

Knowledge Of Infant Nutritional Needs Among Residents Of Nsukka Cultural Zone Of Enugu State, Nigeria.

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Abstract

Most children in Nigeria fall sick as a result of eating inappropriate food for a long period of time. Studies have shown that poor nutrition prevents children and communities from participating fully in social and economic life. In view of the above, the study examined the knowledge of infant nutritional needs among residents of Nsukka cultural zone in Enugu State, Nigeria.. Ten focus group discussions (FGDS) were held with 6 groups of mothers and 4 groups of fathers comprising young and old groups. The data were processed and analyzed using statistical package for social sciences (Spss). The study found that many families are not aware that they can mash carrot, potato and cucumber and mix with meat broth and spoon feed their children. The findings indicated that low income groups seem to have more knowledge of infant nutrition than the medium and high income groups, though this relationship is not statistically significant ($P \leq .126$) The findings highlighted the need to employ education to correct many of these cultural practices in infant feeding practices mostly found in rural Nigeria.

Key Words: Child health, Nutritional needs, Education, infant mortality, knowledge, malnutrition, The Nigeria.

Introduction

Child health problems constitute the greatest threat to public health in the world today. For instance, global chronic under nutrition in children is highly prevalent and remains a big challenge. One hundred and seventy eight million and 112 million children aged less than five years are stunted and underweight in low income countries (1). Infant mortality rate (IMR), which is a measure of death within the first year of birth, ranges from 50 to 150 per thousand and is up to 10 times greater than that of industrialized countries. Data from the Multiple Indicator Cluster Survey (MICS), a survey carried out nationwide by the Federal Office of Statistics (FOS) in 1999, indicates that almost one in five Nigerian children dies before reaching the age of five (2). This implies that, on average a baby born in Nigeria is about 30 times more at risk of death before the age of five than a baby born in the industrialized Countries. In her 2005 study, Onyeneho argued that Nigeria, like many sub-Sahara African countries, has witnessed a dramatic increase in mortality among infants and children, contrary to the decline experienced in the mid 1980s(3). WHO/UNICEF estimates that the child mortality rate for Nigeria is 183/1000(4).This is high compared with those of countries of major world regions in Asia, Latin America and Europe. There is a growing concern about the recent persistent high mortality rates, especially in the early ages in these developing countries. Children most at risk are those aged less than five years living in developing countries.

Malnutrition, largely preventable, contributed to more than half of the deaths of one fifth of the 5 million babies born in this country (5).At least one million of those births were of low birth weight babies. The author maintained that unless the present situation is arrested in Nigeria we will find that one in ten children aged less than 5 years may suffer impeded mental development. Recently, there has been an increase in the prevalence of malnutrition in Africa.

In Nigeria, nutrition survey, conducted by the government of Nigeria and the United Nations Children's Educational Fund (UNICEF) in 1993 revealed that Kano State in the Northern Savannah Zone of the country was facing worsening food insecurity. It had the highest prevalence in the country of stunting or chronic under-nutrition among children under the age of five and alarming statistics for micronutrient deficiencies of iron vitamin A and iodine in children. This has led to a high incidence of malnutrition related diseases including marasmus, kwashiorkor and goiter (6). The causes of childhood under nutrition are diverse, multidimensional and interrelated (7,10) The major underlying causes of nutritional problems include poor maternal and child care practices, lack of awareness and education, family food insecurity and poor intra family food distribution, poor access to good quality health and sanitation services (8). Nutrition problems are due to lack of education and proper utilization of food rather than lack of food. Rokx and Brown (9) argue that lack of knowledge about healthy nutrition behaviors and practices is a major cause of poor nutrition in most of the developing world. Cultural factors and taboos have a powerful influence on feeding practices and eating patterns.

There is now a global consensus that certain types of nutrition interventions such as breastfeeding, supplementation of micronutrients, and some health care services are effective in improving the nutritional status of children in low income countries (10). These interventions have been thought to contribute to the reduction of the risk of dying by as much as three times in infants aged 0-1 years and up to seven times in all children aged less than five years in developing countries. Resources to buy adequate quantities of high quality foods have declined for some families; feeding practices have deteriorated further.

