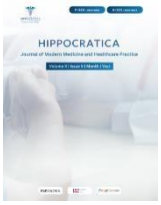

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The Effectiveness of the DASHAT BINTANG Program in Improving the Knowledge of Mothers of Toddlers Regarding Stunting Prevention in Sedayu Village

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Abstract

Stunting remains a critical public health challenge requiring community-based interventions that strengthen maternal knowledge and nutritional practices. This study aimed to evaluate the effectiveness of the DASHAT BINTANG Program in improving mothers' knowledge regarding stunting prevention in Sedayu Village. An empirical pre-experimental study with a one-group pretest-posttest design was conducted involving 10 mothers of toddlers selected through total sampling. Data were collected using structured knowledge assessments before and after an intervention consisting of nutritional education, child growth monitoring guidance, balanced feeding practices based on the Isi Piringku guideline, and a local food processing demonstration. Data were analyzed using the Wilcoxon Signed-Rank Test. The results showed an increase in the mean knowledge score from 96 to 116 after the intervention, with a statistically significant difference between pretest and posttest scores ($p = 0.017$). The program also improved mothers' understanding and practical awareness regarding the utilization of local food for toddler nutrition. The DASHAT BINTANG Program represents an effective community-based strategy for strengthening maternal capacity in supporting stunting prevention through integrated education and practical empowerment.

Keywords: *Stunting Prevention, Maternal Knowledge, Nutrition Education, Local Food, Community Empowerment.*

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INTRODUCTION

Stunting remains one of the most persistent manifestations of childhood malnutrition and continues to represent a critical global public health challenge despite substantial progress in improving maternal and child health outcomes. The condition reflects chronic nutritional deprivation occurring predominantly during the first 1,000 days of life, resulting in impaired linear growth, delayed cognitive development, reduced learning capacity, and increased susceptibility to adverse health outcomes throughout the life course (World Health Organization, 2024). Contemporary approaches to stunting prevention have increasingly shifted from merely addressing immediate nutritional deficiencies toward multidimensional strategies that integrate maternal knowledge enhancement, child growth monitoring, responsive feeding practices, and community-based nutrition interventions. This paradigm recognizes that household-level decision-making, particularly the role of mothers as primary caregivers, constitutes a decisive determinant of children's nutritional status because feeding behavior, food selection, and healthcare-seeking practices are strongly influenced by caregivers' understanding of child growth and nutritional requirements (Gasper et al., 2025). In Indonesia, stunting reduction remains a national priority, as nutritional inequalities, limited access to appropriate dietary practices, and variations in community health literacy continue to constrain efforts toward achieving optimal child development outcomes. The Indonesian Nutritional Status Survey reported that stunting prevalence remains a substantial concern, requiring sustained preventive interventions that are not only health-service oriented but also rooted in community empowerment and behavioral transformation (Kementerian Kesehatan RI, 2025).

Previous studies have demonstrated that improving maternal knowledge through structured nutrition education represents a fundamental pathway for strengthening stunting prevention efforts at the household level. Educational interventions targeting mothers have consistently shown positive effects on increasing awareness regarding balanced nutrition, appropriate complementary feeding, growth monitoring, and preventive health behaviors. A literature review conducted by Hapsah and Pamelasari (2025) revealed that nutrition education significantly contributes to improving maternal knowledge related to stunting prevention, although the magnitude of improvement varies depending on educational methods, intervention duration, and the characteristics of target communities. Similar findings were reported by Nadira et al. (2023), who demonstrated that participatory educational approaches involving interactive learning methods were more effective in enhancing mothers' understanding of child nutrition compared with conventional information delivery. These findings indicate that knowledge improvement is not solely determined by the availability of nutritional information but also by the capacity of interventions to engage participants actively, accommodate local experiences, and translate scientific concepts into practical household applications. However, existing evidence also suggests that knowledge-based interventions alone may have limited sustainability when they are not accompanied by practical skill development, particularly regarding food preparation and utilization of locally available nutritional resources.

