

Optimizing The Role Of Parents In Improving Adolescents' Healthy Eating Patterns, Nutrition Education Program In Ringinsari, Blabak, Kediri Regency, Jawa Timur

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ABSTRACT

Adolescent nutritional problems in Indonesia are still high, often caused by unhealthy snacking habits and skipping breakfast, which reduce concentration during learning. Parents, especially mothers, play an important role in shaping adolescents' eating patterns. This community service aimed to improve parental knowledge about balanced nutrition for adolescents. The program was conducted in Ringinsari Village, Blabak, Kediri Regency, with 25 parents of adolescents as participants. The method used was health education through lectures and discussions, supported by PowerPoint slides and leaflets. Knowledge assessment was carried out using pre-test and post-test questionnaires. The results showed a significant increase in participants' knowledge, with the average score rising from 39.58 to 76.04. In addition, 96% of participants rated the presentation of the material as excellent, and 100% stated that the activity was beneficial. In conclusion, balanced nutrition education for parents effectively improved their knowledge and awareness, and further collaboration with schools and health workers is recommended to sustain healthy eating habits among adolescents.

Keywords: Balanced Nutrition, Education, Parents, Teenager

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INTRODUCTION

Adolescence is a critical period of growth and development that requires adequate and balanced nutrition. However, Indonesia is still facing triple nutritional problems, namely stunting, undernutrition, and obesity, which also occur in the adolescent population (Rah et al., 2021; Yusriani & Khidri Alwi, 2018). Data from the 2018 Basic Health Research showed that the prevalence of stunting among children and adolescents (5–12 years) was 16.9%, underweight 6.8%, and obesity 8.2% (Ernawati et al., 2023, p. 1722; jatim, 2024; Rah et al., 2021; RI, 2024). These nutritional problems have a direct impact on adolescents' health, learning concentration, and long-term productivity (Bean et al., 2020; Chan et al., 2023; Moore Heslin & McNulty, 2023).

One of the main contributing factors is an unbalanced diet, such as skipping breakfast and frequent consumption of unhealthy snacks. Adolescents who do not get adequate nutrition are more susceptible to infections and have reduced academic performance (Amilia Yuni Damayanti et al., 2024; Gilbert et al., 2019; Moore Heslin & McNulty, 2023).

Parental education and knowledge, particularly mothers, strongly influence adolescents' dietary behaviors (Gilbert et al., 2019; Hidayat et al., 2024; Wahyuningtyas et al., 2021). Mothers play a central role in planning and preparing daily meals, making them strategic targets for nutrition interventions (Mahmood et al., 2021; Mothers' Nutritional Knowledge, Self-Efficacy, and Practice of Meal Preparation for School-Age Children in Yangon, Myanmar," 2021).

Several studies have shown that school-based nutrition education is effective in improving knowledge and eating behavior (Dwiyana et al., 2023; Hayati et al., 2023). However, interventions that directly involve parents in the education process are still limited, even though parental support is crucial for sustaining healthy eating habits at home. This gap highlights the importance of community-based parental nutrition education programs.

Therefore, this community service was designed to educate parents, especially mothers, on the importance of balanced nutrition for adolescents. The program aims to improve parents' knowledge, attitudes, and support in shaping adolescents' healthy eating patterns through effective and sustainable family-based interventions.

METHOD

This community service activity was carried out in Ringinsari Village, Blabak, Kediri Regency, and involved 25 parents of adolescents as participants. The purpose of the program was to improve parents' knowledge about balanced nutrition for adolescents through health education.

The activity consisted of three stages:

1. Preparation

Advocacy was conducted with midwives and community health workers to identify problems, determine target participants, and prepare technical needs. Educational media, including PowerPoint slides and leaflets, as well as pre-test and post-test questionnaires, were prepared.

2. Implementation

Educational sessions were delivered through lectures and interactive discussions. The topics included the concept of balanced nutrition, the importance of breakfast, healthy snacking, and parental roles in shaping adolescents' eating patterns.

3. Evaluation

Evaluation was carried out using a pre-test and post-test design with eight multiple-choice questions covering understanding, principles, and guidelines of balanced nutrition. Knowledge levels were categorized as:

- Good (76–100% correct answers)
- Fair (56–75% correct answers)
- Poor ($\leq 55\%$ correct answers)

In addition, participants completed a short questionnaire (five closed questions and one open-ended question) to assess the relevance of the material, the quality of the presentation, and their impressions of the activity.

Data from the pre-test and post-test were analyzed descriptively using mean scores and percentage distributions to evaluate knowledge improvement after the intervention.

RESULTS

Characteristics of Respondents

The majority of respondents were mothers with a secondary education background. As shown in **Table 1**, 76% of participants had completed senior high school, while 20% had junior high school education, and only 4% had a university education. In terms of occupation, most respondents (80%) were housewives, followed by entrepreneurs (12%) and civil servants (8%).

Table 1. Characteristics of Respondents

| Characteristics | n | % |
|--------------------|----|----|
| Education | | |
| Junior High School | 5 | 20 |
| Senior High School | 19 | 76 |
| University | 1 | 4 |
| Occupation | | |
| Housewife | 20 | 80 |
| Entrepreneur | 3 | 12 |
| Civil Servant | 2 | 8 |

Knowledge Improvement

The pre-test and post-test results indicated a significant improvement in respondents' knowledge regarding balanced nutrition. As presented in **Table 2**, before the intervention, none of the participants had good knowledge, while the majority (92%) were in the poor category. After the intervention, 52% of respondents reached the good category, 40% were in the fair category, and only 8% remained in the poor category. The mean score increased from 39.58 (SD = 15.84) to 76.04 (SD = 18.04).

