THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

Nexus of Socio-economic Background of Parents and Malnutrition of Children in Kanam Communities of Plateau State, Nigeria

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Abstract:
This study examined the socio-economic background and knowledge of parents as well as the malnutrition status of children aged 6-59 Months in Kanam Communities, Plateau State. A total population of 697 parents was sampled based on their attendance at the various meetings held in the communities, with the researchers as respondents to research questions 1 and 3. For research question 2, Body Mass Index (BMI) of 511 children whose parents consented were screened. Qualitative and quantitative data were collected through semi-structured questionnaires from the participants. Data entry and statistical analysis were carried out using SPSS Software Version 26 and Microsoft Excel. Descriptive Statistics like frequency and percentage were employed to provide answers to the research questions raised in the study. The major findings show that the socio-economic background of the parents was poor in terms of educational level, yearly income, settlement residence, and family size. Another interesting finding shows that mothers were more involved at the interaction level with children than fathers. It was also established that there was a high rate of malnutrition among children in the communities. Recommendations made include the need for stakeholders to improve the preparation of nutritious food. Federal, State, and Local Governments and other stakeholders should take bold steps to reduce poverty and hardship among parents, especially those in rural communities with poor socio-economic backgrounds, through poverty alleviation programmes. Finally, parents need to be properly educated on childcare practices that can improve their daily lives and reduce the challenges involved when a child is malnourished.

Keywords: Children, Kanam communities, malnutrition, parents, socio-economic background

1. Introduction

Malnutrition among children is a universal issue that no country in the world can afford to overlook. Its effects on children have severally been reported with adverse consequences leading to death (Gebre et al., 2019; UNICEF, 2018). These deaths are mostly attributed to the direct result of childhood illnesses like diarrhea and pneumonia that weakened the affected children, making their survival very minimal. There are several causes of malnutrition, and the most immediate are inadequate dietary intake and diseases, which are caused by a set of underlying factors like household food insecurity, poor maternal/child caring practices, lack of access to basic health services, safe water supply, education as well as chronic poverty, and open defecation (Najw et al., 2019; Raji et al., 2020). From these underlying causes, the socio-economic aspect is one of the major foci for this research.

Socio-economic backgrounds of parents that can affect children's growth and development, thereby leading to malnutrition, are household income, location, education, family size, interaction with children, etc. Among these factors, income is considered central as its unavailability can easily mar the proper development of children, thereby leading to malnutrition. This assertion is in line with Kaur (2022), who suggests that poor households eat traditional and non-nutritious food, whereas wealthy families choose healthy food. On the effect of family size on children's malnutrition, the study by Ahmad (2020) indicated that smaller family sizes are less at risk of stunting, wasting and being underweight. In the aspect of education, the studies of Kaur (2022), Ahmad et al. (2020) and Ghosh (2020) show that children of illiterate, primary and middle-educated parents have higher chances of becoming malnourished than children whose parents have higher education. Parents with good and higher education are likely to provide good practices like exclusive breastfeeding, adequate and nutritious food, and a higher level of interaction. Similarly, their studies reveal that children whose parents live in urban areas are at lower risk of waste than those in rural areas.

Another area that this research focuses on is parental knowledge in connection with risk factors associated with malnutrition. In their study, Harimbola and Kaori (2018) submitted that caregivers' knowledge of malnutrition risk factors plays a vital role in the prevention of undernutrition among under-fives. For example, the study by Raji et al. (2020) on factors contributing to child malnutrition among under-fives found that the majority of the respondents knew that diarrhoea-causing diseases could lead to malnutrition. In addition, two-thirds knew that deworming could protect the child from malnutrition, while less than half did not know that overeating starchy food can cause malnutrition. Furthermore, the study of Yakubu (2023) on the caregivers' knowledge of undernutrition among children aged 6-36 months revealed that caregivers did not know the appropriate age for introducing dairy foods to infants, and 7.8% wrongly indicated that water should be introduced before 6 months of age. His study also showed that only a small percentage of the caregivers (6.8%) knew that non-breastfeeding children aged between 6 and 23 Months should be fed 4 or more times daily with age-appropriate complementary foods.

