

Nursing Mothers' Perceived Determinants of Healthy Eating among Preschoolers in Iwo Local Government Area, Osun State, Nigeria

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ABSTRACT

This study investigated nursing mothers' perceived determinants of healthy eating among preschoolers in Iwo Local Government Area, Osun State, Nigeria. This study purposively examined whether nursing mothers perceive parental influence, socio-economic status, and food preference as determinants of healthy eating among preschoolers in Iwo Local Government Area, Osun State, Nigeria. A descriptive research design of survey type was employed for this study. Multi-stage sampling procedure was used to select 422 respondents. Researchers developed a questionnaire validated by 3 experts from the relevant field was used for the study. A correlation coefficient of 0.76r was obtained using the split-half reliability method. Descriptive statistics and inferential statistics of Chi-square were used to answer the research questions and test the hypotheses, respectively. All hypotheses were tested and rejected at the 0.05 level of significance. The findings revealed that nursing mothers perceive parental influence (Cal x2 val. of 208.4 > Tab x2 val. of 16.92), socio-economic status (Cal x2 val. of 334.7 > Tab x2 val. of 16.92), and food preference (Cal x2 val. of 297.7 > Tab x2 val. of 16.92) as determinants of healthy eating among preschoolers in Iwo Local Government Area, Osun State, Nigeria. It was evident that nursing mothers in this region perceive parental influence, socio-economic status, and food preference as crucial factors shaping the dietary choices and behaviours of young children. This suggests the importance of targeted interventions and comprehensive strategies aimed at addressing various dimensions of influence to promote healthier eating habits among preschoolers.

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INTRODUCTION

Foods provide nutrients and give energy needed by the body. Nutrients are essential because of their contribution to the growth and development of the human species [1]. Childhood is a critical period in the development of obesity [2]. Researchers suggest that feeding practices, honed over time as adaptive responses to the historical threat of food scarcity, may contribute to overeating and overweight problems in today's calorie-abundant environment [3]. Early feeding practices not only influence infants' exposure to food but also shape their eating behaviours and weight status later in childhood. A study in Japan revealed that breastfeeding for six months or more may reduce the risk of low vegetable intake in early childhood [4], echoing findings in Western countries [5]. Childhood obesity is closely tied to appetitive traits, including low responsiveness to satiety signals, high responsiveness to external food cues, elevated reward associated with preferred foods, and a

preference for energy-dense options [6]. These traits influence children's food intake quantity and preferences, impacting overall dietary quality.

Modern diets characterized by unhealthy fast foods, nutritionally deficient options, energy-dense snacks, sugary beverages, sedentary lifestyles, and increased electronic recreation exacerbate overweight and obesity issues among children. Effective child feeding necessitates parental or caregiver nutritional knowledge to ensure that feeding practices, food choices, and calorie levels meet the child's specific needs. Research on parental influence on children's eating habits highlights several key dimensions. Factors such as exposure to foods, parental food preferences, and the affordability of healthy options are crucial in shaping children's dietary behaviours [7]. Children often need multiple exposures to new foods, sometimes up to 15 times, before developing trust

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and willingness to taste them, with 10 to 15 exposures necessary for acquiring a liking for the food. The dietary likes and preferences of parents significantly influence the likelihood of particular foods being presented to children, potentially restricting the variety of foods available to them.

A positive family system plays a pivotal role in promoting healthy eating behaviours among its members through mechanisms like role modelling, providing wholesome foods, and actively supporting engagement in healthy eating practices [8]. Positive role modelling by parents, demonstrated by the consistent presence of a variety of nutritious options, is associated with increased acceptance of new foods and the adoption of healthier dietary choices among children [9]. Mothers are particularly important in implementing effective prevention interventions regarding children's eating habits [10]. Maternal feeding practices are crucial predictors of both weight gain and the development of obesogenic eating behaviours in young children. Therefore, prevention efforts should target mothers specifically to achieve the most impactful outcomes. When parents express concerns about their children's dietary habits, they often employ various strategies such as limiting food quantity and type, pressuring children to adopt a healthier diet, and rewarding them for making nutritious choices. However, these well-intentioned efforts may lead to unintended consequences [11].

A study further explored the link between restrictive feeding practices and children's eating behaviours, revealing that high levels of dietary restriction are associated with poorer self-regulation of energy intake and subsequent weight gain throughout childhood [12]. The family is viewed as a dynamic system contributing significantly to overall health and well-being. A child's ecological niche extends beyond the family to interactions with peers and is influenced by broader factors such as community dynamics, societal norms, media influence, and food availability [13]. The family, as a fundamental component of this ecological niche, significantly influences a child's dietary habits. It is evident that the family's impact extends beyond mere provision of meals; it encompasses the broader context in which food choices are made, shaping children's attitudes, preferences, and behaviours related to nutrition [14].

