

Parental Knowledge of Balanced Nutrition and Healthy Food Provision for Early Childhood: A Correlational Study

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ABSTRACT:

Background

Sustainable food security is a critical issue in Indonesia. Kebocoran Village, Banyumas Regency, initiated the development of melon-picking agrotourism as an innovative solution to strengthen local food security and improve community well-being.

Aims

To determine the relationship between parental knowledge about balanced nutrition and the practice of providing healthy food menus to children at Almaarif Islamic Kindergarten.

Methods

Correlational, using a questionnaire on 80 respondents (parents). Data analysis used Spearman's Rank correlation.

Result

There was no significant relationship ($0.95 > 0.05$) between parental knowledge and healthy food provision. The correlation coefficient indicated a very weak relationship (0.6%) and was unidirectional. The majority of parents' knowledge was moderate (55%), while healthy food provision practices were good (81%).

Conclusion

The null hypothesis (H_0) is accepted, namely that there is no relationship between parental knowledge about balanced nutrition and providing a healthy food menu to children.

Keywords: Balanced Nutrition, Healthy Food, Early Childhood, Research Correlational

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INTRODUCTION

The importance of introducing balanced nutrition to children from an early age is a must to ensure optimal child growth and development (Cucu Ailah et al., nd; Goulart et al., 2025; Hidayani et al., 2025; Widiana & Harwanto, 2025). Research on Providing Healthy Food Menus to Children is very urgent considering that nutritional issues in Indonesia remain an unresolved challenge. Data from the 2022 Indonesian Nutritional Status Survey (SSGI) by the Ministry of Health shows an alarming prevalence of nutritional problems, such as stunting (21.6%), underweight (17.1%), wasting (7.7%), and overweight (3.5%). The high percentage of these nutritional problems indicates a nutritional imbalance in children's daily diets, so systematic efforts to understand and improve the provision of healthy food menus are a primary focus (Corsello et al., 2025; Halilagic et al., 2025; Joseph Lule Kyanjo et al., nd; Wang et al., 2025).

Ideally, parents, especially mothers, have the biggest role in fulfilling the family's food intake and are required to provide provisions that reflect balanced nutrition for children (Halilagic et al., 2025; Lien et al., 2025; Nocerino et al., 2024). However, real conditions show a significant gap (Białek-Dratwa et al., 2024; Cai et al., 2025; Horino et al., 2024). At Almaarif Islamic Kindergarten, the school's "Healthy Food Provisions" program, according to available data, has only achieved 40% of its effectiveness. This low achievement indicates a disconnect between the educational institution's expectations and the practices implemented by parents at home (Mekkara Nikarthil Sudhakaran et al., 2025; Ravikumar et al., 2022; Sudaryati et al., 2021). This gap is very worrying because unhealthy food supplies for children will continue to impact their growth and development in the future (Flores-Moreno et al., 2022; Lalchandani et al., 2025; Pearce & Wall, 2025; Stanham et al., 2025).

This gap in practices created an opportunity to conduct in-depth correlational research at the site. Observations showed that the daily lunches for children at Almaarif Islamic Kindergarten in Singosari were dominated by ready-to-eat foods or snacks that did not reflect balanced nutrition. Examples of lunches brought included spicy macaroni, instant noodles, sausages, and snacks containing MSG, or children were simply given pocket money. The situation, where school programs were not running optimally and unhealthy lunches were predominant, prompted researchers to examine the underlying factors of this problem, making it a specific case worthy of study.

The research gap in this study is the need to empirically test whether parental knowledge is significantly correlated with their behavior in providing healthy food menus in the context of a failed school program. This study focuses on Almaarif Islamic Kindergarten and aims to examine the relationship, strength, and direction of the relationship between the two variables. Its novelty lies in providing specific data at that location to answer the important question of whether knowledge is power, or whether there are other factors (such as economic, social, and cultural) that are more dominant in determining the practice of providing healthy food menus.

Parental Knowledge About Balanced Nutrition was chosen as the independent variable because parental knowledge and understanding is an important foundation before they can introduce the concept of nutrition and get children used to eating healthy foods (Abu Bakar et al., 2024; Hatijar et al., 2025; Liu et al., 2024; Nizmah et al., 2024). Without adequate knowledge about children's nutritional needs (including calories, protein, fat, vitamins, minerals, and water), parents tend to be unable to make informed decisions about meeting their children's nutritional needs. Therefore, assessing knowledge levels is a crucial first step in understanding the root causes of problems in providing healthy food menus to children.

