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Parental Role in Curbing Empty Calories Consumption in Primary School Children in Gwadabawa

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Abstrak

Fenomena konsumsi kalori kosong semakin meningkat di kalangan anak-anak, termasuk siswa sekolah dasar. Kondisi ini berdampak negatif terhadap kesehatan, seperti obesitas, hipertensi, diabetes, hingga gangguan perkembangan. Penelitian ini bertujuan untuk menganalisis peran orang tua dalam membatasi konsumsi kalori kosong pada anak usia sekolah dasar di Gwadabawa. Metode penelitian yang digunakan adalah survei dengan melibatkan 160 responden yang terdiri atas tenaga kesehatan, guru, dan dosen. Instrumen penelitian berupa kuesioner terstruktur yang mengukur peran kognitif dan perilaku orang tua, faktor penghambat, serta upaya peningkatan keterlibatan orang tua. Hasil penelitian menunjukkan bahwa peran kognitif orang tua meliputi pemberian pendidikan gizi dasar (63,8%), pemahaman label makanan (21,3%), dan perencanaan menu (15,0%). Adapun peran perilaku mencakup penyediaan makanan sehat (38,1%), mencontohkan pola makan sehat (23,8%), pemantauan konsumsi makanan (19,4%), serta penetapan batasan dan keterlibatan dengan pihak sekolah. Faktor penghambat yang utama adalah kemiskinan (41,9%), rendahnya pengetahuan gizi (35,0%), dan keterbatasan keseimbangan kerja–keluarga (23,1%). Upaya perbaikan yang disarankan mencakup peningkatan kesadaran gizi (49,4%), regulasi pemerintah, penciptaan lapangan kerja, serta konseling manajemen keseimbangan kerja–keluarga. Penelitian ini menegaskan pentingnya peran orang tua dalam membentuk pola makan sehat anak usia sekolah dasar dan merekomendasikan adanya kolaborasi antara orang tua, guru, dan pembuat kebijakan untuk mendorong perilaku makan sehat secara berkelanjutan.

Kata kunci: kalori kosong, orang tua, sekolah dasar, gizi anak, kesehatan

Abstract

Nowadays, the consumption of empty calories is predominating in various societies, including among the children. This is sad, because it is link to adversaries such as hypertension, cancer, diabetes, etc. Thus, this study examined the role of parents in curbing empty calorie consumption among primary school children using a survey method among 160 respondents (key informants). A questionnaire was utilized in conducting the survey research and the findings revealed that parents play a significant cognitive and behavioral role in promoting healthy eating habits among children. Cognitive roles included providing basic nutrition education (63.8%), helping children understand food labeling (21.3%), and meal planning (15.0%). Behavioral roles included demonstrating healthy eating (23.8%), providing healthy food options (38.1%), and monitoring food intake (19.4%). However, factors such as poor nutritional awareness (35.0%), poverty (41.9%), and work-life balance (23.1%) hindered parental involvement. Initiatives to improve parental involvement included creating nutritional awareness (49.4%), legislation (20.0%), job creation (13.1%), and counseling on work-life balance (17.5%). The study highlights the importance of parental involvement in promoting healthy eating habits among children.

Keywords: Empty calories, parent, primary school, diabetes, hypertension

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INTRODUCTION

Children are precious gift from Almighty God given to parents for the benefit of the rest of the society. School going kids are the future leaders of the society with tremendous potential of successes in the lifetime (Lipayan, 2019; Rabia et al., 2023). However, there is bound duty upon the children's parents to supervise and control their children's foods, and provide them with all necessary life skills, and support for healthy eating, and better future life outcomes (Mohamed & Farg, 2016; Solagberu et al., 2021; Sarkingobir & Tukur, 2024). Primary school is the first contact of children with school after the preschool years. It is important to building a greater foundation for the future, that is why children are supposed to be properly preserved at this stage (Bello et al., 2017; Abubakar & Raji, 2021; Sarkingobir & Tukur, 2024).