1.1. Statement of the Problem

Adequate nutrition is vital for healthy growth and development during childhood. As good as adequate nutrition is to the child, many countries, including Nigeria, have not made addressing malnutrition and child survival a high-level priority. This results in a high prevalence of malnutrition among children worldwide with its negative consequences. In fact, the malnutrition crisis is likely to rob the health of tomorrow's adults, thereby eroding the foundation of the global economy and threatening global stability. One can easily infer that the challenges faced by children with malnutrition have subjected them to stunted growth, weak immune system, and impaired brain development, which by implication will lead to poor academic performance and helplessness to infections, among other challenges. In Nigeria, the study by Raji et al. (2020) indicated that the highest prevalence rate of acute malnutrition among children aged 6–59 months is above the national average of 7% and stunting is above 40%. These highest rates are recorded in North-west, North-east and North-central. In another study by Erisman et al. (2017) for Plateau State, the results show that the prevalence of undernutrition in stunting and thinness was 35.1%, 29.4%, and 11.2%, respectively. For Kanam communities where this study was carried out, no data is available to show the status of malnutrition among children, thereby prompting this study. Another impetus for this study is the lack of any evidence that studies have been conducted on the socio-economic background and knowledge of parents in connection with malnutrition among children in Kanam communities. These are the gaps this present study seeks to address.

1.2. Conceptual Framework

This study sought to explore the socio-economic background and knowledge of parents in connection with malnutrition among children. The conceptual framework is synthesized from Victora, Huttly, Funchs, and Olonto's (1997) work: "The Role of Conceptual Frameworks in Epidemiological Analyses: A Hierarchical Approach." The distribution of variables in this framework is in three group types: socio-economic factors, intermediate factors containing maternal and environmental issues, and proximal or individual aspects.

The socio-economic factors include the educational status of mothers, employment status of the mother, and educational and household deprivation status (HDS). The Intermediate factors are maternal and environmental issues, which include house type, house structure, latrine type and water source. The Proximal factors (Individual factors), which is the third group, have factors which contain the birth order of the child, sex of the child, weight-for-age (WAZ), height-for-age (HAZ), and weight-for-height (WHZ).

From the highlights of the conceptual framework by Victora (1997), this study will only focus on issues that concern parents' educational background, income level, settlements, family size and level of interactions. In addition, the study will seek to know the status of malnutrition among children and, finally, parental knowledge in relation to the causes of malnutrition among children.

1.3. Objectives of the Study

The study examined the socio-economic background and knowledge of parents in connection with children's malnutrition in Kanam Communities, Plateau state. Specifically, the study wants to:
- Determine the socio-economic background of the parents in connection with malnutrition among children in Kanam communities.
- Find out the status of malnutrition among children in Kanam communities.
- Find out the level of parental knowledge on the causes of malnutrition among children in Kanam Communities.

1.4. Research Questions

The study sought answers to these questions:

- What is the socio-economic background of the parents in connection with malnutrition in Kanam communities?
- What is the status of malnutrition among children in Kanam communities?
- What is the level of knowledge of the parents on the causes of malnutrition among children in Kanam communities?

2. Methodology

This study is on the socio-economic background, malnutrition status of children, and parents' knowledge of malnutrition in Kanam communities. A descriptive survey research design was employed for the study. A total population of 697 parents were sampled based on their attendance at the various meetings held in the communities with the research team. From this number, 511 (73%) were females, while 187 (27%) were males. The socio-economic background was assessed from the viewpoint of five (5) indices, which are educational background, the yearly income of the family, the family size, the residing settlement of the parents and the family level of interaction with children. In addition to socio-economic issues, data on the malnutrition status of the children were also collected from 511 children based on their parent's consent to allow them to participate in the research. The children were screened using standard procedures of anthropometric measurements, including weight, height, and mid-upper arm circumference. Additionally, body mass index (BMI) was calculated, and children with a mid-upper arm circumference (MUAC) below 12.5 cm, or a weight-for-height z score (WHZ) between -3 and -2, or a weight-for-age z score (WAZ) greater than -1.5 were identified as malnourished. Children who fulfilled the enrollment requirements (6-59 months, within residents' locality and malnourished) were selected for the research. Parents' level of knowledge regarding causes of malnutrition among children was also obtained. The data were collected through the use of a mixed-method approach of qualitative and quantitative information. Semi-structured questionnaires were employed to collect data from the participants. The questionnaire was validated by three experts to enhance its clarity and comprehension. The researchers, in the company of eight trained research assistants, administered the questionnaire to the parents, and they were collected back on the spot. Data entry and statistical analysis were carried out using SPSS Software Version 26 and Microsoft Excel. Descriptive Statistics like frequency and percentage were employed to provide answers to the research questions raised in the study. Also, Abdula et al (2022) criteria for describing the level of knowledge were utilized for providing answers to the research question that probed knowledge. In this regard, a proportion of less than 40% is described as having a low level of knowledge, 41-59% is described as having average knowledge, 60-80% is described as having high knowledge, and above 80% is described as having a very high level of knowledge.