Previous research emphasized the effectiveness of an authoritative parenting style, which involves balanced control, in promoting children's self-regulation and mitigating obesity risk by moderating intake of unhealthy snacks [15]. Another study further demonstrates that moderate parental control fosters children's self-regulation and healthier eating habits [16]. Patrick and Nicklas expanded the discussion to include broader familial and social influences on children's diets, stressing the complex interplay between family dynamics and social factors [17]. They underscored the need to consider the broader environment in shaping children's eating habits. Another study revealed the

importance of maternal control on child feeding practices alongside factors like psychopathology and socioeconomic status [18]. This highlights the intricate connections between family dynamics, maternal characteristics, and health-related behaviours.

Addressing socio-economic barriers is crucial for ensuring equitable access to nutritious foods for all children [17]. Keller et al. explored societal ideals' impact on children's eating behaviours, finding that societal expectations, particularly regarding gender, significantly influence children's food choices [19]. They identified distinct eating identities, with feminine identities favouring smaller portions and healthier options, while masculine identities prioritize feeling full and physical performance. A study [17] further augmented our understanding of the multifaceted factors influencing children's eating behaviours, revealing a crucial link between family income and dietary patterns. Their investigation revealed that family income serves as a notable barrier to healthy eating, with children hailing from lower socio-economic backgrounds exhibiting a lower consumption of fruits and vegetables. Simultaneously, these children displayed a higher intake of fat compared to their counterparts from relatively higher socio-economic groups.

Research in infant and child nutrition underscores the crucial link between early exposure to solid foods and subsequent food acceptance behaviours [20]. This connection highlights the importance of introducing a diverse array of solid foods during infancy to reduce rejection behaviours toward novel foods later in life [20]. Nicklaus's research reveals a strong association between food fussiness and reduced dietary variety and quality [21]. Children characterized by fussiness not only exhibit resistance to new foods but also demonstrate a limited acceptance of food items, akin to neophobia. This limitation notably leads to decreased consumption of plant-based foods, highlighting the multifaceted nature of dietary behaviours in early childhood.

The researchers noted a concerning trend where parents tend to overlook the importance of healthy food choices for their children, instead opting to pack junk foods and snacks for their school lunches. This behaviour stems from a misconception that children only need something to prevent them from crying, neglecting the nutritional quality of their meals during break time. Such practices jeopardize the health of preschoolers, contributing to the increasing prevalence of health issues associated with poor nutrition in this demographic. To address this pressing issue, this research aims to investigate the determinants of healthy eating habits among preschoolers, with a focus on nursing mothers in the Iwo Local Government Area of Osun State. The objectives were to examine parental influence, socio-economic status and food preference as determinants of healthy eating habits among preschoolers as

perceived by nursing mothers in Iwo Local Government Area, Osun State.

METHODS

Study design and setting

A descriptive research design of survey type was used for this study. The population for this study comprised all nursing mothers in the ten clinics and maternity in Iwo LGA, Osun State. The health centers include General Hospital, Iwo, Obatedo Primary Health Care Centre, Feesu P.H.C., Alaye Maternity, Isale Oba P.H.C., Ode Doodu P.H.C., Idi-Isin P.H.C., Mosinola P.H.C., Akinfenwa P.H.C. and Ago-Ogunrinde P.H.C. A Multistage sampling procedure, which comprised simple random, proportionate and convenience sampling techniques, was used for the study.

Stage one: A Simple random sampling technique was used to select six health centres out of ten clinics in Iwo LGA, Osun State. The selected clinics are General Hospital, Iwo, Obatedo Primary Health Care Centre, Feesu P.H.C., Alaye Maternity, Isale Oba P.H.C. and Ode Doodu P.H.C.

Stage two: A Proportionate sampling technique was used to select 0.5 percent of the population of nursing mothers in each of the six health centres, which was four hundred and twenty-two (422) respondents.

Stage three: Convenience sampling technique was used during the administration of questionnaires to the respondents from each of the health centres sampled.

Data Collection Procedure

The instrument used for data collection was a researcher's structured questionnaire entitled 'Nursing Mothers' Perceived Determinants of Healthy Eating Habits among Preschoolers in Iwo Local Government Area, Osun State'. The instrument was validated by three other experts in the related field of study. The reliability of the instrument was carried out using the split-half method of reliability, while a correlation coefficient of 0.76r was obtained using Pearson's Product-Moment Correlation (PPMC).