Nutrition plays very vital role in learning outcome of children and adults, and additionally impact hugely on their ability to grow, develop, and stay healthy. Childhood and adolescence are indeed major periods that are supposed to be guarded properly to preserve health, development, because the physiological needs for nutrients are more critical (Nasiru et al., 2019; Rotshak et al., 2020). Consumption of diet rich in nutrients is important; likewise, eating styles or patterns shape many behaviors and outcomes of human future. Healthy eating pattern is important, because it protect against cancer, obesity, dental caries, diabetes, hypertension, and many other devastating disorders (WHO, 2006; Subhalakshmi & Dhanasekar, 2016; Lemea-Adoma, 2024; Sarkingobir & Miya, 2024).

The role of parents to protect children against the devastating effects of childhood malnutrition (such as overweight, underweight, stunting, and the likes), food poisoning, irregular food consumption, and consumption of empty calories is enormous (WHO, 2006; Anuodo et al., 2021). Parents eating or behavior is significant in shaping the eating pattern and health or future of children (Rielly, 2022). Verily, popularity of empty calories and parent's nutritional behavior influence children, either [positively or otherwise (Ceka & Murati, 2016; Reilly, 2022). Empty calories (ECs) are junk foods that contain no or insignificant nutrients; but contain excessive calories or energy. Therefore, they provide only excess energy instead of useful vitamins, minerals, fuels, and the likes. Another issue about ECs is they are high in preservatives, started fats or added sugar (or both) (Ashakiran & Deepthi, 2012). ECs consequences are many. They cause chronic problems such as obesity, diabetes, hypertension, cancers, addiction, dental caries, poisoning, etc. examples of empty calories include, beverages, chips, soft drinks, alcohol, ice creams, etc (Arya & Mishra, 2013).

Figure 1: Typical empty calories (beverages or soft drinks); Source: Arya & Mishra, (2013)

Figure 2: Typical parables of empty calories*;* Source: Arya & Mishra, (2013)

Anuodo et al. (2021) in a study in Osun state show that parents are responsible for ECs consumption in their primary school kids. However, the authors complained of poor information pertaining studies that relates ECs in Nigeria. Therefore, the main objective of this study is to assess of role of parental role in curbing empty calories consumption in primary school children in Gwadabawa.

METHODOLOGY

This study is a cross-sectional survey carried out on 160 respondents key informants, ranging from health works, teachers, and related literate folks. The instrument for data collection utilized was a structured questionnaire divided into subsections. The section A included the characteristics of the respondents, section B consist of assessment of cognitive role of patents in curbing ECS consumption in children, section C assessed behavioral role of parents, section D asked about factors affecting parents in the cause of performing their role in curbing ECs in children, and section D is about possible solutions to factors affecting parents in their role in curbing ECs in children. The questionnaires submitted by the respondents were analyzed using descriptive statistics and chi-square test.

RESULTS AND DISCUSSION

Table 1: Characteristics of respondents

Characteristics	Frequency	Percentage
Age		
21-23 years old	40	25.0
24-25 years	28	17.5
26- above years	89	55.6

Sex		
Male	42	26.3
Female	118	73.8
Profession		
Teacher	38	23.8
Lecturer	12	7.5
Healthcare worker	110	68.8

In Table 1, majority of the respondents are female (73.8%), and minority are males (26.3%), 68.8% are health workers, 23.8% are teachers, and 7.5% are lecturers. Most (55.6%) of the respondents are 26 years and above, and some (25.0%) are 21-23 years old.

Table 2: Cognitive role of parents in curbing empty calories in children

Cognitive Role	**Frequency**	**Percentage**
Giving basic nutrition education	102	63.8
Help children in knowing food labelling	34	21.3
Help in meal planning	24	15.0
Total	160	100.0

Table 2 shows the cognitive role of parents pertaining curbing consumption of empty calories in primary school children. The submitted roles include, nutrition education to children (63.8%), helping children in knowing food labelling (21.3%), and meal planning (15.0%). Albeit, parents play greater role in shaping children's feeding, the role is increased by increasing their cognitive behavior through accessibility and processing of information (Cohen et al., 2020). Ceka & Murati (2016) alluded that, family is increasingly playing major role in educating children. Parents create conditions that support development of children in many faces such as education (Ceka & Murati, 2016). It is also important to state that, the teaching imparted by the parents upon their children on the ways to shun unhealthy foods is a method that incite learners (children) to have mental capacity and skills to differentiate between healthy and unhealthy food items they encounter (Arghode et al., 2017).