Recent community-based nutrition programs have increasingly incorporated practical demonstrations and local food empowerment as complementary strategies to bridge the gap between nutritional knowledge and actual caregiving practices. Demonstration-based interventions allow mothers to acquire experiential skills in preparing nutritious meals, thereby increasing confidence and feasibility in implementing recommended feeding practices within domestic settings. Studies examining local food-based interventions have reported that cooking demonstrations combined with nutrition education can improve not only maternal knowledge but also food processing skills and willingness to adopt healthier dietary patterns for children. Firdaus et al. (2026) found that education combined with practical preparation of locally sourced complementary foods enhanced mothers' ability to provide nutritionally appropriate meals for young children. Similar evidence was presented by Pratiwi et al. (2026), who reported that balanced nutrition education accompanied by complementary feeding demonstrations produced meaningful improvements in maternal understanding and practical capacity in preventing stunting. Community empowerment programs utilizing local ingredients, such as those reported by Asna et al. (2026) and Widyaningsih et al. (2026), further emphasize that locally adapted interventions may strengthen nutritional resilience because they reduce dependence on expensive food sources while encouraging sustainable dietary practices based on available community resources.

Despite the growing evidence supporting nutrition education and food-based empowerment programs, several limitations remain within the existing literature. Many previous interventions have focused primarily on measuring changes in knowledge, attitudes, or short-term behavioral intentions, while empirical evidence regarding integrated programs combining nutritional education, child growth monitoring awareness, and practical food preparation skills remains relatively limited. Existing studies also frequently examine generalized nutrition education models without sufficiently considering contextual factors such as local food availability, community participation patterns, and culturally appropriate intervention designs. Research on stunting prevention programs has indicated that program effectiveness is strongly influenced by implementation mechanisms, community engagement, and the ability of interventions to adapt to local conditions rather than relying solely on standardized educational materials (Nuryanti & Mashur, 2024). Furthermore, evaluations of the DASHAT (Dapur Sehat Atasi Stunting) program have predominantly examined program implementation and broader acceleration strategies, while evidence regarding its effectiveness in improving maternal knowledge through structured educational and practical components remains insufficient (Faradila et al., 2024). This limitation creates an important empirical gap concerning how community-based DASHAT initiatives can function as an effective mechanism for enhancing maternal capacity in preventing stunting at the village level.

The unresolved gap has significant scientific and practical implications because maternal knowledge and caregiving skills represent modifiable factors that can influence the effectiveness of stunting prevention strategies. Interventions that successfully improve mothers' understanding of growth monitoring, balanced nutrition, and local food utilization may contribute to strengthening

preventive health behaviors before nutritional problems become clinically manifested. Previous research has established that maternal knowledge is closely associated with preventive actions toward stunting, suggesting that improvements in cognitive domains may serve as an initial foundation for behavioral modification within households (Arnita et al., 2020; Wati, 2025). Nevertheless, the effectiveness of integrated community interventions that combine educational approaches with direct culinary demonstrations requires further investigation, particularly in rural settings where local food resources and community-based health activities represent important components of sustainable nutritional improvement. The DASHAT BINTANG program implemented in Sedayu Village provides a relevant context for examining whether an intervention model integrating education on child growth monitoring, balanced feeding practices, and local food processing demonstrations can effectively enhance maternal knowledge as part of broader stunting prevention efforts.

This research is positioned within the field of community nutrition and health promotion by examining the effectiveness of an integrated educational and practical intervention model through the DASHAT BINTANG Program in improving mothers' knowledge regarding stunting prevention. The study aims to evaluate changes in maternal knowledge before and after intervention using a pre-experimental one-group pretest-posttest design, thereby providing empirical evidence regarding the contribution of community-based nutrition programs to maternal capacity development. The findings are expected to contribute theoretically by strengthening understanding of how educational empowerment combined with practical food-based interventions influences maternal knowledge acquisition in stunting prevention contexts. Methodologically, this study provides evidence from a localized community intervention model that integrates quantitative evaluation with practical empowerment activities, offering insights for the development of more adaptive, participatory, and sustainable stunting prevention programs at the primary healthcare and village levels.

RESEARCH METHODS

This study employed an empirical research approach using a pre-experimental design with a one-group pretest-posttest framework to evaluate the effectiveness of the DASHAT BINTANG (Dapur Sehat Atasi Stunting Bina Nutrisi dan Tumbuh Kembang) Program in improving mothers' knowledge regarding stunting prevention. The study was conducted on 23 July 2026 at the Toddler Mother Class in Sedayu Village, Indonesia. The participants consisted of 10 mothers of toddlers who were selected through a total sampling technique, in which all mothers participating in the educational activity were included as research respondents. The inclusion criteria comprised mothers who had children under five years of age, attended the DASHAT BINTANG educational activity, and were willing to participate in the pretest and posttest assessments. Participants who did not complete the assessment process or were unable to participate in the entire intervention session were excluded from the analysis. Data collection was conducted through the administration of a pretest before the intervention to assess baseline knowledge, followed by an educational intervention covering toddler growth and development monitoring, balanced nutrition practices based on the *Isi Piringku* guideline, and prevention strategies for stunting. The intervention was complemented by a practical demonstration of preparing corn pudding with coconut milk sauce as a locally available nutritious food alternative, followed by a posttest using the same measurement instrument to assess changes in participants' knowledge after the program.