Poor nutrition prevents children and communities from reaching their full potential and from participating fully in social and economic life even worse, under-nutrition affects not just one generation: under nourished parents bear undernourished children, so that over time communities continue to suffer. Nutritional status during childhood is important for human development as it affects every phase of human life (11). This study therefore, aimed at examining the relationship between the socioeconomic factors and the knowledge of infant nutritional needs and also aimed at using the findings as the basis for policy recommendations on nutrition interventions in Nigeria

Materials and Methods

Study site:

The study was located in Enugu State of South Eastern Nigeria and was under taken among residents in ten rural communities of Enugu State. The ten Communities include: IKem, Ovoko, Imilike, Eha-Amufu, Nru, Ihe/Owerre, Orba, Ibagwa Aka, Nkpunanor, and Opi in Nsukka cultural zone of Enugu State.

Participants

The study involved married women of reproductive ages (18 -49 years) and their husbands aged 18 years and above, residing in any one of the ten rural communities and with children aged between 0-5 years. In the chosen households, children above 5 years during the stated period were excluded. From 18 years and above consisted the segment of the population that can articulate themselves and contribute meaningfully to the study and give up-to-date information of the situation.

The multi-stage sampling approach was adopted in order to select the communities, villages, households as well as respondents for the study. The ten communities chosen were divided into villages where 20 villages were selected through balloting and purposive sampling technique. To get at the house holds where the actual respondents were contacted, households within the villages were counted and numbered, using the systematic sampling method. Fifty, (50) respondents were selected from each of the 20 villages bringing the total respondents to one thousand.

The FGD guide was developed in relation to the issues raised in the research questions. Respondents that formed the FGD teams were purposively selected from persons who were not involved in the questionnaire study and included specific target groups, preferably of the same sex, age groups and socioeconomic background, whose ideas and experiences are germane to the study.

Data and Descriptive Statistics

Socio- demographic information collected in the questionnaire included the respondent's age, sex, marital status, religion, highest educational attainment, occupation, monthly income bracket and knowledge of nutrition. Table 1 below shows that the study is not gender sensitive. Thus, the study reveals that males constituted about 39.9% of the sample population as against the female respondents who constituted 60.1% of the total sample size. Approximately 40% of the respondents were males and out of this, 53% of them did not complete primary education, primary completed (47%), secondary uncompleted (49%) secondary completed (39%) and Diploma/University degree (34%). For the 60% of the female respondents, 47% of them did not complete their primary education while 53% had their primary education completed, and secondary uncompleted (51%), secondary completed (61%) and 67% had their Diploma/University degree. The findings from this study show that a greater percentage of male respondents (53%) did not complete their primary education as against the female respondents (47%) who did not complete their primary education. The study also shows that 67% of the female respondents had their Diploma/University degrees as against their male counterparts (34%) who possess Diploma/University degrees. The study reveals that most of the respondents fall within the age bracket of 29 – 39 years. This group thus constituted 335 (34.3%) while those between the age range of 18 – 28 years were 314 (32.2%) of our sample. Those between the age range of 40 years and above, constituted about 327 (33.5%) of the sample population. For those between the age range of 18-28 years, 20% and 4% of them were males and females respectively. Out of those that fall within the age range of 29-39 years, 40% were males and 31% of them were females. 28% of males and 25% of females were between the age ranges of 40-50 years. Lastly, 12% (males) and 5% (females) were 51 years and above. The findings show that out of the younger respondents (18-

39yrs), 60% were males and 71% were females while the older respondents (40yrs and above) had males (40%) and females (29%).

The study shows that the greatest numbers of respondents were farmers. They constituted 352 (36.1%) of the sample. Notable among the other groups in the sample were civil servants (31.3%) and petty traders (22.4%). In addition, business men and women constituted about (9.4%) and less than one percent (.8%) of the respondents were students. For those respondents who were engaged in civil service, 32% of them were males and 31% were females. 16% and 27% of males and females were petty traders' respectively. Those who were engaged in business constitute 17% of males and 5% of females whereas those respondents who were farmers constitute 34% (males) and 36% (females). 2% and .3% of student respondents were males and females respectively. The study shows that the greatest numbers of females (38%) were farmers, followed by their male counterparts (34%)

