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Parenting Styles, Self-esteem and Gender on Eating Behavior among Primary School Pupils in Nigeria

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Abstract

Eating behavior has remained a recurring issue for parents, teachers, and the government as children move into their formal level of learning. Studies linking children's eating behavior to parenting styles and self-esteem in a semi-urban settlement in Nigeria are lacking. Therefore, this study examined the influence of parenting styles, self-esteem, and gender on eating behavior among primary school pupils in Lagos, Nigeria. A cross-sectional survey design was adopted while validated questionnaires were used to gather data from 198 parents of pupils of four randomly selected primary schools. Data were analyzed using zero-order correlation, a t-test of independent samples, and a 2 x 2 ANOVA. Four hypotheses were tested and accepted at $p < .05$ level of significance. The results showed that parenting styles and self-esteem significantly influenced eating behavior among primary school pupils [$t(136) = 2.573$, $p < .05$]. Also, the result indicated that parenting styles and self-esteem had significant interaction effects on eating behavior [$F(2,134) = 4.732$, $p < .05$]. Finally, gender-differentiated eating behavior among study participants [$t(191) = -3.672$, $p < .05$). The study concluded that parenting styles, self-esteem, and gender are strong contributors to eating behavior among study participants. The study recommended that parents, government and other stakeholders should work in synergy to improve the dietary requirements of primary school pupils to prevent malnutrition in the future.

Keywords: eating behavior, parenting styles, primary school pupils, self-esteem

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INTRODUCTION

A child's eating behavior is characterized by a gradual change from total dependence on caregivers prior to weaning to a child becoming an accomplished eater, making independent food choices albeit limited by the context of what is available (Adetayo, 2024). The eating behavior established during this early period moves into adolescence and adulthood and when it is a healthy behavior, it has a positive influence in combating many non-communicable diseases usually reported at this age (Devine et al., 2023; Jiya et al., 2024).

Eating behavior developed through three learning processes of familiarization, associative, and observation (Birch & Doub, 2014). Familiarization refers to the positive impact of repeated exposure of a child to a stimulus of food, which, when done over time, would make the child accept such food in the future (Birch & Doub, 2014). The associative (conditioning) occurs when a positive evaluation of a stimulus arises through its association with a second stimulus (Birch & Anzman, 2010). This means what a child would eat depends on what they have been repeatedly exposed to over time. Observational (social) learning is where individuals observe and imitate the behavior of others (Birch & Anzman, 2010). An example is when a child is influenced by the eating behavior of other individuals.

Importantly, children have been found to have similar affective responses toward different types of food across different cultures suggesting biological underpinnings for the foods they are programmed to prefer and avoid (Adetayo, 2024; Amadi & China, 2024; Mennella & Ventura, 2011). This explains the role of environments such as schools and families in shaping children's eating behaviors (Kral & Faith, 2007). The early years of children are marked by tremendous physical and psychological developments which allow them to gradually become less helpless and more independent such as in what they eat (Goswami, 2002). Children eating behavior tends to be established between ages 5 and 11.

According to the United Nations Inter-agency Group for Child Mortality Estimation (UN-IGME, 2024), poor eating behavior has caused 21% morbidities and 2.2 million deaths globally (UN-IGME, 2024). The prevalence is more in sub-Saharan Africa which stood at 41 deaths per 1,000 births. Petrikova et al. (2023) listed some common foods in Nigeria ideal for children on a daily basis such as cereals, milk, boiled egg, fruit/fruit juice, rice and beans with beef, stew, semolina (or any swallow) with vegetable soup, meat or chicken. He specified some food items which should be in the lunch bag of the child on a daily basis in the

Nigerian environment. These include spaghetti, banana, chicken, noodles, boiled egg, peanut, butter, sandwich, rice and stew, beans and dodo (fried ripe plantain) with stew.