The research instrument consisted of structured knowledge assessment items designed to measure mothers' understanding of toddler growth monitoring, nutritional requirements, appropriate feeding practices, and stunting prevention strategies. The collected data were analyzed using univariate and bivariate analyses. Univariate analysis was performed to describe the distribution of participants' knowledge scores before and after the intervention, while bivariate analysis was conducted using the Wilcoxon Signed-Rank Test because the data were obtained from paired measurements and analyzed to determine differences between pretest and posttest scores. Statistical significance was determined at a 95% confidence level with a significance threshold of $p < 0.05$. The study adhered to ethical principles in health research by ensuring voluntary participation, providing information regarding the purpose and procedures of the activity, maintaining confidentiality of participant data, and obtaining informed consent from all participants prior to data collection. The implementation of the program also involved coordination with local health cadres and village authorities to ensure that the intervention was conducted appropriately within the community health promotion framework.

RESULTS AND DISCUSSION

Changes in Mothers' Knowledge Levels Following the Implementation of the DASHAT BINTANG Program

The DASHAT BINTANG Program was implemented as a community-based health intervention designed to strengthen mothers' knowledge and capacity in preventing stunting through nutritional education, child growth monitoring awareness, and local food utilization practices. The initial assessment indicated that participants required additional reinforcement regarding essential aspects of child growth patterns, balanced nutritional requirements, and age-appropriate feeding practices. This condition highlights the importance of empowering mothers as primary caregivers, considering that household decisions related to food selection, feeding behavior, and health monitoring substantially influence children's nutritional outcomes. Maternal knowledge represents a critical predisposing factor in shaping health-related behaviors, making educational interventions an essential component of sustainable stunting prevention strategies (Gasper et al., 2025).

The intervention specifically targeted mothers of toddlers because maternal decision-making directly affects the implementation of nutritional practices within the household environment. A total of 10 mothers participated in the complete sequence of activities, including educational sessions and practical demonstrations aimed at improving both conceptual understanding and applied nutritional skills. The participatory nature of the program was designed to facilitate active engagement, allowing participants to relate scientific nutritional information to their daily caregiving experiences. Previous evidence indicates that health promotion interventions incorporating active participation and contextual learning approaches are more effective in improving maternal awareness and strengthening preventive behaviors related to child nutrition (Nuryanti et al., 2024).

The evaluation of knowledge improvement was conducted using a one-group pretest-posttest design by comparing participants' knowledge scores before and after the DASHAT BINTANG intervention. The findings demonstrated a measurable increase in the average knowledge score following the educational activities focusing on toddler growth monitoring and balanced feeding practices based on the *Isi Piringku* guideline. The improvement suggests that the combination of interactive lectures, discussion sessions, and practical demonstrations successfully facilitated the transfer of nutritional information to participants. Similar studies have reported that nutrition education interventions supported by interactive learning approaches generate greater improvements in maternal knowledge compared with conventional one-directional counseling methods (Hapsah & Pamelasari, 2025).

The quantitative differences in participants' knowledge scores before and after the intervention are presented in Table 1. The findings demonstrate that the mean knowledge score increased from 96 during the pretest assessment to 116 during the posttest evaluation, with the maximum possible score reaching 120 points. This substantial improvement indicates that participants were able to acquire and retain essential information regarding stunting prevention, child growth monitoring, and appropriate feeding practices. Previous research has confirmed that structured nutritional interventions delivered through community-based programs can effectively enhance maternal knowledge as a foundation for improving child feeding behaviors (Lasmadasari et al., 2023).