Table 1. List of Selected Health Centres and Number of Respondents

Name of Selected Health Centres	Population of Nursing Mothers	Proportionate sample of Respondents (0.5%)
General Hospital, Iwo	35,000	175
Alaye Maternity	15,000	75
Obatedo P.H.C.	11,437	57
Feesu Maternity	10,000	50
Isale Oba P.H.C.	8,000	40
Ode Doodu P.H.C.	5000	25
TOTAL	84,437	422

Researchers' Fieldwork, (2023).

Data Analysis

Descriptive statistics of percentages were used to answer the research questions, while inferential statistics of Chi-Square were used to test the postulated hypotheses. The decision criteria for the hypotheses were set at a 0.05 level of significance.

RESULTS

Answers to Research Questions

Research Question One: Will parental influence be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State?

Table 2 shows the answer to the research question one: The mean values of Positive Response 272 (64.5%) is greater than the mean value of Negative Response 150 (35.5%). The results show that nursing mothers perceived parental influence as a determinant of healthy eating habits among preschoolers in Iwo Local Government Area, Osun State.

Research Question Two: Will socio-economic status be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State?

Table 2. Percentile analysis on Parental Influence and Healthy Eating habits

ITEMS	SA (%)	A (%)	Positive Response	D (%)	SD (%)	Negative Response
My child always prefers to eat what I eat	102 (24.2%)	156 (37.0%)	258 (61.1%)	115 (27.3%)	49 (11.6%)	164 (38.9%)
My child eats healthy food because I provide him with only healthy food	108 (25.6%)	199 (47.2%)	307 (72.7%)	93 (22.0%)	22 (5.2%)	115 (27.3%)
I force my child to eat a particular type of food even if he/she does not want to eat it	115 (27.3%)	202 (47.9%)	317 (75.1%)	89 (21.1%)	16 (3.8%)	105 (24.9%)
I moderately control my child to eat more vegetables and fruits to balance his/her diet	68 (16.1%)	138 (32.7%)	206 (48.8%)	135 (32.0%)	81 (19.2%)	216 (51.2%)
X			272 (64.5%)			150 (35.5%)

Table 3: Percentile analysis on Socio-economic Status and Healthy eating habits

ITEMS	SA (%)	A (%)	Positive Response	D (%)	SD (%)	Negative Response
Families with a higher socio-economic status have better access to fresh and nutritious food for their preschoolers	156 (37.0%)	225 (53.3%)	381 (90.3%)	10 (2.4%)	31 (7.3%)	41 (9.7%)
The cost of healthy food is a barrier for nursing mothers with lower socio-economic status in providing nutritious meals for their preschoolers.	129 (30.6%)	149 (35.3%)	278 (65.9%)	67 (15.9%)	77 (18.2%)	144 (34.1%)
Nursing mothers with higher socio-economic status are more likely to engage in meal planning and preparation that prioritizes healthy eating for their preschoolers.	142 (33.6%)	206 (48.8%)	348 (82.5%)	60 (14.2%)	14 (3.3%)	74 (17.5%)
Limited financial resources contribute to nursing mothers with lower socio-economic status providing less nutritious meals for their preschoolers.	123 (29.1%)	175 (41.5%)	298 (70.6%)	86 (20.4%)	38 (9.0%)	124 (29.4%)
X			326 (77.3%)			96 (22.7%)

Table 4: Percentile analysis on Food Preference and Healthy eating habits

ITEMS	SA (%)	A (%)	Positive Response	D (%)	SD (%)	Negative Response
The more I feed my child bitter food, the more he/she shows acceptance	173 (41.0%)	201 (47.6%)	374 (88.6%)	29 (6.9%)	19 (4.5%)	48 (11.4%)
Introducing variety of healthy food to my child at an early age makes him/her accept it easily as he/she grows older	90 (21.2%)	236 (55.9%)	326 (77.3%)	79 (18.7%)	17 (4.0%)	96 (22.7%)
I only feed my child with sweet foods such as sweet potatoes because he/she prefers it than bitter foods	133 (31.5%)	154 (36.5%)	287 (68.0%)	85 (20.1%)	50 (11.8%)	135 (32.0%)
My child always rejects bitter foods during first experience	108 (25.6%)	199 (47.2%)	307 (72.7%)	93 (22.0%)	22 (5.2%)	115 (27.3%)
X			324 (76.7%)			98 (23.3%)

Table 3 shows the answer to the research question two: The mean values of Positive Response 326 (77.3%) is greater than the mean value of Negative Response 96 (22.7%). The result show that nursing mothers perceived socio-economic status as a determinant of healthy eating habits among preschoolers in Iwo Local Government Area, Osun State.