3. Results

- Research question 1: What is the socio-economic background of the parents in connection with malnutrition among children in Kanam communities?
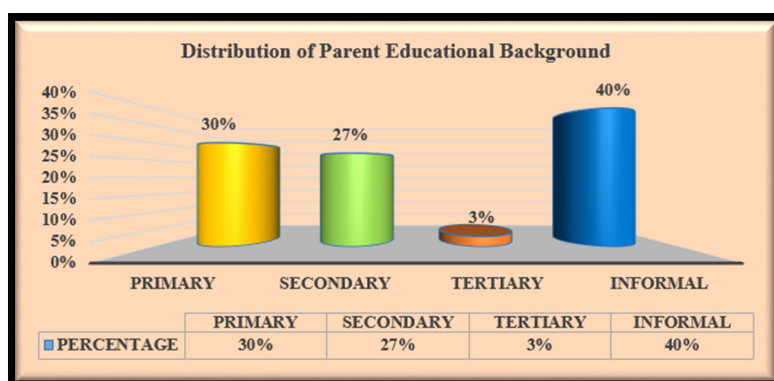

Figure 1: Distribution of Parents' Educational Background

The chart presents the educational background of the participants within the communities in which the study took place. The chart revealed that out of 697 parents that participated in the study, 279 parents, representing 40%, had informal education, 209 parents (30%) had primary education, 188 (27%) had secondary education and 21 parents (3%) had tertiary education.
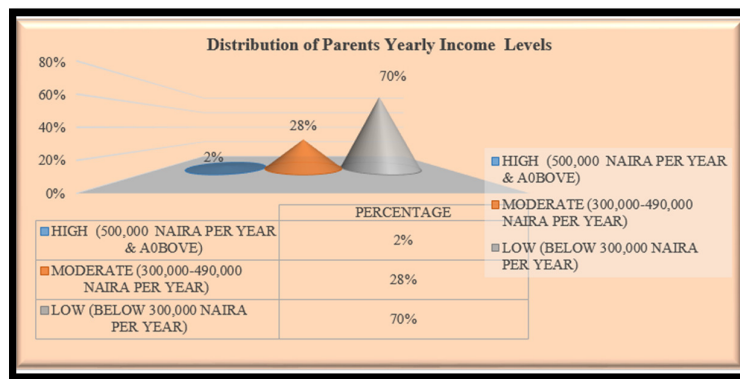
Figure 2: Distribution of Parents' Yearly Income Levels

The chart presents the income level of the participants in the communities under investigation. The result revealed that the high-income level that was classified as 500 thousand nairas and above yearly income had 14 (2%) parents, the moderate-income earners classified as 300-400 thousand naira yearly had 195 (28%) parents, while low-income of below 300 thousand naira yearly had 488 (70%) parents.
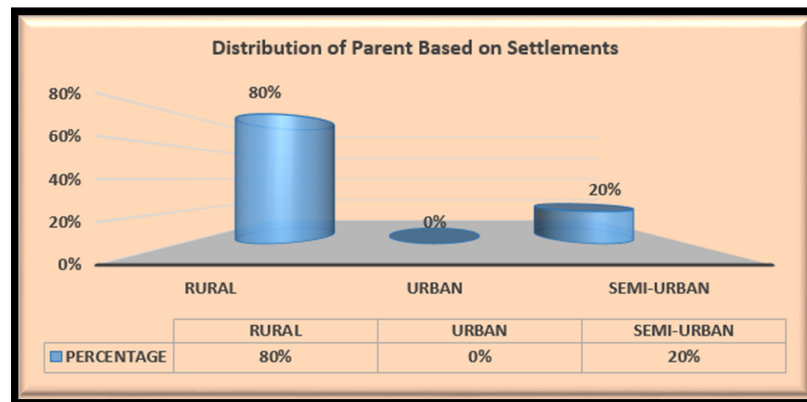