Table 1. Mean Knowledge Scores of Mothers of Toddlers Before and After the DASHAT BINTANG Intervention

Measurement	Mean Knowledge Score	Maximum Score	p-value
Pretest	96	120	
Posttest	116	120	0.017

The data presented in Table 1 demonstrate that the DASHAT BINTANG intervention produced a meaningful improvement in maternal knowledge levels following the educational program. The 20-point increase between pretest and posttest scores reflects the effectiveness of the intervention in strengthening participants' understanding of nutritional concepts and preventive measures associated with stunting. Statistical analysis using the Wilcoxon Signed-Rank Test revealed a significant difference between pre-intervention and post-intervention knowledge scores ($p = 0.017$), confirming

that the observed improvement was not attributable to random variation. These findings are consistent with previous community nutrition studies demonstrating that targeted education can significantly improve mothers' understanding of stunting prevention strategies (Nadira et al., 2023).

The significant improvement in knowledge observed after the intervention indicates that the educational component of the DASHAT BINTANG Program effectively addressed existing information gaps among mothers of toddlers. The intervention content was structured around key determinants of child nutritional status, including growth monitoring, balanced dietary composition, and appropriate feeding frequency according to children's developmental stages. Such an approach corresponds with the national nutritional guidance emphasizing the importance of diversified food intake and balanced meal composition for supporting optimal child growth (Kementerian Kesehatan RI, 2024). The findings further reinforce the theoretical assumption that increased health literacy can function as an initial mechanism for encouraging preventive maternal practices.

The effectiveness of the educational intervention may also be attributed to the integration of multiple learning methods within the program framework. The combination of verbal explanation, interactive discussion, and practical demonstration created a multidimensional learning environment that allowed participants to process information through cognitive and experiential mechanisms. Research on health education programs suggests that combining knowledge delivery with practical engagement improves comprehension because participants are not only exposed to information but also provided with opportunities to apply acquired concepts in realistic situations (Prakoso et al., 2026). This approach is particularly relevant in stunting prevention programs because nutritional practices require both theoretical understanding and practical capability.

The findings support previous evidence that community-based nutritional empowerment programs can enhance maternal knowledge when interventions are adapted to local needs and involve direct interaction with participants. Studies focusing on maternal education and stunting prevention have demonstrated that improved knowledge contributes to stronger awareness regarding child nutritional requirements and encourages more appropriate caregiving decisions (Fitriahadi et al., 2023). The DASHAT BINTANG Program reflects this principle by integrating health education with locally relevant nutritional practices, allowing mothers to recognize preventive strategies that are feasible within their household conditions. Such community-oriented approaches are increasingly considered important components of comprehensive stunting reduction initiatives.

The improvement in knowledge scores also provides empirical support for the role of educational interventions as part of broader stunting acceleration programs at the community level. Previous evaluations of stunting prevention initiatives have emphasized that successful programs require not only healthcare service availability but also active community participation and increased awareness among caregivers (Faradila et al., 2024). The findings from Sedayu Village demonstrate that a focused intervention involving mothers of toddlers can generate measurable improvements within a relatively short implementation period. Similar outcomes have been reported in community empowerment programs where nutritional education was combined with practical activities to strengthen family capacity in preventing childhood malnutrition (Asna et al., 2026).

The results of this study indicate that the DASHAT BINTANG Program represents an effective educational model for improving maternal knowledge related to stunting prevention. The statistically significant increase in knowledge scores demonstrates that structured education combined with contextualized learning activities can enhance mothers' understanding of essential nutritional practices. Although the intervention involved a limited number of participants, the findings provide valuable empirical evidence regarding the potential contribution of community-based educational programs in strengthening maternal roles within child nutrition management. Future implementation of similar programs may consider broader participant coverage and longer-term evaluation to examine whether improvements in knowledge translate into sustained behavioral changes in household feeding practices.

The Role of Local Food-Based Demonstration in Strengthening Mothers' Nutritional Skills for Stunting Prevention

The DASHAT BINTANG Program incorporated a practical demonstration of preparing corn pudding with coconut milk sauce as a complementary intervention to strengthen mothers' ability to transform locally available food resources into nutritious alternatives for toddlers. The inclusion of food processing practices within nutritional education represents an important strategy because knowledge

acquisition alone does not always guarantee behavioral implementation in household settings. Mothers require practical competence to translate nutritional recommendations into feasible meal preparation activities that correspond with family resources and children's preferences. Previous studies have emphasized that nutritional empowerment programs become more effective when educational components are integrated with direct skill development, particularly in communities where food availability and economic considerations influence dietary practices (Firdaus et al., 2026).