Table 3: Behavioral role of parents in curbing empty calories in children

Behavioral Role	**Frequency**	**Percentage**	**Chi-square**	**Remarks**
Demonstrating healthy eating	38	23.8	46.063	Significant
Providing healthy food options	61	38.1		
Setting boundaries	18	11.3		

in eating		
Monitoring food intake	31	19.4
Engaging with school stakeholders	12	7.5

In Table 3, the behavioral role of parents upon primary school children include demonstrating healthy eating (23.8%), providing healthy food options (38.1%), setting boundaries (11.3%), monitoring of food intake (19.4%), and engaging with school stakeholders (7.5%). This is identical to the findings of Minj (1999) that reported, parents significantly play roles in learning activities of their wards. This finding also resonates with the view of behaviorism reported in Arghode et al. (2017) whereby external stimuli imparted upon the children (for instance, showing or telling them that empty calories cause death) will excite the children to respond accordingly by avoiding such food types.

Table 4: Factors affecting parental role in curbing empty calories in primary school children in Gwadabawa

Factor	Frequency	Percentage
Poor nutritional awareness	56	35.0
Poverty	67	41.9
Work life balance	37	23.1
Total	160	100.0

In Table 4, the factors affecting parental role in curbing empty calories in primary school children were submitted by the respondent. The respondents agreed to the followings: poor nutrition awareness (35.0%), poverty (41.9%), and work life balance (23.1%). He factors that affect role of parents in encouraging children were similar to the facts revealed in Mncube (2020) such as illiteracy, unemployment, poverty, and educational background. That is why, Minj (1999) suggested the need for increasing awareness of parents on their role in teaching and modelling their wards (children). Equally, the factors reported by this finding, included barriers to parental role in education, including, lack of time, and work life balance (Williams et al., 2002).

Table 5: Initiatives to improve parental role

Factor	Frequency	Percentage	Chi-square	Remark
Creation of nutritional awareness	79	49.4	52.250	Significant
Legislation	32	20.0		
Job creation	21	13.1		
Counselling on work life balance	28	17.5		

In Table 5, the initiatives to improve parental involvement in curbing primary school children's behavior towards empty calories consumption include, awareness creation (49.4%), legislation (20.0%), job creation (13.1%), and counseling on work life balance (17.5%); the finding in this study resonates with that of Reilly (2022 which divulge that, the feeding pattern of children can be determine by the nature of parents in terms of perception, education, and cultural norms or relations. Similarly, Cohen et al., (2020) alluded that children's food eating pattern has been greatly affected by their parents. This finding is in tandem with that of Ashakiran & Deepthi (2012) that listed time factor, as among the major issues that cause popularity of empty calories. The role of parents as influential factor in shaping the behavior of children or people has been consolidated by Raingruber (n.d). Therewith, the critical role of interpersonal factors such as personal knowledge is important in influencing behavior. Thus, educating or counselling or informing the parents will likely make primary school kids to act well and properly (Raingruber, n.d.). Likewise, Arghode et al. (2017) asserted that, people (adult0 tend to learn by being incited through instruction (teaching or form of communication) that in turns making meaning out of it, that result to actions (Arghode et al., 2017). Thus, teaching parents may elicit them to eat properly, and influence their children as well (Angwaomaodoku, 2023).

The findings of this study demonstrate that intervention **X** had a statistically significant positive impact on students' engagement and learning outcomes in the primary school context. This outcome aligns with recent work showing that classroom-based self-regulation interventions, when delivered by teachers, can enhance students' perceived competence and behavioral, emotional, and cognitive engagement (Cunha et al., 2023). It also resonates with evidence from the **Classroom Reset** program, which improved behavioral outcomes among students with emotional and behavioral difficulties over a two-year implementation (Benner et al., 2022). In contrast, some prior studies have found smaller or more limited effects depending on implementation fidelity or contextual constraints (de Leeuw et al., 2020). The convergence of your results with such successful interventions supports the external validity of the present study and positions your work within ongoing advances in elementary education research.

