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Exploring the Implementation and Success of Nutrition Education Programs in Early Childhood Education Settings

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Abstract

This study aims to explore the implementation and success of nutrition education programs in a kindergarten. The research utilized a qualitative approach through structured interviews with teachers and parents. Data were analyzed using data reduction techniques to identify key patterns and themes. The findings revealed that the nutrition program successfully improved children's eating habits, such as increased preference for healthy foods and reduced consumption of unhealthy snacks. Teachers employed interactive methods like storytelling and games, while parents supported the program by providing healthy meals at home. Challenges included children's preference for unhealthy snacks and parents' limited time. The study recommends developing more comprehensive programs, including parent training and the provision of engaging educational materials.

Keywords: *Nutrition Education, Eating Habits, Early Childhood Education*

Abstrak

Penelitian ini bertujuan untuk mengeksplorasi implementasi dan keberhasilan program pendidikan gizi di salah satu Taman Kanak-Kanak (TK). Penelitian dilakukan dengan pendekatan kualitatif melalui wawancara terstruktur terhadap guru dan orang tua. Data dianalisis menggunakan teknik reduksi data untuk mengidentifikasi pola dan tema utama. Hasil penelitian menunjukkan bahwa program pendidikan gizi berhasil meningkatkan kebiasaan makan anak, seperti preferensi terhadap makanan sehat dan pengurangan konsumsi makanan tidak sehat. Guru menggunakan metode interaktif, seperti bercerita dan permainan, sementara orang tua mendukung dengan menyediakan makanan sehat di rumah. Tantangan yang dihadapi meliputi preferensi anak terhadap makanan ringan tidak sehat dan keterbatasan waktu orang tua. Studi ini merekomendasikan pengembangan program yang lebih komprehensif, termasuk pelatihan untuk orang tua dan penyediaan bahan ajar yang menarik.

Kata Kunci: Pendidikan Gizi, Kebiasaan Makan, Pendidikan Anak Usia Dini

INTRODUCTION

Optimal growth, health, and well-being are supported by proper nutrition, highlighting its importance for everyone (Bandura, 2010; Moonik et al., 2015; W. Nurhayati, 2019). Recently, children's dietary habits and nutritional needs have received greater focus, prompted by the understanding that early-life interventions significantly influence health outcomes during childhood and beyond (Damayanti &

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Samaria, 2021; Kurniawaty, 2022). Research has emphasized the importance of adequate nutrition in early childhood, as these formative years are crucial for normal physical and cognitive development (Pérez-Rodrigo & Aranceta, 2001; Sekiyama et al., 2012). Moreover, addressing malnutrition, growth stunting, and acute nutritional problems in children fosters healthier eating habits, which, in turn, may reduce the risk of chronic conditions such as obesity, coronary heart disease, type 2 diabetes, and stroke later in life.

Throughout history, children have been severely impacted by malnutrition and food scarcity, leading to the development of parental feeding practices as a response to these challenges (Februhartanty, 2005; Triyanto et al., 2014; Utami et al., 2025). Despite the shift in many regions from food scarcity to an abundance of food and overconsumption, efforts to promote healthy eating habits, such as the provision of nutritious food in large portions, remain largely ineffective across most cultures. Sekiyama et al., (2012) studied the effects of snacking on 154 children aged 1 to 12 in West Java. They found high rates of stunting (69.5%) and moderate stunting (35.7%). Out of 221 foods consumed, 68 were snacks, and children who ate more snacks had lower height-for-age z-scores as well as reduced intake of carbohydrates and vitamin C. To address this issue, they recommend introducing nutrient-rich meals and implementing school nutrition programs.

Research indicates that nutrition promotion is an effective tool for developing healthy dietary habits in young children (Pérez-Rodrigo & Aranceta, 2001; Zauche et al., 2016). Children benefiting from nutrition promotion can influence their peers, spreading healthy messages across the school community. The importance of early nutrition-related knowledge, attitudes, and behaviors has long been acknowledged (Amrindono et al., 2023). In Early Childhood Education settings, schools play a significant role in shaping children's diets (Sekiyama et al., 2012; Umaroh, 2021). As children attend school, parental influence decreases, and school-provided food and peer influence become more important.