The utilization of corn as the primary ingredient in the demonstration was based on its accessibility as a local food resource with potential nutritional value for family consumption. The intervention introduced participants to the concept that locally available ingredients can be modified into attractive and nutritious food products suitable for toddlers without requiring costly commercial alternatives. This approach aligns with the broader framework of sustainable nutrition interventions, which emphasizes the importance of utilizing culturally acceptable and economically feasible food sources to improve household food practices. Research on local food-based nutrition programs has demonstrated that empowering communities through locally adapted food processing techniques can increase mothers' confidence in preparing healthier meals for children (Sari et al., 2026).

The practical demonstration component provided participants with direct experience in preparing a nutritious snack through guided learning processes. Mothers were not only informed about the nutritional benefits of corn but were also introduced to preparation techniques, ingredient selection, and food presentation methods appropriate for toddlers. This experiential approach facilitated deeper understanding because participants were able to observe and practice the application of nutritional concepts rather than merely receiving theoretical explanations. Similar findings have been reported in community nutrition interventions where cooking demonstrations contributed to improvements in maternal knowledge, confidence, and food preparation abilities (Widyaningsih et al., 2026).

The evaluation of the practical activity indicated that participants demonstrated increased understanding regarding the utilization of local food ingredients and expressed willingness to reproduce the demonstrated menu at home. The observed improvement in practical awareness suggests that the cooking demonstration functioned as a behavioral reinforcement mechanism by reducing the gap between nutritional recommendations and actual household practices. The relationship between knowledge and behavior is strongly influenced by individual capability, perceived feasibility, and environmental support, indicating that skill-based interventions may provide additional value beyond conventional nutrition counseling (Gasper et al., 2025). The outcomes of the DASHAT BINTANG intervention are summarized in Table 2.

Table 2. Evaluation of Mothers' Participation and Understanding During the Local Food Processing Demonstration

Evaluation Component	Achievement of Participants
Understanding of corn as a local nutritious ingredient	Participants recognized corn as an alternative food source for toddler snacks
Knowledge of preparation process	Participants understood ingredients and preparation stages of corn pudding
Ability to identify nutritional benefits	Participants identified the importance of nutritious snacks for toddler growth
Motivation to apply at home	Participants expressed willingness to prepare similar menus independently

Table 2 illustrates that the practical demonstration achieved the expected learning outcomes by improving participants' understanding of local food utilization and encouraging household application. The results indicate that the intervention successfully expanded the role of mothers from passive recipients of nutritional information into active agents capable of implementing preventive nutrition practices. This finding corresponds with previous research showing that community cooking demonstrations can enhance maternal engagement because practical activities provide immediate relevance to daily caregiving responsibilities (Asna et al., 2026). The effectiveness of this approach is

particularly important in stunting prevention because dietary improvement requires continuous implementation at the household level.

The integration of practical food preparation into the DASHAT BINTANG Program reflects a shift from information-based intervention models toward empowerment-oriented approaches in public health nutrition. Conventional education frequently focuses on delivering recommendations regarding healthy eating patterns, yet such approaches may encounter barriers when caregivers lack confidence or practical skills to implement suggested dietary changes. The cooking demonstration addressed this limitation by providing participants with concrete examples of how nutritional principles can be applied using accessible ingredients. Similar intervention models have demonstrated that practical training increases mothers' readiness to adopt improved feeding behaviors for children (Pratiwi et al., 2026).

The findings also highlight the importance of considering local food systems within stunting prevention strategies. The availability of affordable and culturally accepted food resources can influence the sustainability of nutritional interventions because families are more likely to continue practices that align with their economic and environmental conditions. The DASHAT BINTANG Program utilized corn as a locally relevant ingredient, demonstrating that preventive nutrition strategies can be developed through community assets rather than relying exclusively on external nutritional products. Previous research has shown that local food-based interventions contribute to strengthening household food security while simultaneously improving awareness of balanced nutrition practices (Sari et al., 2026).

The demonstration activity provided an opportunity for participants to develop practical skills that support long-term nutritional decision-making within families. Skill acquisition represents an important component of health promotion because behavioral changes require not only awareness but also the ability to perform recommended actions independently. The implementation of cooking demonstrations has been associated with improved maternal competence in preparing nutritious meals, particularly when activities are conducted through participatory learning methods involving direct involvement of participants (Komalasari et al., 2026). These findings support the argument that practical empowerment should become an integral component of community-based stunting prevention programs.