Some factors have been used to explain primary school pupils (age 5-11 years age bracket) eating behavior. One factor considered in this study to explain eating behavior is parenting style, which is described as a psychological construct that explains interactions between parents and children (Moitra & Murkerjee, 2012). Also, it is a behavioral construct that sets the emotional context within which parents and children interact (Larsen et al., 2015). Parenting styles have two dimensions: Demandingness, which explains how much control parents exercise and responsiveness, which describes the parents' warmth and acceptance in response to their children's needs (Baumrind, 1991). Within these two dimensions, four types of parenting styles have been identified. First is the authoritative parenting style which is associated with a high level of demandingness and rules with high responsiveness to the child (Baumrind, 1991). Second is authoritarian parenting which has high demandingness but low responsiveness characterized by rules but with less influence from the child's needs (Baumrind, 1991). Third is the permissive (indulgent) parenting which combines low demandingness and high responsiveness with few rules but high engagement with the child's needs. Finally, uninvolved parenting is associated with both low demandingness and low responsiveness (Baumrind, 1991).

When these dimensions are situated within eating behavior, authoritative parenting feeding style parents actively encourage their child to eat but achieve this through supportive behaviors including rules explained in a humane way whereas with authoritarian parenting feeding style parents encourage eating through parent-centric rules. Permissive parenting style parents listen to the needs and wants of their children without exerting control over their choices whereas uninvolved parenting style parents neither demand nor exert rules on their children's eating behavior. Studies have indicated that good parenting styles significantly influenced eating behavior among primary school pupils (Arlinghaus et al., 2017; Hennessy et al., 2012; Janicke, 2013; Rhee et. al., 2015; Shinn et al., 2017; Williams et al., 2017).

The second factor considered in this study to explain eating behavior among primary school pupils is self-esteem which describes an individual's self-worth and the feelings about oneself (Rosenberg, 1979). It is also conceptualized as how an individual evaluates self and perceives others (Hepper, 2023). Self-esteem is attributed to eating behavior which in turn leads to a higher intake of healthy

food and restrained intake of fatty food. Studies on self-esteem on eating behavior among Scottish adolescent girls showed significant differences within the age of 10-16 years. In another study among Asian adolescents, the result showed that self-esteem influenced consumption of sugar products "more than once a day" (Honkala et al., 2006). However, study has also found no significant influence between self-esteem and eating behavior among adolescent participants (Soo et al., 2008).

Finally, gender is considered as a likely factor to influence eating behavior. Studies on the influence of gender on eating behavior gave varied results. For example, Perez-Rodrigo et al. (2003) found gender differences to exist in the preferences of eating behavior among their Spanish participants. Similar results among 4-5-year-old British children found gender differences between girls and boys where girls were found to like vegetables more than boys did (Cooke & Wardle, 2005). The same streams of findings were reported in gender differences among children in French 9-11-year-olds (Macaux, 2001) and Norway (Lien et al., 2001).

Studies investigating parenting styles, self-esteem and gender on eating behavior carried out in developed and other developing countries gave varied results. Also, literature search found no similar studies among Nigerian samples which thus leave a gap in knowledge to be filled. Therefore, the objective of this study was to examine the influence of parenting styles, self-esteem and gender on eating behavior among primary school pupils (5-11-year-old) in Idimu/Egbe, Lagos State, Nigeria.

The questions raised to guide this study were: 1. Is there any differences between parenting styles and self-esteem on eating behavior among primary school pupils?; 2. Is there any significant interaction effects between parenting styles and self-esteem on eating behavior among primary school pupils?; 3. Is there any gender differences in eating behavior among primary school pupils?

The result of this study would bring further understanding on the influence of parenting styles, self-esteem and gender on eating behavior among primary school pupils in Lagos, Nigeria. Also, the study findings would inform parents, guardians, teachers and school management on the implications of poor eating behavior among primary pupils and what should be done. Furthermore, the results of this study would guide policy makers and other stakeholders in planning the dietary needs of children in public schools. Finally, data generated from this study would help in further studies on eating behavior beyond the study populations.