Research Question Three: Will food preference be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State?

Table 4 shows the answer to the research question three: The mean values of Positive Response 324 (76.7%) is greater than the mean value of Negative Response 98 (23.3%). The result shows that nursing mothers perceived food preference as a determinant of healthy eating habits among preschoolers in Iwo Local Government Area, Osun State.

Hypotheses Testing

Hypothesis 1: Parental influence will not significantly be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

Table 5: Chi-square analysis on Parental Influence and Healthy Eating Habits

Variable	N	df	Calx2 value	Critical value	Remarks
Parental influence as a perceived determinant of healthy eating habits among preschoolers	422	9	208.4	16.92	Ho rejected

@ 0.05 level of significance

Table 5 shows the test of hypothesis one, which has a calculated chi-square value of 208.4 is greater than the critical value of 16.92 @ 9 degrees of freedom. This showed that the hypothesis was rejected, which implies that parental influence is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

Hypothesis 2: Socio-economic status will not significantly be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

Table 6: Chi-square analysis on Socio-economic Status and Healthy eating habits

Variable	N	df	Calx2 value	Critical value	Remarks
Socio-economic status as a perceived determinant of healthy eating habits among preschoolers	422	9	334.7	16.92	Ho rejected

@ 0.05 level of significance

Table 6 shows the test of hypothesis two, which has a calculated chi-square value of 334.7 is greater than the critical value of 16.92 @ 9 degrees of freedom. This showed that the hypothesis was rejected, which implies that socio-economic status is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

Hypothesis 3: Food preference will not significantly be perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

Table 7: Chi-square analysis on Food Preference and Healthy Eating Habits

Variable	N	df	Calx2 value	Critical value	Remarks
Food preference as a perceived determinant of healthy eating habits among preschoolers	422	9	297.7	16.92	Ho rejected

@ 0.05 level of significance

Table 7 shows the test of hypothesis three, which has a calculated chi-square value of 297.7 is greater than the critical value of 16.92 @ 9 degrees of freedom. This showed that the hypothesis was rejected, which implies that food preference is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State.

DISCUSSION

The result revealed that parental influence is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State. This result was supported by a finding that confirmed that some parental control is likely required to moderate children's intake of these foods [15]. A finding also reinforces the hypothesis that an authoritative parenting style, in which parents use moderate levels of control, may facilitate the development of children's self-regulation and moderate children's intake of palatable snack foods, promote children's diet quality, and reduce obesity risk [16]. The study by Patrick and Nicklas noted that family and social environment play an important role in the development of children's eating patterns and diet quality.

Another finding revealed that socio-economic status is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State. This result corroborates with the report that societal ideals related to expectations about what and how males and females should eat may also engender different eating behaviors in children [19]. A feminine identity is characterized by eating smaller portions, consuming less meat, and preferring healthier options to maintain appearance, while a masculine eating identity is characterized by feeling full, with a focus on physical performance. Another study [17] found out that family income often presents a barrier to healthy eating, with children in lower socio-economic groups eating fewer fruit and vegetables and having higher intake of fat compared to children in relatively higher socio-economic groups.

The study also showed that food preference is significantly perceived as a determinant of healthy eating habits among preschoolers by nursing mothers in Iwo Local Government Area, Osun State. This result affirmed that infants who were previously exposed to a greater variety of solid foods show fewer rejection behaviours in response to later offers of novel foods [20]. Food "fussiness" [or "pickiness"] has also been linked with lower dietary variety and quality [21]. Fussier children, in addition to refusing new foods, often eat a very narrow range of foods.

CONCLUSION

The findings from this study shed light on the multifaceted perceptions of nursing mothers in Iwo Local Government Area, Osun State, regarding determinants of healthy eating habits among preschoolers. It is evident that parental influence, socio-economic status, and food preferences are perceived as significant factors shaping the dietary behaviours of young children in this community. Understanding these perceptions is crucial for developing targeted interventions aimed at promoting healthy eating habits among preschoolers, thereby potentially mitigating the risk of nutrition-related health issues in this population. Further research exploring the intricate interplay of these determinants and their impact on dietary practices is warranted to inform tailored interventions and policies that effectively address the nutritional needs of preschool-aged children in Iwo and similar communities.

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