The results of the local food demonstration are consistent with previous studies emphasizing the effectiveness of combining education with applied nutritional training. Programs that integrate counseling and food preparation practices have reported improvements in mothers' nutritional literacy, food selection patterns, and confidence in providing appropriate meals for young children (Firdaus et al., 2026). The DASHAT BINTANG Program extends this evidence by demonstrating that even a short-term intervention can facilitate meaningful improvements in participants' understanding and motivation when the learning process is contextualized according to local resources. This approach provides a practical model for strengthening preventive nutrition capacity at the village level.

The implementation of local food-based demonstrations within the DASHAT BINTANG Program demonstrates that nutritional education becomes more impactful when accompanied by direct skill transfer and community participation. The findings suggest that mothers' involvement in food preparation activities enhances their ability to connect nutritional concepts with everyday practices, which represents a crucial mechanism in preventing childhood malnutrition. Although the present evaluation primarily assessed immediate outcomes, the improvement in practical understanding provides an important foundation for sustained behavioral adaptation within households. Future community nutrition interventions may consider integrating repeated demonstrations and follow-up monitoring to evaluate the long-term influence of acquired skills on toddler feeding practices and nutritional outcomes.

Effectiveness of the DASHAT BINTANG Program as a Community-Based Strategy for Sustainable Stunting Prevention

The implementation of the DASHAT BINTANG Program represents a community-based preventive approach that integrates nutritional education, child growth monitoring awareness, and local food empowerment to strengthen maternal capacity in addressing stunting risks. The findings of this study indicate that the program successfully improved mothers' knowledge regarding essential aspects of stunting prevention, as demonstrated by the statistically significant difference between pretest and posttest scores. The effectiveness of this intervention reflects the importance of community

participation in strengthening preventive health strategies, particularly in settings where maternal knowledge and household practices remain key determinants of child nutritional outcomes. Stunting prevention requires multidimensional approaches that address nutritional, behavioral, and social determinants because childhood growth impairment is influenced by complex interactions between dietary adequacy, caregiving practices, and environmental conditions (World Health Organization, 2024).

The significant improvement in maternal knowledge following the DASHAT BINTANG intervention provides empirical evidence that structured community education can function as an effective mechanism for improving health literacy among caregivers. Knowledge enhancement represents an important initial stage in behavioral modification because individuals with better understanding of health risks and preventive measures are more likely to adopt appropriate practices. The findings support previous research demonstrating that educational interventions targeting mothers of young children contribute to increased awareness regarding nutritional requirements, growth monitoring, and stunting prevention strategies (Muhdar et al., 2019). However, knowledge improvement should be understood as one component within a broader behavioral pathway because sustained nutritional practices are also influenced by socioeconomic conditions, accessibility of food resources, and family support systems.

The DASHAT BINTANG approach demonstrates relevance within the framework of health promotion because it positions mothers as active participants in preventing childhood nutritional problems rather than passive recipients of health information. The program encouraged participants to understand the relationship between nutritional intake, child development, and preventive care through interactive educational processes. Such an empowerment-oriented model corresponds with contemporary public health perspectives that emphasize community ownership and active engagement as determinants of successful intervention outcomes. Previous studies have indicated that maternal involvement in health education programs can strengthen confidence, decision-making ability, and commitment to implementing recommended childcare practices (Nasir et al., 2021).

The effectiveness of the program can also be interpreted through the relationship between maternal knowledge and preventive behavior in child nutrition management. Improved knowledge may influence how mothers recognize nutritional risks, interpret growth monitoring results, and select appropriate dietary options for toddlers. Research examining maternal knowledge and stunting prevention behavior has consistently identified a positive association between understanding nutritional concepts and the implementation of preventive actions within households (Arnita et al., 2020). The DASHAT BINTANG findings reinforce this relationship by demonstrating that targeted educational interventions can enhance the cognitive foundation required for mothers to make informed decisions regarding child nutrition.

The statistical outcomes of the intervention are presented in Table 3, which summarizes the effectiveness analysis based on the Wilcoxon Signed-Rank Test. The results demonstrate that the knowledge scores obtained after the intervention were significantly higher compared with the baseline measurements, confirming that the educational program produced measurable changes among participants. The statistical evidence strengthens the interpretation that the observed improvement was associated with the intervention process rather than occurring through random variation. Similar findings have been reported in evaluations of stunting prevention programs, where structured interventions demonstrated positive effects on maternal knowledge and awareness (Nuryani & Mashur, 2024).