Figure 3: Distribution of Parents' Based on Settlements

The chart presents the distribution of the participant parents based on their settlements within the communities. The rural participants were 558 (80%), the urban had none (0%) while the semi-urban participants were 139 (20%).
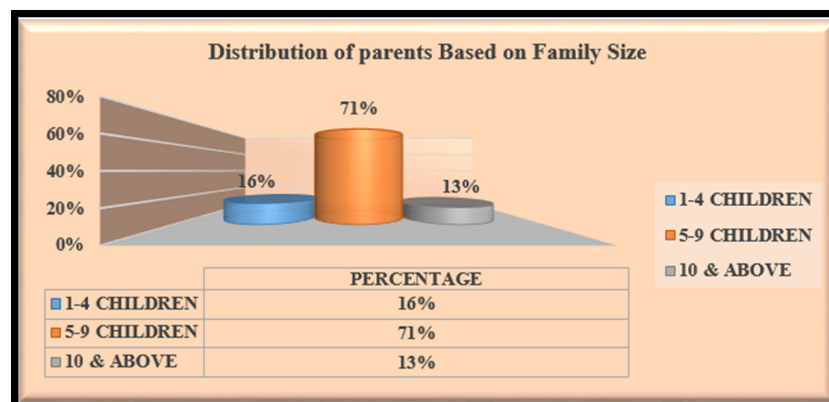

Figure 4: Distribution of Parents' Based on Family Size

The chart presents the distribution of the participants based on the number of children they have. The result revealed that there were 111 (16%) parents with 1-4 children, 495 (71%) participants with 5-9 children, and 91 (13%) participants with 10 children and more.
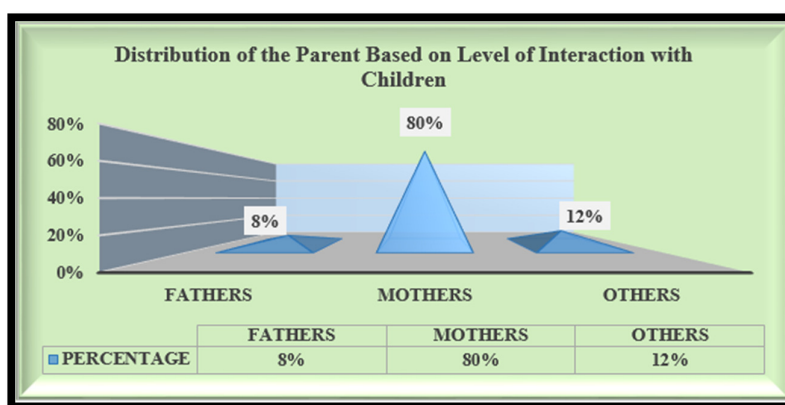
Figure 5: Distribution of Parents' Based on Level of Interaction with Children

The chart presents the participants' level of interaction with their children in their communities. The result indicated that only 56 (8%) fathers, 557 (80%) mothers and 84 (12%) others were involved in interaction with their children.

Generally, one can infer from the results presented that the socio-economic background of the participants involved in the study was poor in terms of educational level, yearly income, settlement residents and family size. The mothers were more involved at the interaction level than the fathers and others, which limits the benefits children will get from their fathers.

- Research question 2: What is the malnutrition status of children in Kanam communities?

Area	BMI < 16.9 (kg/m²)	BMI 17–18.4 (kg/m²)	BMI 18.5–24.9 (kg/m²)	BMI 25–29.5 (kg/m²)	TOTAL
Dengi	68	14	10	2	94
Gumsher	50	35	28	3	116
Jarmai	82	30	30	-	142
Tuttung	112	30	17	-	159
Total	312	109	85	5	511
%	61.06	21.13	16.63	0.98	

Table 1: Area-Wise Prevalence of Malnutrition by Body Mass Index (BMI) in Different Categories

From the presentation in table 1 regarding the malnutrition level of children in Kanam communities, the results show that 61.06% of children with BMI < 16.9 are severely underweight, 21.13% of children with BMI 17 – 18.4 are underweight, 16.63% of the children with BMI 18.5 – 24.9 have the ideal weight (Healthy weight) and 0.98% of children with BMI 25 – 29.5 are overweight. The implication of these results shows that 82.39% of the population is underweight and malnourished, while only 16.63% is healthy.