The Theory of Planned Behavior (TPB, Ajzen, 1991) was used to anchor this study. The theory has three components: attitude, subjective norms and perceived behavioral control. The theory posits that when an individual has a favorable attitude towards a given behavior, perceives that significant others want the individual to perform that behavior, and the individual feels capable of performing the said behavior, the individual would have a higher intention to perform the behavior. When applied to eating behavior, it means that to engage in healthy eating behavior, an individual must have a favorable attitude toward food, consider what the significant others would say and have the right food to eat at the right time.

Studies have provided results on the efficacy of this theory on eating behavior. For example, Liu et al. (2021) found subjective norms and perceived behavioral control to be significant predictors of behavioral intention of healthy eating behavior among adults living in Beijing, China. Also, Sogari et al. (2023) found attitude, subjective norms and control beliefs significantly related to behavioral intention of adopting a healthy diet. Furthermore, Sajjad et al. (2023) found behavioral intention and subjective norms components of TPB as the strongest predictors of fast-food consumption among their study participants. Extant study by Chan and Tsang (2011) found perceived behavioral control, attitudes toward healthy eating and subjective norms to predict 45 % of the variance in behavioral intention. Further support was by Fila and Smith (2006) who found subjective norms and perceived behavioral control to explain 30 % of the variance in eating behavior among boy and girl participants.

The hypotheses tested in this study were: **H1:** Primary school pupils who experienced good parenting style would manifest good eating behavior than those with poor parenting styles; **H2:** Primary school pupils who scored low in self-esteem would manifest significant differences in eating behavior than their counterparts who scored high in self-esteem; **H3:** There would be significant interaction effects between parenting styles and self-esteem on eating behavior among primary school pupils; **H4**: Female primary school pupils would show significant differences on eating behavior than male primary school pupils.

METHOD

Research Design

The study adopted a cross-sectional survey design using validated questionnaires for data collection. The independent variables were parenting

styles, self-esteem and gender while the dependent variable was eating behavior among primary school pupils. The study was conducted in Idimu/Egbe Local Council Development Area (LCDA) of Lagos State, where four public primary schools were randomly selected: Idimu Primary School, Community Primary School, Local Government Nursery & Primary School, Egbe, and Oore-Ofe Nursery & Primary School, Egbe. The public primary schools were selected because of the heterogeneous populations of the LCDA in Lagos State.

Sample and Sampling Techniques

The study utilized both simple random and convenience sampling techniques. Simple random sampling technique was used to select four public primary schools while convenience sampling technique was used to administer questionnaires to the study participants during parent forum association (PFA) meetings across the selected schools.

Participants

The participants comprised 163 female parents (82%) and 35 (18%) male parents with the pupils age as follow: Age 5 were 42 (21%), age 6 were 33 (17%), age 7 were 51(26%), age 8 were 13 (7%), age 9 were 34 (17%), age 10 were 22 (11%) and age 11 were 3 (1%). In terms of their class levels: 34 (17%) were in primary one, 30 (15%) were primary two, 36 (18%) were primary three, 29 (15%) were primary four, 35 (18%) were primary five, 34 (17%) are primary six. Also, indications of their religious faiths showed that 102 (73%) were Christians while 96 (27%) were Muslims. Finally, 169 (85%) of the pupils were reported to reside with both parents while 29 (15%) were living with guardians.

Instruments

The Children's Eating Behaviour Questionnaire (CEBQ, Wardle et al., 2001) was used to measure the eating behavior among study participants. CEBQ has eight subscales: Food Responsiveness (FR), Enjoyment of Food (EF), Desire to Drink (DD), Satiety Responsiveness (SR), Slowness in Eating (SE) and Food Fussiness (FF). CEBQ is presented on a 5-point Likert's response format (Never, Rarely, Sometimes, Often, Always). Sample items include: "My child refuses new foods at first (FF)", "My child eats more when worried (FR)", "My child has a big appetite (SR)", "My child eats less when s/he is angry (EE)", "My child is always asking for a drink (DD)", and "My child finishes his/her meal very quickly (SE)".