Table 3. Statistical Analysis of Knowledge Differences Before and After the DASHAT BINTANG Program

Variable	Mean Pretest Score	Mean Posttest Score	Test Analysis	p-value
Mothers' knowledge regarding stunting prevention	96	116	Wilcoxon Signed-Rank Test	0.017

The findings presented in Table 3 indicate that the DASHAT BINTANG Program achieved statistically significant improvement in mothers' knowledge related to stunting prevention. The increase from a mean score of 96 to 116 demonstrates that participants experienced substantial cognitive improvement after receiving educational materials and practical reinforcement activities. The significance value of 0.017 confirms that the intervention produced meaningful differences between measurements before and after program implementation. These findings are consistent with previous evaluations of community-based stunting acceleration programs, which suggest that targeted educational interventions can improve community awareness and strengthen preventive capacity (Fatimah, 2025).

The contribution of DASHAT BINTANG extends beyond short-term knowledge improvement because the program represents an integrated model that connects health education with community empowerment. The combination of nutritional counseling, growth monitoring information, and local food processing activities reflects a preventive framework that addresses both cognitive and practical dimensions of maternal capacity. Such integration is important because successful stunting prevention requires interventions that facilitate understanding while simultaneously enabling caregivers to implement recommended practices in daily life. Previous studies evaluating DASHAT-based initiatives have emphasized that program effectiveness depends on the ability to combine education, community involvement, and locally appropriate strategies (Faradila et al., 2024).

The findings also demonstrate the relevance of village-level interventions in supporting national strategies for reducing stunting prevalence. Community-based programs provide opportunities to deliver preventive services closer to families, particularly through collaboration between health workers, local cadres, and community members. The DASHAT BINTANG implementation in Sedayu Village illustrates how localized interventions can translate broader nutritional policies into practical activities that address specific community needs. Evidence from previous stunting prevention initiatives indicates that sustained collaboration between community structures and healthcare systems contributes to strengthening program effectiveness and continuity (Kementerian Kesehatan RI, 2023).

From a methodological perspective, the use of a pre-experimental one-group pretest-posttest design provided evidence regarding immediate changes in maternal knowledge following program exposure. Although the design does not include a comparison group and therefore limits causal generalization, it remains valuable for evaluating preliminary effectiveness of community-based health interventions implemented in real-world settings. The findings provide an empirical basis for further research using larger samples, control groups, and longitudinal assessments to examine whether knowledge improvements are maintained and translated into behavioral changes. This methodological consideration is important because sustainable stunting prevention requires evidence not only of immediate educational effects but also of long-term behavioral and nutritional outcomes.

The DASHAT BINTANG Program demonstrates that an integrated community nutrition intervention can effectively enhance maternal knowledge and strengthen preventive capacity related to stunting. The findings contribute to the growing evidence that education combined with practical empowerment strategies represents a promising approach for improving caregiver readiness in addressing childhood malnutrition. The program provides a contextualized intervention model that aligns with principles of health promotion, community participation, and sustainable nutrition improvement. Continued development of similar programs with broader coverage and systematic follow-up evaluation may strengthen their contribution to achieving long-term improvements in child nutritional health.

CONCLUSION

The DASHAT BINTANG Program demonstrated effectiveness as a community-based health intervention in improving mothers' knowledge regarding stunting prevention through an integrated approach combining nutritional education, child growth monitoring awareness, and local food-based practical demonstrations. The significant increase in knowledge scores from the pretest to posttest assessment, confirmed by the Wilcoxon Signed-Rank Test ($p = 0.017$), indicates that structured educational activities were capable of strengthening maternal understanding of balanced nutrition, appropriate feeding practices, and preventive strategies for childhood growth impairment. The incorporation of corn pudding preparation as a local food demonstration further enhanced the practical dimension of the intervention by encouraging mothers to utilize accessible nutritional resources and

develop confidence in preparing healthier food alternatives for toddlers. These findings highlight the importance of participatory and context-specific health promotion models that integrate knowledge transfer with practical skill development to support sustainable stunting prevention at the community level. The DASHAT BINTANG approach provides empirical evidence that empowering mothers through educational and applied nutritional interventions can contribute to strengthening household-level preventive capacity, although further studies involving larger populations and longitudinal evaluation are required to assess long-term behavioral changes and nutritional outcomes.

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