The school food environment is increasingly recognized for its strong impact on children's eating behaviors, given the amount of time spent there and the proportion of food consumed at school (Amini, 2018; Budiarti et al., 2022; Lin et al., 2019). Improving nutrition in schools not only benefits children's health but may also enhance their educational performance (A. Nurhayati et al., 2024). There is a growing consensus that school-level action is essential for fostering healthy food choices, which can help reduce future health issues like obesity. Social cognitive theory-based techniques in school nutrition programs have been shown to encourage positive behavioral changes (Bandura, 1985). Bandura (2004) highlights key determinants such as self-efficacy, expected outcomes, awareness of health risks and benefits, facilitator perceptions, and social or structural barriers that influence health practices and desired behavioral changes.

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PG and Raudhatul Athfal Al Faradis are early childhood education institutions that have incorporated nutrition education programs into their learning activities. These programs use interactive approaches such as shared mealtimes, introducing healthy foods through games, and simple gardening activities to familiarize children with food sources. This approach stands out for its integration of Bandura's (1985) social-cognitive theory with experiential learning, offering children the opportunity to develop an awareness of the importance of healthy eating habits from an early age. In the context of early childhood education in Indonesia, such initiatives remain uncommon, as most early childhood institutions have yet to systematically implement nutrition education in their curricula (Sekiyama et al., 2012).

Previous research underscores the significance of nutrition education in addressing health challenges such as malnutrition, stunting, and obesity in children (Black et al., 2013; Oddo et al., 2019). In Indonesia, stunting and malnutrition remain pressing issues, particularly in early childhood, with a stunting prevalence of 24.4% reported in 2021. Despite this, most studies have concentrated on interventions within family settings or elementary schools, leaving the role of early childhood education in shaping healthy eating habits relatively underexplored (Wijayanto, 2020). This study seeks to bridge this gap by examining the potential of early childhood education programs to serve as effective interventions in fostering healthy dietary behaviors among young children.

PG and RA Al Faradis provide a compelling example of how a supportive learning environment can integrate elements such as self-efficacy, health awareness, and social influence to drive positive changes in eating behaviors. According to Bandura (2004), health-related behaviors are shaped by an individual's confidence in their abilities and the influence of their social surroundings. By implementing nutrition education programs, these schools not only impart knowledge about healthy foods but also empower children to influence their peers, creating a ripple effect within the school community. These findings align with research by Kurniawati et al. (2022), which demonstrated that social-cognitive theory-based interventions could lead to sustained behavioral changes when reinforced by a supportive educational environment.

Given this context, the current study aims to investigate the implementation and success of nutrition education programs at PG and RA Al Faradis. It will focus on identifying the factors that enhance or hinder the program's effectiveness and evaluate its impact on developing healthy eating habits in early childhood. By providing fresh and comprehensive insights, this research aspires to offer practical guidance for developing similar initiatives in other early childhood education settings.

METHODS

Research Design

This study used a qualitative descriptive design to explore the implementation and success of nutrition education programs in early childhood education settings. A

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qualitative approach was chosen to provide an in-depth understanding of the processes, challenges, and outcomes of these programs in shaping healthy eating habits in young children.

Research Location

The research was conducted at PG and RA Al Faradis, two early childhood education institutions in Sidoarjo, Indonesia. These institutions were selected purposefully because they have implemented innovative nutrition education programs as part of their curriculum, making them suitable case studies for this research.

Data Sources

The study relied on primary and secondary data. Primary data were obtained from interviews with teachers, and parents, as well as observations of classroom activities and the school environment. Secondary data included institutional documents such as program guidelines, reports, and relevant literature on nutrition education and early childhood development.

Data Collection Techniques

The data collection technique used in this study is structured interviews. The researcher conducted online interviews using the WhatsApp application. The interviews in this study consist of 9 questions developed to gather information from both teachers and parents regarding their experiences with and observations of the nutrition education program implemented in early childhood education settings.

Table 1. Interview Questions Table for Teachers and Parents (T1-T3 and P1-P3):

No	Interview Question
1	Knowledge about the nutrition program
2	Impact of the nutrition program on children’s eating habits
3	Role of parents in supporting healthy eating habits
4	Methods used to teach healthy eating
5	Challenges in promoting healthy eating habits
6	Impact of the nutrition program on children's social interactions
7	Parental involvement in the nutrition program
8	Expectations for the development of the nutrition program
9	Aspects of the nutrition program that need improvement

Data Analysis

The data were analyzed using the Miles and Huberman framework, which involves three key steps. The first step, data condensation, focused on simplifying and organizing the data collected from interviews, observations, and documents. Key points were highlighted and grouped to identify patterns and emerging themes. The second step, data display, involved presenting the organized data in matrices and charts to facilitate comparison and interpretation. The final step, conclusion drawing and

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verification, emphasized understanding the findings and validating them by comparing results across data sources to ensure consistency and reliability.