The table below reveals that majority of the respondents (53.6%) fall within the low-income bracket and the respondents in the medium income bracket constitute about (39.8%) of the sample size while the respondents in the high income bracket constitute about (6.6%) of the sample. From the table shown below, it shows that the respondents whose income brackets fall within N10, 000.00 were males (13%) and females (28%). Then, 27% and 35% constituted the sample of males and females respectively whose monthly income bracket fall between N11, 000.00-N20, 000.00. Those respondents whose monthly income range from N21,000.00 to N30,000.00 were males (32%) and females (22%) while those who received between N31,000.00 and 40,000.00 were males (18%) and females (12%). 11% (males) and 4% (female) belong to the category of those respondents who received N41,000.00 and above as their monthly income. The findings in this study show that majority of the female respondents (35%) received from N11, 000.00 to N20, 000.000 as their monthly income as against their male counter parts (27%) who received the same amount. The study also showed that males (11%) and females (4%) received the highest amount of monthly income ie N41, 000 and above.

Table 1: Sex of Respondents and Educational Attainment Cross Tab

Sex	Highest educational attainment					Total
	Primary Uncompleted	Primary-completed	Secondary Uncompleted	Secondary Completed	Diploma/University Degree	
Male	17 (53.1%)	44 (47.3%)	73 (48.7%)	146 (38.8%)	109 (33.5%)	389 (39.9%)
Female	15 (46.9%)	49 (52.7%)	77 (51.3%)	230 (61.2%)	216 (66.5%)	58 (760.1%)
Total	32 (100.0%)	93 (100.%)	150 (100.0%)	376 (100.0%)	325(100.0%)	976 (100.0%)

Table 2: Age of Respondents and Sex Cross Tab

Age Range	Sex			Total
	Male	Female		
18-28years	77 (19.8%)	237 (40.4%)		314 (32.2%)
29-39year	156 (40.1%)	179 (30.5%)		335 (34.3%)
40-50years	109 (28.0%)	144 (24.5%)		253 (25.9%)
51 years and above	47 (12.1%)	27 (4.6%)		74 (7.6%)
Total	389 (100.0%)	587 (100.0%)		976 (100.0%)

Table 3: Occupation of Respondents and Sex Cross Tab.

Occupation	Sex			Total
	Male	Female		
Civil Servant	124 (31.9%)	181 (30.8%)		305 (31.3%)
Petty trading	62 (15.9%)	157 (26.7%)		219 (22.4%)
Business	65 (16.7%)	27 (4.6%)		92 (9.4%)
Farming	132 (33.9%)	220 (37.5%)		352 (36.1%)
Student	6 (1.5%)	2 (.3%)		8 (.8%)
Total	389 (100.0%)	587 (100.0%)		976 (100.0%)

Table 4: Monthly Income and Sex Cross Tab

Monthly income bracket	Sex			Total
	Male	Female		

N10,000	50 (12.9%)	164 (27.9%)	214 (21.9%)
N11,000-N20,000	103 (26.5%)	206 (35.1%)	309 (31.7%)
N21,000-N30,000	123 (31.6%)	127 (21.6%)	250 (25.6%)
N31,000-N40,000	70 (18.0%)	69 (11.8%)	139 (14.2%)
N41,000 and above	43 (11.1%)	21 (3.6%)	64 (6.6%)
Total	389 (100.0%)	587 (100.0%)	976 (100.0%)

Results

Knowledge of Infant Nutritional Needs

The following variables were used to measure the knowledge of infant nutritional needs in Enugu State: perception of respondents on infant consumption of meat/egg, awareness of protein content in meat and egg, how often the mothers feed their children with such foods, knowledge of medicinal fruits and food mashing for children.

The study investigated the respondents' perception of infant consumption of meat/eggs and how often the infants were fed with such foods. The findings revealed that over 60% of them agreed that it is not wrong for a child to eat meat/eggs. To understand the respondents' awareness of the protein content of meat/eggs, they were asked to state whether meat/eggs are sources of protein for infants. Most respondents (74.6%) affirm that they are aware that foods such as meat/eggs are sources of protein for children, and that they often give such foods to the under- (5) five children while only 16.8% of the respondents had never tried or attempted to give meat/eggs to their under – five children. This group of respondents believes that it is wrong for a child to eat meat/egg because according to them it is against their culture/beliefs and makes a child a glutton. Others in this group are knowledgeable enough about the importance of meat/egg but there is insufficient money to purchase enough quantity of the required food. In order to make ends meet, most of the wage earners are forced to buy cheap food leading to over reliance on few high-yielding staples that are usually cheap to procure. This leads to undernourishment and low resistance to disease. Undernourishment and malnutrition lead to high infant mortality especially in our rural communities. This can be corroborated with the cross sectional study conducted in luangprabang province by Phengxay. M et al in 2007 to estimate the anthropometric measures for 798 children and investigate their risk factors (12, 13). They found that low maternal education, poor nutrition knowledge and restricted intake of meats were the main causes for childhood malnutrition. This is the result of lack of knowledge concerning infant nutrition.