Table 2. Distribution of Knowledge Levels Before and After Education (n = 25)

| Knowledge Level | Pre-test n (%) | Post-test n (%) |
|-----------------|----------------|-----------------|
| Good | 0 (0%) | 13 (52%) |
| Fair | 2 (8%) | 10 (40%) |
| Poor | 23 (92%) | 2 (8%) |
| Mean (SD) | 39.58 (15.84) | 76.04 (18.04) |

Evaluation of Activity Implementation

The majority of respondents evaluated the activity positively. As shown in **Table 3**, almost all participants (96%) rated the presentation as excellent, and 100% considered the activity beneficial. Regarding comprehension, 72% of participants reported complete understanding of the material, while 28% showed sufficient understanding.

Table 3. Evaluation of Activity Implementation (n = 25)

| Evaluation Aspect | Category | n (%) |
|--------------------------|-----------------|----------|
| Relevance of material | Relevant | 3 (12) |
| | Highly relevant | 22 (88) |
| Presentation by speakers | Good | 1 (4) |
| | Excellent | 24 (96) |
| Perceived benefit | Beneficial | 25 (100) |

| Evaluation Aspect | Category | n (%) |
|---------------------|-----------|---------|
| Overall impression | Good | 1 (4) |
| | Excellent | 24 (96) |
| Comprehension level | 70–85% | 7 (28) |
| | 100% | 18 (72) |

Overall, the findings demonstrate that the nutrition education program was effective in enhancing parental knowledge. The sharp increase in the good knowledge category (from 0% to 52%) and the rise in mean scores confirm the positive impact of the intervention. Additionally, participants' evaluations showed high satisfaction and acceptance of the activity, indicating that the educational approach and materials used were appropriate and well received.

To illustrate the implementation, **Figure 1** and **Figure 2** show the atmosphere during the education session and the distribution of educational media. These photos support the quantitative findings, as they reflect the active participation of parents and their enthusiasm in receiving the materials provided.



Figure 1. Nutrition education session for parents at Ringinsari Village Hall, Blabak, Kediri Regency.



Figure 2. Distribution of leaflets on balanced nutrition to participants.

DISCUSSION

The results of this community service activity indicate a significant increase in parents' knowledge about balanced nutrition for adolescents after attending the education sessions. The proportion of participants with good knowledge increased from 0% before the intervention to 52% after, while the mean score improved from 39.58 to 76.04. These findings demonstrate that targeted nutrition education can effectively enhance parents' understanding and awareness.

This outcome is consistent with previous studies showing that participatory-based nutrition education can improve parental knowledge and positively influence children's eating behaviors (Camila et al., 2023; Kenney et al., 2024; Liu et al., 2021; Prasetyo et al., 2023).

The interactive approach used in this program, including lectures, discussions, and educational media such as leaflets, facilitated participants' comprehension regardless of their educational background. Similar findings were reported by (Ares et al., 2024; Kenney et al., 2024), who emphasized that family involvement is crucial for shaping adolescents' food literacy and long-term eating habits.

The fact that most participants were housewives with a secondary education background may also explain the success of the program. Housewives generally have more time and direct responsibility in preparing family meals, thus improved knowledge translates more directly into practice. This supports the argument that empowering mothers is a strategic intervention for improving adolescent nutritional status (Kenney et al., 2024; Liu et al., 2021; Prasetyo et al., 2023).

Evaluation data further showed that almost all participants perceived the activity as highly beneficial and relevant, with 96% rating the presentation as excellent. This positive reception reflects the appropriateness of the methods and content delivered. Similar results have been highlighted in other community-based interventions, where acceptance and enthusiasm of participants are key factors in program sustainability (Hayati et al., 2023; Mahmood et al., 2021; "Mothers' Nutritional Knowledge, Self-Efficacy, and Practice of Meal Preparation for School-Age Children in Yangon, Myanmar," 2021).

Despite these encouraging results, some limitations were noted. The duration of the program was relatively short, limiting the opportunity to explore more practical aspects such as daily menu planning for adolescents. Moreover, the assessment focused primarily on knowledge outcomes, without measuring behavioral changes or long-term impacts on adolescents' dietary habits. Future programs should therefore include follow-up sessions, collaboration with schools and health workers, and integration into broader community health initiatives (Amilia Yuni Damayanti et al., 2024; Wrottesley et al., 2023).

In summary, this study reinforces the importance of parental involvement, especially mothers, in adolescent nutrition education. Strengthening partnerships between families, schools, and health services will be essential to ensure that knowledge gains are translated into sustainable improvements in adolescents' eating patterns and overall health.

CONCLUSION

This community service demonstrated that nutrition education for parents, particularly mothers, in Ringinsari Village, Blabak, Kediri Regency, effectively improved knowledge about balanced nutrition for adolescents. The average knowledge score increased significantly from 39.58 before the intervention to 76.04 after, with more than half of participants reaching the good knowledge category.

However, this program had limitations, including a relatively short duration and the absence of long-term follow-up to evaluate changes in parental practices or adolescents' actual eating behaviors.

Therefore, future initiatives are recommended to expand the scale of this program, integrate it into community health services such as Puskesmas and village health activities, and strengthen collaboration with schools to ensure sustainability. Such efforts will optimize the role of parents in supporting adolescents' healthy eating patterns and overall health.

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