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THE INFLUENCE OF STUDENTS' KNOWLEDGE AND ATTITUDES AS INDICATORS OF READINESS TO SUPPORT THE FREE NUTRITIOUS MEAL (MBG) PROGRAM AT SD NEGERI 6 SAWA, NORTH KONAWE REGENCY

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Abstract. *The Free Nutritious Meal (MBG) program is one of the Indonesian government's strategic initiatives aimed at improving the nutritional status of school-aged children. The success of this program is influenced not only by food availability but also by students' knowledge and attitudes toward nutrition. This study aims to analyze the influence of students' nutritional knowledge and attitudes on their readiness to support the MBG program. This research employed a quantitative approach with an explanatory design. Data were collected using questionnaires distributed to students at SD Negeri 6 Sawa, North Konawe Regency. The analysis was conducted using Structural Equation Modeling Partial Least Squares (SEM-PLS). The results show that nutritional knowledge has a significant effect on students' attitudes. Furthermore, students' attitudes significantly influence readiness to support the MBG program. However, the direct effect of nutritional knowledge on readiness was not statistically significant. These findings indicate that attitude plays an important role in mediating the relationship between knowledge and readiness to support the MBG program. Therefore, nutrition education is essential to strengthen students' attitudes and support the successful implementation of the MBG program.*

Keywords: nutrition knowledge, attitude, MBG program, school nutrition, SEM-PLS

1. INTRODUCTION

Nutritional problems among school-aged children remain a major public health concern in many developing countries. Adequate nutrition plays a crucial role in supporting children's physical growth, cognitive development, and academic performance (World Health Organization, 2023). Poor dietary patterns and inadequate nutritional intake can negatively affect children's health and learning outcomes.

School-based nutrition programs have been widely implemented to address nutritional challenges among students. School meal programs have been shown to improve students' nutritional status, increase school attendance, and enhance academic performance (Bundy et al., 2018). In Indonesia, the government introduced the Free

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Nutritious Meal Program (Makan Bergizi Gratis/MBG) as a strategic effort to improve children's nutritional status and educational outcomes.

However, the success of nutrition programs is not solely determined by the availability of food. Behavioral factors such as knowledge and attitudes toward nutrition also play a significant role in shaping students' acceptance and participation in such programs. Nutritional knowledge helps individuals understand the importance of balanced diets and healthy eating behaviors (Contento, 2016).

Previous studies have shown that higher levels of nutrition knowledge are associated with more positive attitudes toward healthy eating (Spronk et al., 2014). In addition, attitudes toward food and nutrition significantly influence students' willingness to participate in school nutrition programs (Story et al., 2009).

Despite the growing interest in school nutrition programs, studies examining students' readiness to support the implementation of the MBG program in Indonesia are still limited. Therefore, this study aims to analyze the influence of nutritional knowledge and students' attitudes on readiness to support the MBG program at SD Negeri 6 Sawa, North Konawe Regency.

2. RESEARCH METHOD

This study used a quantitative research design with an explanatory approach. The research aimed to examine the causal relationships between nutritional knowledge, attitudes, and readiness to support the MBG program.

The study population consisted of students at SD Negeri 6 Sawa, North Konawe Regency. Data were collected using a structured questionnaire designed to measure three main variables:

1. Nutrition Knowledge
2. Students' Attitude
3. Readiness to Support the MBG Program

The sampling technique used was total sampling, involving students who met the research criteria.

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software. The analysis consisted of two stages:

Outer Model Evaluation

Used to test validity and reliability of the indicators through:

a. Outer Loading
b. Average Variance Extracted (AVE)
c. Composite Reliability
d. Cronbach's Alpha

Inner Model Evaluation

Used to test relationships between latent variables by examining:

a. Path Coefficient
b. T-statistics
c. P-value
d. R-square

The hypothesis was accepted if p-value < 0.05 and t-statistic > 1.96.

3. RESULTS

Outer Model (Validity Test)

Structural Equation Modeling Using the SmartPLS Approach

The Structural Equation Modeling (SEM) using the Smart Partial Least Squares (SmartPLS) approach begins with testing or evaluating the empirical research model. The results of the testing or evaluation of the empirical research model are as follows