The study also sought to understand the respondents' awareness of certain fruits that can protect children from infectious diseases. The findings revealed that over 50% of them agree that they are aware that fruits such as oranges, paw-paw, carrot, banana etc can protect children from infectious diseases while 43% are not aware. The knowledge of food mashing was sought from the respondents and it was discovered that majority of them (58.2%) are not aware that they can mash potato, carrot, cucumber and mix with meat broth and spoon feed their children while only 7% of the respondents are aware of food mashing. This low level of knowledge on nutritional needs of children in Enugu state especially in the urban areas needs more efforts in awareness creation to reach at this group of people.

Table 5: Respondents' knowledge of infant nutrition

Variables	Frequency	Percentages
Eating of meat/eggs by infant is wrong		
Yes	353	36.1
No	591	60.5
Don't know	32	3.3
Total	976	100.0
Knowledge of meat/eggs as sources of infant protein		
Yes	728	52.4
No	204	27.0
Don't know	44	20.6
Total	976	100.0
Knowledge that fruits protect infant from diseases		
Yes	547	56.0
No	176	18.0
Don't know	253	25.9
Total	976	100.0
Knowledge of food mashing for infants		
Yes	69	7.0
No	567	58.0
Don't know	339	35.0
Total	976	100.0

Table 6 examined the relationship between level of income and the knowledge of nutrition. In this study, level of income was grouped into three; namely: Low income, medium and high income. The low income groups comprised of those respondents whose monthly income bracket fall between N10, 000.00 to N20, 000.00. The medium income groups were those respondents whose monthly income bracket falls within N21, 000.00 to N40, 000.00 while the high income groups were those respondents whose monthly income range from N41, 000.00 and above. From the table above, the findings indicate that low income groups seem to have more knowledge of infant nutrition than the medium income groups, though, this relationship is not statistically significant, $X^2(2, N = 976) = 4.138, p \leq .126$. One may conclude that the level of income appears to have no effect on the views held by the parents/respondents.

Table 7 examined the difference between the level of education and the knowledge of infant nutritional needs. Studies have been done to determine the relationship or associations of education level with the knowledge of infant nutrition. Education level in this study was grouped into three, namely low, medium and high education. The low education group comprised those respondents who completed or did not complete their primary education. The medium group was made up of those respondents who completed or did not complete their secondary school education, while the high education group included those respondents who had diploma or university degree.

Education acts as a structural variable, sorting individuals into socio-economic strata with graduated rates of economic accumulation as measured by factors such as occupational status and authority, earnings, household-income and wealth. A study conducted in Luangprabang province in 2007 showed that low maternal education leads to poor nutrition knowledge and childhood malnutrition (13). People who are better educated may also be better able to make use of written materials like newspaper articles and leaflets, to gain information and implement it in their lifestyles. It also seems likely that more educated people would be better able to understand sometimes complex information about diet-disease links.

Table 8 examined the relationship between age of respondents and their knowledge of infant nutrition. The younger group comprised of those respondents whose age bracket falls within 18-39 years whereas the older group comprised of those respondents who were 40 years and above. Findings show that more of the younger respondents (72.3%) had knowledge of infant nutrition than the older respondents (27.7%). The result shows that there is a significant difference between the age of respondents and the knowledge of infant nutrition. ($X^2(1, N = 976) = 64.211, P < .000$). The reason for this result may be that the younger respondents fall within the age of child bearing groups and should be eager to learn about dietary practices more than their older respondents. This group could be more knowledgeable about infant nutrition because of their inquisitiveness to utilize information which has been shown to depend on the needs, skills and attitudes of individuals. In many cases where the knowledge of nutrition exists, there is insufficient money to buy the right kinds of food required for the under-five children. Another reason of increased knowledge of nutrition by the younger respondents could be

associated with seeking out dietary information to ensure that children eat healthy foods. However, to gain a true understanding of the relationship between age and knowledge, it would be necessary to conduct longitudinal research to differentiate between cohort effects and changes in knowledge related to life stages.