CEBQ scale has good psychometric properties with Cronbach's alpha ranging from .72 to .91 with adequate two-week test-retest reliability (correlation coefficients ranging from .52 to .87) and construct validity. Principal Components Analyses showed that each scale had a single factor, which explained 50-84% of the variance. In this study, all the psychometric properties of the scales were well-established with the composite scale Cronbach's alpha of .89.

The Perceived Parenting Style Scale (Divya & Manikandan, 2013) was used to measure parenting style in four dimensions of authoritative, authoritarian, permissive and uninvolved. It is a 30-item scale presented on a 5-point Likert's response format ranging from strongly disagree (1) to strongly agree (5). Sample items include: "I am capable of making my child understand about "Right " and "Wrong " and" My child's suggestions and ideas are considered". The authors obtained composite Cronbach's alpha of .89 while the subscales Cronbach's alphas were authoritative style (.79), authoritarian style (.81) and permissive style (.86). The current study obtained composite Cronbach's alpha of .83 and for the respective subscale were authoritarian (.71), authoritative (.84) and permissive (.82).

Rosenberg Self-Esteem Scale (RSES, Rosenberg, 1979) was used to assess participants' level of feelings about themselves (self-esteem). The scale consisted of 10 items presented on a 4-point Likert's format ranging from strongly disagree to strongly agree. Sample items include: "Overall I feel good about my child's abilities compared to others (e.g. at school, playing sports or socially)" and "If my child makes an innocent mistake, it get him/her down". The RSES has demonstrated sound psychometric properties and has been extensively used in several studies across the globe. Several studies have validated the scales among Nigerian samples (Omumu, 2022). Cronbach's alpha was .91.

Procedure for Data Collection

A formal letter of introduction was obtained from the Department of Psychology, University of Ibadan which was presented to the respective Head Teachers in the selected primary schools. Based on the contents of the questionnaires which were discussed with the Head Teachers, permission was granted for the researchers to attend Parent Forum Association meetings in each of the schools for the researchers to distribute the questionnaires to the parents of the pupils. The researchers took time to explain the purpose of the study to the potential participants. Potential participants were told that participation in the study was voluntary and responses given would be treated confidentially. Also,

they were duly informed that they can discontinue at any point they feel uncomfortable without any penalty. Only those who agreed to participate in the study were given the questionnaires to fill. A total of 200 questionnaires (50 each in each school) were distributed across the four schools and were collected on the spot which took less than 20 minutes to complete. When screening and coding the questionnaires, two were found to be incomplete and were removed thus left with 198 used for the analysis.

Data Analysis

IBM SPSS version 23 was used to analyze the collected data. Both descriptive and inferential statistics were executed on the data. Hypotheses 1, 2 and 3 were tested with t-test of independent samples while hypothesis 4 was tested using a 2 x 2 analysis of variance (ANOVA). All hypotheses were accepted at $p < .05$ level of significance.

FINDINGS

The results in Table 1 revealed parental styles had a negative relationship with eating behavior ($r = -.316$, $p < .05$), meaning that as parental style increases, negative eating behavior decreases. Also, the result indicated that self-esteem had a negative relationship with eating behavior ($r = -.246$, $p < .05$). This implies that low self-esteem leads to poor eating behavior.

Table 1. Zero-order Correlation of Study Variables

SN	Variables	1	2	3	Mean	SD
1	Parenting style	-			3.960	.615
2	Self-esteem	-.152*	-		2.295	.269
3	Eating behavior	-.316*	-. 246*	-	2.753	.445

*Significant at the 0.05 level

H1: Primary school pupils who experienced good parenting style would manifest good eating behavior than those with poor parenting styles. The hypothesis was tested using t-test for independent samples and the result is shown in Table 2.