- Research question 3: What is the parental knowledge on the causes of malnutrition among children in Kanam Communities?

S/N	Knowledge of the Causes of Malnutrition		
	Are you aware of cases of malnutrition among children in your community?	Yes (%)	No (%)
		76.1	23.9
	Knowledge of Causes of Malnutrition Among Children in the Communities by the Participants	Percent	
1	Poverty	35%	
2	Insufficient daily/nutritious foods	28%	
3	Ignorance of the provision and preparation of an adequate diet	12%	
4	Early weaning/child spacing	7%	
5	Sickness/infection	4%	
6	Lack of interaction with children	3%	
7	Lack of potable water	11%	
	Total	100%	

Table 2: Knowledge/Awareness of the Causes of Malnutrition

The table presents participants' responses on the knowledge of the causes of malnutrition among children aged between 6-59 months in Kanam communities, Plateau state. The results indicate that out of 697 parents who participated in this research, 530 (76.1%) were aware of cases of malnutrition among children, while 167 (23.9%) were not. For their knowledge of causes of malnutrition among children, the following results were obtained the most: 244 (35%) parents had poverty, 195 (28%) had insufficient daily/nutritious foods, 83 (12%) parents had ignorance of the provision and preparation of adequate diet, 49 (7%) parents had early weaning/child spacing, 28 (4%) parents had sickness/infection, 21(3%) parents had lack of interaction with children and 77 (11%) parents had a lack of portable water. From this result, poverty and insufficient daily/nutritious foods were indicated as the most common causes of malnutrition among children in the communities.

4. Discussion of Findings

The findings in charts 1-4 indicated that the socio-economic backgrounds of the parents were poor in educational level, yearly income, settlement residence and family size. These findings in Kanam communities corroborate the studies of Kaur (2022), Ahmad et al. (2020) and Ghosh (2020), which state that children of illiterate, primary and middle-educated parents have higher chances of becoming malnourished than children whose parents have higher education. Also, parents with good and higher education are likely to provide good practices like exclusive breastfeeding, adequate and nutritious food, and a higher level of interaction for their children. Similarly, their studies prove that children whose parents live in urban areas are at a lower risk of wasting than those in rural areas and that children who come from lower family sizes are at a lower risk of stunting, wasting and being underweight. In terms of interactions with parents and other significant adults, the mothers had the highest level of interactions with children in the communities, thereby showing the father's role as very minimal. The consequences of this finding in these communities were highlighted in the study of Wells (2016), who stated that when fathers' interaction level is low, such children will not benefit from the father-child connections, which offer positive cognitive development and socio-behavioural outcomes.

Based on parental knowledge of the causes of malnutrition among children in Kanam Communities, the first interesting finding noticed was the response of most of the parents, who were aware of the presence of cases of malnutrition in their communities. However, the main reason was that they had little knowledge. This finding corresponds with that of Yakubu (2023), which revealed that caregivers had low knowledge as they did not know the appropriate age for introducing dairy food to infants, and 7.8% wrongly indicated that water should be introduced before 6 months of age. Only a small percentage of the caregivers (6.8%) knew that non-breast-feeding children aged between 6-23 months should be fed 4 or more times daily with age-appropriate complementary food.

The findings on the malnutrition status of children in the communities show that a very high number of the children were underweight and malnourished, while very few had a healthy weight. This finding is not surprising, especially when we correlate the poor results with the socio-economic backgrounds of parents and their knowledge of the causes of malnutrition in the study areas.

5. Conclusion

The study concludes that the poor socio-economic backgrounds of parents influence their nutrition knowledge, which in turn impacts the nutrition outcomes of children with high cases of malnutrition in Kanam communities. Also, male parents had a minimal level of interaction, thereby limiting the benefits children drive from such relationships.

6. Recommendations

The study, therefore, recommends that improvement in the preparation of nutritious food by stakeholders will go a long way toward combatting the causes of malnutrition among children in the communities. In addition, male parents should be encouraged to interact more with children to maximize the benefits contained therein. Also, federal, state and local governments and other stakeholders should take bold steps to reduce poverty and hardship parents, especially those in rural communities with poor socio-economic backgrounds, are facing through poverty alleviation programmes. Finally, parents need to be properly educated on childcare practices that can improve their daily lives and reduce the challenges involved when a child is malnourished.

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