2004); Vorster and Hautvast (2002) showed that the immediate causes of childhood malnutrition are insufficient diet, stress, trauma, disease (severe or frequent infections) and poor psychosocial care, health status, food taboos, growth and personal choice related to diet. Torún (2006) submitted that factors contributing to the development of protein-energy-

malnutrition (PEM) include cultural and social practices that lead to the exclusion of certain foods due to food taboos, food and dietary fads and migration from rural areas to urban slums.

Conclusion and Recommendations

The finding of this study revealed that socio-cultural factors are significant predictors of PEM among breast feeding mothers with customs having the highest contribution followed by nutritional knowledge of the mother and beliefs, while poverty took a distant forth position. Meaning that mere economic development or even the adequacy of food at household levels is no guarantee for a stable and satisfactory nutritional status, the shackles of negative customs and beliefs has to be broken through good nutritional knowledge, especially the mothers. Therefore, maternal education should be given priority because education has a lot of role to play as educated mother not only could take better care of child nutrition but could also help prevent infant morbidity and mortality to a large extent.

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