This study has three main objectives: to determine the relationship, strength, and direction of the relationship between parental knowledge of balanced nutrition and the provision of healthy food menus to children. The findings are expected to provide theoretical benefits as a guideline or

reference for further research in the field of Early Childhood Education. Furthermore, in terms of practical benefits, these findings are expected to serve as a foundation or initial data for educational institutions to conduct training or seminars for parents to improve nutritional knowledge and the practice of providing healthy food.

METHOD

Research Design

This research uses a quantitative approach with a correlational type. This design was chosen because it aims to measure the relationship, strength, and direction of the relationship between two variables without establishing a cause-and-effect relationship, namely Parental Knowledge (X) and Provision of a Healthy Food Menu (Y).

Participant

The participants of this study were 80 parents of students at Almaarif Islamic Kindergarten.

Population and the methods of sampling

The study population consisted of all parents of students enrolled at Almaarif Islamic Kindergarten, Singosari, totaling 174 students, comprising 78 students in Class A and 96 students in Class B.

The sampling process was conducted in several stages to ensure relevance to the research objectives. First, the population was restricted to Class B students (aged 5–6 years), as this age group is considered more independent in daily eating practices and regularly brings lunch boxes to school. This stage resulted in a target population of 97 parents.

Second, from these 97 eligible parents, 80 respondents were selected as the final research sample using a purposive sampling technique. The inclusion criteria were parents who were willing to participate, completed the questionnaire in full, and returned it within the data collection period. Incomplete or unreturned questionnaires were excluded from the analysis, resulting in a final sample size of 80 respondents.

This stepwise sampling procedure ensured consistency between the defined population, eligibility criteria, and the final sample analyzed in the correlational study.

Instrument

The research instruments used in this study were tested for validity and reliability prior to data collection. Content validity was assessed through expert judgment involving two experts, and the results were quantified using Aiken's V coefficient. The parental knowledge questionnaire showed a high validity index (Aiken's V = 0.925), while the healthy food provision questionnaire also demonstrated acceptable validity (Aiken's V = 0.867), indicating that all items were valid (V > 0.60).

Reliability testing was conducted using the Split-Half method, with reliability coefficients calculated using the Spearman–Brown formula. The parental knowledge instrument showed a high reliability coefficient ($r = 0.964$), while the healthy food provision instrument demonstrated good reliability ($r = 0.811$). Both coefficients exceeded the acceptable threshold (> 0.70), indicating that the instruments were reliable and suitable for data collection.

Procedures and Time Frame (Procedures and Time Frame)

1. Location: Almaarif Islamic Kindergarten, Singosari District, Malang Regency.
2. Data Collection Time: Distribution of the questionnaire began on February 5, 2024 and ended on February 24, 2024. The procedure included: preparation, instrument trial, distribution of the questionnaire to 80 respondents, and data analysis.

Analysis Plan

The data analysis plan for this study includes editing, scoring, entering (using SPSS version 23), and cleaning. Spearman's Rank Correlation was used for hypothesis testing because the data were measured on an ordinal scale. The basis for decision-making is that a relationship is considered statistically significant if the Sig. (2-tailed) value is <0.05 . The strength of the relationship is interpreted based on the range of correlation coefficient values, which range from 0.00-0.25 (Very Weak) to 0.76-1.00 (Very Strong).

The analysis results, presented in Table 4.7, show that the Sig. value is 0.95. Since this value is greater than 0.05, it can be concluded that there is no significant relationship between the variables of Parental Knowledge (X) and the Provision of a Healthy Food Menu (Y). Furthermore, the correlation coefficient value obtained is 0.006 (or 0.6%). This figure indicates a very weak relationship strength and the nature of the relationship is positive.

RESULTS AND DISCUSSION

Result

The results of this study are based on data collected from 80 parents of students at Almaarif Islamic Kindergarten. Descriptive analysis of parental knowledge regarding balanced nutrition showed that the majority of respondents were classified in the moderate knowledge category (55%; $n = 44$), followed by the high category (36.25%; $n = 29$), while only a small proportion fell into the low knowledge category. This distribution indicates that most parents possessed an adequate level of theoretical understanding of balanced nutrition concepts.