This study hypothesized that females are more likely to have better knowledge of infant nutrition than their male counterparts. To test the hypothesis, we used an index to measure the knowledge of right kinds of food for the infants (see table 9) Chi –square test in table 9 shows that there is a significant difference between gender and knowledge of infant nutritional needs ($X^2 (1, N = 976) = 10.871, p \leq .001$).

The table shows that female respondents (62.6%) appear to have better knowledge of infant nutrition than their male counterparts (37.4%). This is not surprising because studies have tended to find women more knowledgeable than men in the issues of infant nutrition. This could be that mothers are usually taught how to promote and sustain the healthy growth of children under five years including nutritional surveillance based on growth monitoring, counseling on nutrition as well as advice on household food security. Men can hardly have time for all these, unlike their female counterparts. Therefore, one can conveniently conclude that there is a significant difference observed between sex and the knowledge of nutritional needs. Infants are totally dependent upon parents especially mothers to provide the necessary nutrition in a safe and usable form. The results consistently show a positive relationship between women and the knowledge of infant nutrition. In all areas of nutrition in this study, women have demonstrated superior knowledge over their men counterparts. The major demographic trend involved level of education, with more educated people demonstrating significantly better knowledge.

Table 6: Level of income and nutritional needs

Level of income	Nutritional Needs		Total
	Have knowledge	Have no knowledge	
Low income	425 (53.5%)	98 (53.8%)	523 (53.6%)
Medium	311 (39.2%)	78 (42.9%)	389 (39.9%)
High income	58 (7.3%)	6 (3.3%)	64 (6.6%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0)

$X^2 (2, N = 976) = 4.138, p \leq .126$.

Table 7: Level of education and nutritional needs

Level of Education	Nutritional Needs		Total
	Have Knowledge	No Knowledge	
Low education	103 (13.0%)	22 (12.1%)	523 (53.6%)
Medium education	400 (50.4%)	126 (69.2%)	389 (39.9%)
High education	291 (36.6%)	34 (18.7%)	64 (6.6%)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

$X^2 (2, N = 976) = 24.211, P \leq .000$

Table 8: Age of respondents and knowledge of infant nutrition

Age of Respondents	Nutritional Needs		Total
	Have Knowledge	No Knowledge	
Younger respondents	574 (72.3%)	75 (41.2%)	649 (66.5)
Older respondents	220 (27.7%)	107 (58.8%)	327 (33.5)
Total	794 (100.0%)	182 (100.0%)	976 (100.0%)

$X^2 (1, N = 976) = 64.211, P < .000$.

Table 9: Sex of respondents and knowledge of nutritional needs

Sex	Nutritional needs		Total
	Have Knowledge	No Knowledge	
Male	297 (37.4%)	92 (50.5%)	389 (39.9)
Female	497 (62.6%)	90 (49.5%)	587 (60.1)
Total	794 (100.0%)	182 (100.0%)	976 (100.0)

$X^2 (1, N = 976) = 10.871, P \leq .001$

Table 10: Logistic regression predicting knowledge of infant nutritional needs

Variables	B	S.E	Wald	df	Sig	Exp (B)
Age of respondents	.300	.174	55.908	1	.000 **	3.671
Education	.276	.134	4.214	1	.040 **	.759
Level of income	.296	.151	3.843	1	.050 **	.744
Location	.096	.178	.292	1	.589	1.101
Sex	.462	.180	6.588	1	.010 **	.630

Significant levels are denoted as ** $p < 0.05$.