Table 2. T-test of Independent Samples Showing the Differences between Poor and Good Parenting Style on Eating Behavior

Parenting styles	N	Mean	SD	Df	t	p
Poor	129	2.727	.204	196	2.428	.05
Good	69	2.802	.299			

Dependent variable: Eating behavior

The results in Table 2 revealed a significant differences between parenting styles and eating behavior [t(196) = 2.428, p <.05] such that pupils who reported good parenting styles scored higher in good eating behavior (Mean= 2.802, SD= .299) compared to pupils with poor parenting styles (Mean = 2.727, SD = .204). Therefore, the hypothesis was accepted.

H2: Primary school pupils who scored low in self-esteem would manifest significant differences in eating behavior than their counterparts who scored high in self-esteem. The hypothesis was tested using t-test of independent samples and the result is presented in Table 3.

Table 3. T-test of Independent Samples Showing Differences between Low and High Self-Esteem on Eating Behavior

Self-esteem	N	Mean	SD	Df	t	p
Low	43	2.898	.410	136	2.573	.05
High	95	2.715	.326			

Dependent variable: Eating behavior

The results in Table 3 indicated a significant differences between self-esteem and eating behavior [t(136) = 2.573, p <.05] such that pupils who reported low in self-esteem scored higher in eating behavior (Mean= 2.898, SD = .410) compared to pupils who scored high in self-esteem (Mean = 2.715, SD = .326). Therefore, the hypothesis was accepted.

H3: There would be significant interaction effects between parenting styles and self-esteem on eating behavior among primary school pupils. The hypothesis was tested using a 2 x 2 analysis of variance and the result is presented in Table 4.

Table 4. A- 2 X 2 ANOVA Showing Main and Interaction Effect of Parenting Styles and Self-Esteem on Eating Behavior among Study Participants

Source	SS	Df	MS	F	p
Parenting styles	.077	1	.077	.528	>.05
Self-esteem	.906	1	.906	6.196	<.05
Parenting styles*Self-esteem	.692	1	.692	4.732	<.05
Error	19.591	134	.146		
Total	1135.122	138			

Dependent variable: Eating behavior

The results in Table 4 showed significant interaction effects between parenting styles and self-esteem on eating behavior among primary school pupils [F(2,134) = 4.732, p <.05]. Therefore, hypothesis three is accepted.

H4: Female primary school pupils would show significant differences on eating behavior than male primary school pupils. The hypothesis was tested using t-test of independent samples and the result is presented in Table 5.

Table 5. T-Test of Independent Samples Showing the Differences between Male and Female Pupils on Eating Behavior

Gender	N	Mean	SD	Df	t	p
Male	98	2.640	.390	191	-3.672	<.05
Female	95	2.870	.478			

Dependent variable: Eating behavior

The results in Table 5 revealed that female pupils show significant differences in eating behavior than their male pupils [t (191) =-3.672, p < .05) such that female primary school pupils indicated higher eating behavior (Mean = 2.870, SD = .478) compared to male primary school pupils (Mean = 2.640, SD = .390). The hypothesis was accepted.

DISCUSSION

The study investigated parenting styles, self-esteem and gender on eating behavior among primary school pupils in Idimu/Egbe LCDA, Lagos, Nigeria. Four hypotheses were tested and accepted at p <.05 level of significance. The hypothesis that primary school pupils who experienced good parenting style would demonstrate good eating behavior compared to those who experienced poor parenting style was confirmed. Pupils from authoritative and moderate authoritarian parenting styles tended to have controlled eating behavior. Pupils from permissive parenting style where no discipline and control are applied to their behavior tended to have poor eating behavior. The finding supported Kuppens and Ceulemans (2018) stated that parenting styles play a significant role in how children develop their eating behavior. Parents as the primary influencers of their children's eating behavior allow them to observe and imitate their parents' positive eating behavior. Also, the present result supported previous findings that parents who used their mealtime to coach and instill healthier eating behavior among their children (Adetayo, 2024; Arlinghaus et al., 2017; Janicke, 2013; Shinn et al., 2017).