Regarding the practice of providing healthy food menus to children, the results showed that most respondents demonstrated good practices (81%; $n = 65$). A smaller proportion of parents were categorized as having sufficient practices, while very few fell into the poor or very poor categories. Overall, these findings indicate that the majority of parents reported positive behaviors related to preparing and providing healthy food menus for their children.

To examine the relationship between parental knowledge of balanced nutrition and the practice of providing healthy food menus, Spearman's Rank correlation analysis was performed. The results showed a significance value (Sig. 2-tailed) of 0.950, which is greater than the predetermined significance level of 0.05. This indicates that there is no statistically significant relationship between the two variables examined in this study.

Furthermore, the correlation coefficient obtained was $r = 0.006$, indicating a very weak positive correlation between parental knowledge and healthy food provision practices. Although the direction of the relationship was positive, the strength of the association was minimal, suggesting that variations in parental knowledge were not meaningfully associated with differences in reported healthy food provision practices among the respondents.

Discussion

The findings of this study indicate that there is no statistically significant relationship between parental knowledge of balanced nutrition and the practice of providing healthy food menus to children at Almaarif Islamic Kindergarten. Although most parents demonstrated a moderate level of nutritional knowledge and reported good practices in preparing healthy food, the correlation analysis showed that knowledge alone was not a meaningful predictor of actual behavior. This result highlights the existence of a gap between what parents know and what they apply in daily food provision practices for their children.

This finding is consistent with several previous studies suggesting that nutritional knowledge does not automatically translate into healthy dietary behavior (Olorunfemi et al., 2021; Saaka et al., 2021). Behavioral theories emphasize that food-related practices are influenced by a complex interaction of cognitive, economic, social, and environmental factors. In the context of this study, the very weak correlation coefficient suggests that factors beyond knowledge such as time constraints, household economic conditions, food availability, and children's food preferences may play a more dominant role in shaping parents' decisions regarding lunch preparation. Thus, knowledge functions as a necessary but insufficient condition for behavior change.

The discrepancy between the high proportion of reported good practices and prior school observations of unhealthy lunchboxes also deserves attention. This condition may indicate the presence of social desirability bias, as data on food provision practices were collected using self-report questionnaires. Parents may have tended to provide responses that reflected socially acceptable behavior rather than their actual daily practices. This methodological issue further supports the interpretation that the relationship between knowledge and behavior is not straightforward and may be mediated or moderated by contextual and psychological factors.

From a practical standpoint, these findings imply that nutrition intervention programs in early childhood education settings should move beyond knowledge-based approaches. While improving parental understanding of balanced nutrition remains important, greater emphasis should be placed on practical skill development, behavioral support, and structural facilitation (Hargreaves et al., 2022; Whitehead & Parkin, 2022). Programs such as hands-on training in preparing affordable and time-efficient healthy menus, personalized feedback on children's lunchboxes, and supportive school-parent collaboration may be more effective in encouraging sustainable behavior change.

Nevertheless, this study has limitations that should be considered when interpreting the results. The use of a correlational design restricts causal inference, and the reliance on self-report instruments may not fully capture actual food provision behavior. Additionally, the study was conducted in a single educational setting, which limits the generalizability of the findings. Future research is therefore recommended to employ mixed-methods or longitudinal designs, integrate direct observation or dietary assessment, and include additional explanatory variables such as parental attitudes, self-efficacy, and socio-economic factors to better understand the determinants of healthy food provision for early childhood.

CONCLUSION

Based on data analysis involving 80 respondents from parents of students at Almaarif Islamic Kindergarten, this study shows that the level of parental knowledge about balanced nutrition is dominated by the Moderate category at 55%, while their practice in providing healthy food menus shows a very good figure, namely in the Good category at 81%. However, the results of the Spearman's Rank Correlation hypothesis test indicate that there is no significant relationship between parental knowledge about balanced nutrition and providing healthy food menus to children. This is evidenced by a significance value of 0.950 which is much greater than 0.05, so the null hypothesis (H0) is accepted. Although not significant, the correlation coefficient obtained is 0.006 indicating a very weak and positive unidirectional relationship. In conclusion, at this study location, parental cognitive knowledge is not a major determining factor or significant predictor in their practice of providing healthy food, indicating a gap between what is known and what is applied in daily behavior.

AUTHOR CONTRIBUTION STATEMENT

IDF was responsible for conceptualizing the study, designing the research methodology, collecting and analyzing the data, and drafting the original manuscript. STPS contributed to data interpretation, critically reviewed and revised the manuscript for intellectual content, and approved the final version for publication.

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