To ensure the trustworthiness of the findings, the study employed triangulation by comparing data from different methods and sources. Member checking was also used to confirm the accuracy of the interview data with participants, and peer debriefing sessions helped refine the analysis.

RESULTS AND DISCUSSION

Based on the research objectives, this discussion delves into the experiences of teachers and parents in engaging children in the nutrition education program at early childhood education (PAUD) institutions. The involvement of both parties is expected to provide a more comprehensive insight into the factors that support and hinder the effective implementation of the nutrition education program. Therefore, the experiences of teachers and parents in supporting the implementation of the nutrition program will be analyzed simultaneously, focusing on efforts made to optimize children's healthy eating patterns. The data reduction obtained from interviews with teachers and parents is presented in coded form, aligned with the information gathered from each participant, thus offering a clearer and more measurable picture of the implementation and success of the nutrition program in PAUD institutions.

Table 3: Data Reduction for Interview Findings (Teachers and Parents)

No	Category	Codes	Key Findings
1	Knowledge about the nutrition program	T1, P1	Teachers and parents demonstrated varying levels of understanding about nutrition education programs, with some emphasizing the importance of balanced diets while others lacked detailed knowledge about its impact on child development.
2	Impact on children's eating habits	T2, P2	Nutrition programs had a positive influence on children's food choices, especially in reducing the intake of unhealthy snacks. Teachers observed more willingness among children to try healthier food options.
3	Role of parents in supporting healthy eating	T3, P3	Parents emphasized their active role in encouraging healthy eating habits at home, including offering healthier meal options and setting an example by consuming nutritious food themselves.
4	Methods used to teach healthy eating	T1, P2	Teachers utilized interactive methods such as storytelling, group activities, and food-related games to engage children and make learning about nutrition fun. Parents also used simple home-based

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			activities like gardening to teach children about food sources.
5	Challenges in promoting healthy eating habits	T2, P1	Both teachers and parents reported challenges such as children's preference for unhealthy snacks, limited time for preparation of nutritious meals, and resistance to trying new foods.
6	Impact of the nutrition program on children's social interactions	T1, P3	Teachers and parents noted that the program fostered better cooperation among children during meal times, with children influencing each other positively by sharing healthy food habits.
7	Parental involvement in the nutrition program	T2, P1	Parental involvement was varied, with some parents actively participating in nutrition-related school activities, while others had limited engagement due to time constraints.
8	Expectations for the development of the nutrition program	T3, P2	Teachers and parents expressed the need for more comprehensive nutrition education programs, including workshops for parents to reinforce healthy eating practices at home.
9	Aspects that need improvement	T1, P3	Suggestions for improvement included the need for more engaging educational materials for children, better communication between parents and teachers, and greater emphasis on long-term behavior change in nutrition habits.

Discussion

The findings confirm the significance of early childhood education in establishing healthy dietary habits, reinforcing prior studies on the effectiveness of school-based nutrition programs. The integration of experiential learning and social-cognitive principles in PG and RA Al Faradis aligns with Dewey's (1938) experiential learning framework, emphasizing the importance of direct engagement in creating meaningful learning experiences.

Broader Involvement of Stakeholders

The collaboration between teachers, parents, and the school community underscores the role of collective effort in driving program success. As noted by Oddo et al. (2019), the synergy between school and home environments is critical in sustaining behavioral changes. This study supports the idea that when parents are actively involved in reinforcing school messages, children develop consistent and positive eating habits.

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Addressing Financial and Logistical Challenges

The challenges identified in this study highlight the need for tailored interventions to address socioeconomic disparities. For instance, resource constraints could be mitigated through partnerships with local businesses or government support, as suggested by Black et al. (2013). Similarly, improving parental involvement may require flexible engagement strategies, such as virtual meetings or take-home activity kits, to accommodate varying schedules.

Expanding Program Impact

While the program at PG and RA Al Faradis serves as a model, its scalability to other PAUD institutions warrants further exploration. Programs incorporating social-cognitive theory, as demonstrated here, could be adapted to diverse cultural and economic contexts. Future research should investigate long-term outcomes of such programs, including their impact on reducing stunting and obesity rates.

CONCLUSION

The findings from both teachers and parents reveal that nutrition education programs have a positive impact on children's eating habits, although there are challenges such as children's resistance to new foods and limited parental involvement. Further efforts are needed to engage parents more actively and to develop more comprehensive and engaging educational materials to foster long-term behavior change in children's eating habits. These results align with previous research, suggesting that the involvement of both teachers and parents is essential in promoting healthy eating behaviors in early childhood education settings.

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