The hypothesis that primary school pupils who reported low self-esteem would have poor eating behavior than those who reported high self-esteem was supported. This means that primary school pupils with high self-esteem

developed good eating behavior compared to those who showed low self-esteem. Development of good global self-worth at this tender age comes from good parenting styles which reinforce discipline in what, when, where and how they eat. This finding lent credence to previous study that self-esteem significantly influences dietary behavior of adolescents age 9 to 16 years old (Adetayo, 2024). However, this finding should be interpreted cautiously because of cultural relativity. While primary school pupils in Nigeria may respond to food with emotion and passion basically because food is hard to come by, primary school pupils from developed countries that have accessed food as when due would not react to the present or absence of food in the same fashion.

The hypothesis that there would be significant interaction effects between parenting styles and self-esteem on eating behavior among primary school pupils was confirmed. This means that parents who adopted robust parenting styles that include listening, counseling and role modeling and the development of positive self-esteem among their children contributed to good eating behavior. This result supported previous studies that showed a significant interaction effect existed between parenting styles and self-esteem on eating behavior among their study participants (Cardel et al., 2012; Hennessy et. al., 2012; Johnson et. al., 2012; Rhee et. al., 2015; Tung & Yeh, 2013). Parenting styles are characterized by feeding styles such as emotional and self-esteem feeding in the case of permissiveness, or pressure to eat and restriction in the case of authoritarian styles leading to positive eating behavior. A balance between permissive, neglectful, and authoritarian with high self-esteem traits produced and reinforced positive eating behavior among children (Johnson et al., 2012).

Finally, the hypothesis that female pupils would show better different eating behavior than male pupils was supported. This means that gender determines the eating behavior of the study participants. The finding of this study supported Perez-Rodrigo et al.'s (2003) finding that gender differences existed in the preferences of eating behavior among their Spanish participants. Also, the present study confirmed Cooke and Wardle's (2005) result among 4-5-year-old British children that girls preferred some food more than boys. Finally, Macaux' s (2001) study in France and Lien et al.'s (2001) study in Norway lent credence to the present study's finding. However, this result must be interpreted cautiously because of cultural relativity.

CONCLUSIONS

Based on the findings of this study, the following conclusions were drawn. Both parenting styles and self-esteem have significant influence on the eating behavior among primary school pupils in the study populations. Also, there was a significant interaction effect between parenting styles and self-esteem on eating behavior among study participants. Finally, gender differences in eating behavior were found among study participants.

The study recommended that regular nutritional and growth assessment should be an integral part of the school management best practices for primary school pupils at this age to prevent a nutritional deficiency that would probably crop up later in their developmental stage. Also, the government should re-invigorate the free-school lunch program among primary school pupils to improve their nutritional balance as they grow and move into their post-primary levels of education. Since the study has implicated parenting styles and self-esteem as contributing factors to eating behavior among study participants, parents/guardians/caregivers should demonstrate good parenting styles and build self-esteem into the lives of their wards to understand the importance of developing good eating behavior at an early age in life. Finally, other stakeholders in educational sectors should rally round the parents and complement the government efforts to ensure that primary school pupils have access to quality meals while in the school environment.

One limitation of the study was that only primary school pupils in one LCDA in Lagos State were used which hindered generalization of the study findings. Further studies should include more LCDAs in the State. The use of standardized questionnaires to collect data did not rule out response bias especially among the study participants. Further studies should include focus group discussion and key informant interview to triangulate data collected using questionnaires. Three independent variables investigated in this study were not exhaustive, further studies should include social support, birth order and parent's socio-economic backgrounds.

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