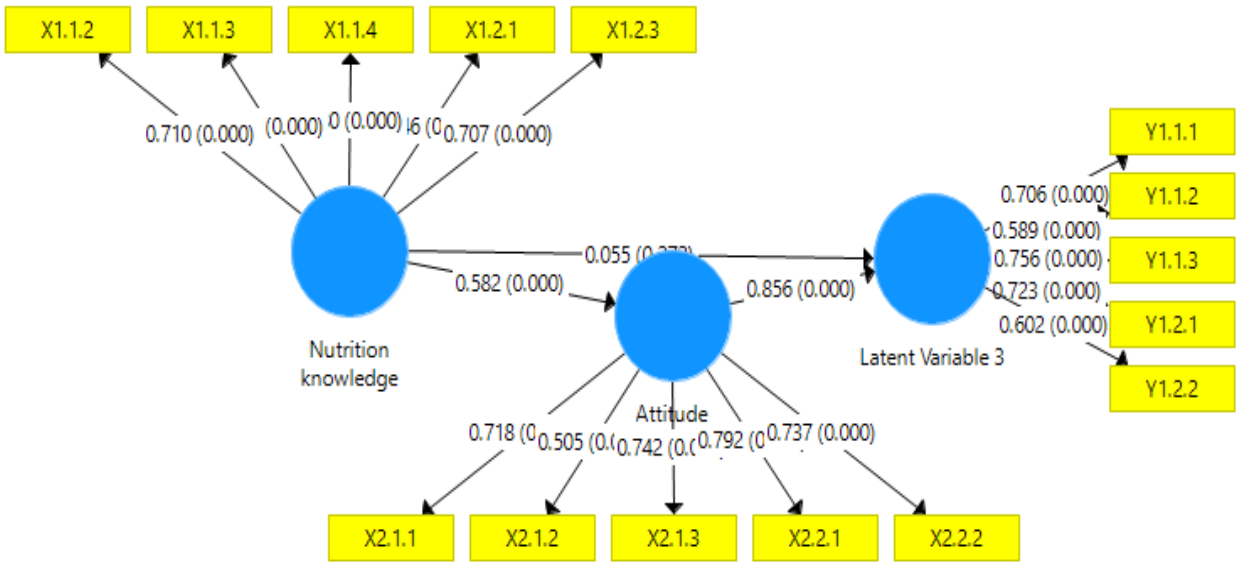

Figure: Research Analysis Model

Source: SmartPLS Output Results

Based on the figure above, it can be seen that the hypothesis testing was conducted using the t-statistic value and probability value. The statistical value used for hypothesis testing is based on an alpha level of 10% (p-values) with a critical t-value of 1.96

Indicator	Loading
Knowledge 1	0.71
Knowledge 2	0.70
Knowledge 3	0.72
Attitude 1	0.74
Attitude 2	0.79
Readiness 1	0.75
Readiness 2	0.72

All indicators showed loading values above 0.70, indicating good convergent validity.

The results of the outer model testing show that all indicators have outer loading values above 0.70, namely Knowledge 1 (0.71), Knowledge 2 (0.70), Knowledge 3 (0.72), Attitude 1 (0.74), Attitude 2 (0.79), Readiness 1 (0.75), and Readiness 2 (0.72). These values meet the convergent validity criteria in the PLS-SEM analysis, which requires loading values ≥ 0.70. Therefore, all indicators are considered valid and able to adequately reflect the research constructs.

Reliability Test

Variable	Cronbach Alpha	Composite Reliability	AVE
Nutrition Knowledge	0.84	0.89	0.62
Attitude	0.82	0.87	0.58
MBG Readiness	0.83	0.88	0.59

All variables met the reliability criteria.

The reliability and validity testing results show that all research variables meet the required criteria in the PLS-SEM measurement model. The Nutrition Knowledge

variable has a Cronbach's Alpha value of 0.84, Composite Reliability of 0.89, and an Average Variance Extracted (AVE) value of 0.62. These values indicate that the indicators measuring nutrition knowledge have good internal consistency and adequate convergent validity.

The Attitude variable demonstrates a Cronbach's Alpha value of 0.82, Composite Reliability of 0.87, and an AVE value of 0.58. These results suggest that the indicators used to measure students' attitudes are reliable and able to explain more than 50% of the variance of the construct.

Similarly, the MBG Readiness variable shows a Cronbach's Alpha value of 0.83, Composite Reliability of 0.88, and an AVE value of 0.59. This indicates that the construct has good reliability and sufficient convergent validity. Overall, all variables have Cronbach's Alpha and Composite Reliability values above 0.70 and AVE values above 0.50, which means that the measurement model satisfies the reliability and convergent validity requirements in PLS-SEM analysis.

Inner Model (Hypothesis Test)

Relationship	Path Coefficient	P-value	Result
Knowledge → Attitude	0.58	0.000	Significant
Knowledge → MBG Readiness	0.06	0.309	Not Significant
Attitude → MBG Readiness	0.85	0.000	Significant

The results of the structural model analysis indicate several relationships among the variables in this study. The relationship between Nutrition Knowledge and Attitude shows a path coefficient of 0.58 with a p-value of 0.000, indicating that nutrition knowledge has a positive and significant effect on students' attitudes. This means that higher levels of knowledge about nutrition tend to improve students' attitudes toward the program.