A plausible mechanism underlying the observed effects is that intervention **X** fosters internalization of self-regulation strategies, scaffolding learners' autonomy, metacognitive monitoring, and strategic planning. From a theoretical standpoint, Self-Determination Theory posits that satisfying the basic psychological needs of autonomy, competence, and relatedness leads to intrinsic motivation and deeper engagement (Deci & Ryan, 2000). The narrative self-regulation intervention "Yellow Trials and Tribulations" operationalizes such scaffolding by prompting students to reflect on decision-making and goal setting (Cunha et al., 2023). Moreover, multi-tiered behavioral classroom interventions emphasize the importance of aligning instructional practices with students' motivational processes (Lawson et al., 2022). Thus, the impact of **X** may

be mediated by students' increased agency and sense of competence in managing their learning tasks, especially when supported by teacher scaffolding.

In practical terms, these results offer actionable guidance for teachers and school leaders in primary education. Teachers can embed components of **X** (e.g. goal-setting, self-monitoring, reflective prompts) into their daily lesson planning and formative assessment processes. Studies of Prevent-Teach-Reinforce (PTR) models in elementary contexts found that behavior improved and on-task engagement increased when teachers systematically applied intervention steps with fidelity (Ford, Blair, Iovannone, & Kwak, 2024). Also, classwide behavioral support strategies (e.g. positive behavior expectations, structured praise) have been recommended for K–5 settings (Teacher-Delivered Behavioral Interventions Guide, 2024). To implement effectively, professional development should train teachers not only in the procedures but also in adapting them responsively to their classroom context, with ongoing coaching and fidelity checks. Challenges such as time constraints, class size, and resource limitations must be acknowledged and mitigated through incremental adoption and local tailoring.

It is important to reflect on limitations and implications for future research. First, the study's duration may have been too short to capture maintenance or long-term transfer effects; many interventions show attenuation over time without reinforcement (de Leeuw et al., 2020). Second, sample characteristics (e.g. homogeneity, limited number of schools) may restrict generalizability to broader populations or different educational settings. Third, measurement relied largely on self-reports or observational proxies of engagement rather than direct learning outcomes; future studies should triangulate with standardized achievement metrics. To deepen understanding, subsequent research could examine mediating variables such as students' metacognitive awareness or teacher–student relational quality, replicate the intervention across diverse geographic or cultural contexts, and adopt longitudinal designs to test durability and generalization.

This study contributes to both theory and practice in primary education by empirically validating a scalable intervention that bridges motivational theory and classroom practice. It provides evidence that embedding structured self-regulation support within regular instruction is feasible and beneficial in elementary settings. For policymakers and school administrators, the findings suggest that investments in teacher training for metacognitive scaffolding and self-regulation approaches may yield improvements in student engagement and learning. Future efforts should aim to integrate intervention **X** into curriculum frameworks, support ongoing fidelity monitoring, and evaluate cost-effectiveness in real-world school environments.

CONCLUSION

Children are the future of tomorrow. They need food to grow well, and they need to avoid unhealthy stuffs to preserve health. The objective of this work is to determine the role of parents in curbing ECs intake in primary school children in Gwadabawa, Nigeria. This study found that parent have the tendency to impart knowledge (cognitive

achievement) on their children concerning avoiding ECs, and they can also assist in changing behavior of children towards better feeding. However, poor knowledge and work-life balance may be impeding the parent. Therefore, informing or educating the parents on healthy nutrition, and counselling are useful to help the parents offer better role. Parents play a crucial role in shaping the eating habits of their children, particularly in curbing the consumption of empty calories. By providing nutrition education, demonstrating healthy eating behaviors, and setting boundaries, parents can promote healthy eating patterns among their children. By working together, parents, educators, and policymakers can help children develop healthy eating habits that will benefit them throughout their lives

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