Logistic regression analysis was employed to further test the simultaneous effect of factor independent variables. The correlates of socio-demographic characteristics (such as respondent's age, sex, educational status, level of income and place of residence) and knowledge of infant nutrition in table 10 predicted the future knowledge of infant nutritional needs and four variables, age of respondents, sex, educational level, and level of income were statistically significant ($p = 0.000, 0.010, 0.040$ and 0.050) respectively. The age of respondents followed by sex, educational level and income level were the best predictors of knowledge of infant nutrition. In other words, it is more likely that the younger respondents (18 – 39 yrs) will acquire knowledge of infant nutrition especially when they are educated. There is likelihood in future that they will definitely have more knowledge of infant nutrition than the older respondents (40 years and above)

Discussion

The study has provided evidence on the knowledge of infant nutrition in Enugu state. In the empirical results, women showed superior knowledge in all the areas of nutrition as has been found in most studies looking at the knowledge of nutrition. For instance, Gregory et al (14) found that women were more likely to eat healthy foods like whole meal bread, fruit, vegetables, and reduced fat-milk. Men, on the other hand, reported eating more sausages, meat pies, and chips. This suggests that the poorer nutrition knowledge among men in this study could also be attributed to the less healthy eating habits. It is increasingly important for men to know how to eat healthily. So far, it appears that more men are relying on women to make decisions about their diets. This highlights the need to target men in nutrition education campaigns. It is also common knowledge that articles relating to diet are still very much the domain of women's magazines. Generally, respondents performed well with regard to the awareness that fruits can protect children from infections diseases but knowledge about food mashing for infants was poor. Many of them were inclined to disbelieve the link between mashing of food and mixing it with meat broth to spoon feed infants and healthy babies. Approximately, one in two people were still unaware of this link. This simply shows that many of them are ignorant of these nutrition practices, which provide iron fortification for infants. Mashing of food is necessary for the infants from seven to nine months of age, since they are not developmentally or physiologically ready to ingest solid foods.

The major demographic trend involved age of respondents, with more younger respondents demonstrating significantly better knowledge and support of exclusive breastfeeding. This may be because the younger respondents belong to the group of child-bearing age who seem to be more energetic, serious and more educated and as such more eager to get information that will better the lot of their children, especially in the areas of child survival and development. However, the present finding is contrary to multiple studies carried out by Volpe and Bear in 2000, which addressed the factors, associated with the infant feeding practices and identified adolescent mothers (younger respondents) as one group that is unlikely to breastfeed (15). Many researchers have established that breast-milk is perfectly suited to nourish infants and protect them from illness (Onyizili, 2005). Babies who are not exclusively breastfed for six months are more likely to develop a wide range of infectious diseases.

Further analysis of the data, showed that majority of the respondents in the low income group were less ready to take their children to the hospital or clinics for treatment. The reason offered by them was that there was no money for treatment. This means that poverty has played a significant role in the death of under – 5 children. It has long been recognized that socioeconomic factors such as poverty, water sanitation, education and gender inequality are important determinants of health outcomes in many low-income countries (16). However, statistics showed that under -5, mortality is higher among people with lowest wealth/income and children with mothers who have no education. This is noticeable especially when the economics of any country falters, as is the case in Nigeria. The number of people living in poverty increases and the gap between the rich and the poor widens. The parents who are poor are aware of the value of health for their children but they lack the resources necessary to

give their children the required medical attention. Poverty leaves children vulnerable to malnutrition and diseases – that are largely preventable.

Finally, the results from the study show that there is an urgent need to invest in programmes that will enhance the knowledge of infant nutrition in Nigeria. These infants today are the next generation; they represent the continuity of tradition as well as the hope for tomorrow.

Conclusion

In conclusion, understanding the nutritional problems of children is critical for attaining the Millennium Development Goals (MDGs) set by the United Nations for education, health, nutrition and poverty. To lead a good and healthy lifestyle for children, parents ought to have some basic knowledge of what to feed them and how and when to feed them. Knowledge of infant nutritional needs is necessary at this point in time because most parents feed their infants with inadequate nutrition due to lack of knowledge. This inappropriate system of food in-take for a long period of time has been one of the root causes of many physical ailments or illnesses in our society. More research is needed here to gain a clearer understanding of nutrition knowledge in those groups which were under-represented in our sample especially male groups and those with low educational qualification.

The nutrition habits are acquired within social groups such as family, peers, the subcultures and have proven to be extremely difficult to change. For most people, personal behaviour is not the primary determinant of health status and it will not be very effective to intervene at the individual level without concomitant attempts to alter the broader economic, political, cultural and structural components of society that act to encourage, produce and support poor health. In sum, improving the nutritional needs of children will require us to look beyond individual behaviours to broader social structural issues.

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