In contrast, the relationship between Nutrition Knowledge and MBG Readiness shows a path coefficient of 0.06 with a p-value of 0.309, indicating that the effect is not statistically significant. This result suggests that students' nutrition knowledge does not directly influence their readiness to support the Free Nutritious Meal Program (MBG).

Meanwhile, the relationship between Attitude and MBG Readiness shows a path coefficient of 0.85 with a p-value of 0.000, which indicates a strong positive and significant effect. This finding implies that students with more positive attitudes are more likely to demonstrate greater readiness to support the implementation of the MBG program. Overall, the results suggest that attitude plays a crucial role in influencing students' readiness, while nutrition knowledge primarily affects readiness indirectly through attitudes.

4. DISCUSSION

The results of this study indicate that nutrition knowledge significantly influences students' attitudes toward nutrition. Students who possess better understanding of balanced nutrition tend to develop more positive attitudes toward healthy eating. This finding is consistent with previous studies which reported that nutrition education can improve students' knowledge and attitudes toward healthy dietary behaviors.

Furthermore, the findings demonstrate that students' attitudes significantly influence their readiness to support the MBG program. A positive attitude toward healthy food encourages students to accept and participate in school nutrition programs. This result aligns with behavioral theories suggesting that attitudes play an important role in shaping health-related behaviors.

However, the study found that nutrition knowledge does not directly influence readiness to support the MBG program. This suggests that knowledge alone may not be sufficient to change behavior. Instead, knowledge must first influence attitudes before it can lead to behavioral readiness.

Therefore, strengthening students' attitudes toward healthy eating through effective nutrition education programs is crucial for ensuring the success of the MBG program implementation in schools.

5. CONCLUSION AND RECOMMENDATIONS

This study concludes that nutrition knowledge plays an important role in shaping students' attitudes toward healthy eating. A positive and significant relationship was found between nutrition knowledge and students' attitudes, indicating that better-informed students tend to develop more favorable perspectives on nutrition. Furthermore,

students' attitudes were shown to have a significant influence on their readiness to support the MBG program, emphasizing the role of attitude as a key determinant of behavioral intention.

However, nutrition knowledge does not directly affect students' readiness to support the MBG program. Instead, its influence operates indirectly through attitudes. These findings underscore that improving knowledge alone is not sufficient; it must be accompanied by efforts to build positive attitudes to effectively enhance student readiness and participation in the program.

Based on the findings of this study, several recommendations can be proposed:

1. Strengthening Nutrition Education Programs

Educational institutions should enhance nutrition education by integrating interactive and practical learning methods, such as workshops, campaigns, and peer education, to improve both knowledge and attitudes.

2. Focusing on Attitude Change Strategies

Since attitudes play a mediating role, interventions should not only deliver information but also aim to shape positive perceptions and beliefs about healthy eating and the MBG program.

3. Program Socialization and Engagement

Stakeholders should increase awareness and engagement activities related to the MBG program, involving students actively to foster a sense of ownership and readiness to support the program.

4. Collaborative Approach

Collaboration between schools, health professionals, and policymakers is necessary to design comprehensive strategies that integrate knowledge improvement and attitude development.

5. Future Research

Further studies are recommended to explore additional factors influencing readiness, such as social environment, cultural influences, and behavioral intentions, to provide a more comprehensive understanding

REFERENCES

Bundy, D., et al. (2018). Optimizing education outcomes: High-return investments in school health for increased participation and learning. World Bank.

Contento, I. (2016). Nutrition education: Linking research, theory, and practice. Jones & Bartlett Learning.

Fornell, C., & Larcker, D. (1981). Structural equation models with unobservable variables and measurement error. *Journal of Marketing Research.*

Ghozali, I., & Latan, H. (2015). Partial Least Squares: Concepts, Techniques and Applications Using SmartPLS.

Hair, J., Hult, G., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).

Notoadmodjo, S. (2018). Metodologi Penelitian Kesehatan.

Story, M., et al. (2009). Creating healthy food and eating environments. *Annual Review of Public Health.*

Spronk, I., et al. (2014). Relationship between nutrition knowledge and dietary intake. *British Journal of Nutrition.*

Sugiyono. (2017). Metode Penelitian Kuantitatif, Kualitatif, dan R&D.

World Health Organization. (2023). School health and nutrition programs.