DEVELOPMENT OF A FAMILY MENTORING MODUI FOR POSYANDU CADRES IN STUNTING PREVENTION

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ABSTRACT

Stunting prevention requires sustained family support, growth monitoring, appropriate nutrition, developmental stimulation, and timely use of health services. Posyandu cadres are strategically integrated to provide community-based support. Objective: This study aimed to develop a family mentoring module for Posyandu cadres in stunting prevention using the ADDIE model. Methods: A research and development study was conducted in Jetis Village, Sukoharjo. Needs analysis combined literature review with a needs assessment involving five Posyandu cadres. The module was designed through a blueprint and content development process, then reviewed by experts in pediatric nursing, nutrition, and public health. The module was preliminary implementation with cadres using discussion, trigger cases, roleplay, simulation, and family visits. Results: Needs assessment identified cadres' needs for practical content on child nutrition, picky eating, growth and development, developmental stimulation, growth monitoring, family mentoring, home visits, and referral. Expert evaluation yielded mean feasibility scores of 3.60 and 3.59 on a four-point scale, indicating that the module was feasible with revision. Preliminary cadre review supported the clarity and practicality of the module. Conclusion: The module integrates practical guidance on child nutrition, picky eating, growth and development, developmental stimulation, growth monitoring, family mentoring, home visits, referral, and monitoring

KEYWORDS ADDIE_model; module; stunting_prevention; posyandu cadres

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INTRODUCTION

Stunting prevention requires interventions that address child nutrition, growth, development, caregiving practices, infection prevention, and access to health services (Apriliani, 2025). Because these determinants are closely connected to family practices, prevention cannot rely only on facility-based services. Families need repeated, practical, and context-sensitive support to translate recommendations into everyday behaviour.

Posyandu cadres have an important community-level role in this process because they are close to mothers, young children, and families. identification of risk, home visits, follow-up, and referral. Recent Indonesian research has shown that cadres' knowledge, roles, and practical skills in stunting prevention still vary, indicating the need for continuing capacity development and practical support (Widiasih et al., 2025)

Cadre capacity building should address the actual problems encountered during family mentoring. In particular, cadres need to understand child nutrition, feeding difficulties, picky eating, growth monitoring, and developmental stimulation, while also being able to communicate with caregivers and translate recommendations into achievable family actions. Evidence from Yogyakarta demonstrates that structured cadre training combined with simulation and home visits can improve knowledge related to child growth, child development, and infant and young child feeding and can strengthen cadres' confidence in assisting families (Siswati et al., 2024)

Nutrition education is especially relevant to stunting prevention. However, education delivered mainly through presentations may not be sufficient to strengthen cadres' knowledge. A 2024 Indonesian study among Posyandu cadres found only a small, non-significant increase in knowledge following a 60-minute interactive presentation and animated-video session and recommended more staged learning involving simulation and practice (Willmart et al., 2024). This supports the development of a practical learning resource that cadres can use during and after training.

Family mentoring also needs to cover child development. Developmental stimulation is relevant because stunting is not only a problem of linear growth but is connected to broader child development and caregiving. Integrating nutrition, growth monitoring, feeding difficulties, developmental stimulation, and family mentoring in one cadre resource can help cadres view the child and family more comprehensively.

The module developed in Jetis Village was therefore designed as a practical resource for Posyandu cadres rather than as a general educational booklet. The existing module contains material on stunting, cadre roles, growth monitoring, family mentoring, child nutrition, developmental stimulation, home visits and referral, and monitoring and evaluation. TEMANI card is integrated as a practical tool for structuring family visits, including assessment, target setting, follow-up, and evaluation.

The module was developed systematically, the study used the ADDIE framework. ADDIE consists of Analysis, Design, Development, Implementation, and Evaluation and provides a logical sequence for identifying users' needs, designing content, developing a product, trying it with users, and revising it. Recent health education research has demonstrated the use of ADDIE in developing and pre-evaluating health education applications and modules (Nowicki et al., 2024)

Community health worker training literature also emphasizes that training characteristics, practical application, and supportive tools influence the potential value of cadre development programmes (Seneviratne et al., 2022). A module that connects learning materials with practical family-mentoring tasks can therefore strengthen the transition from knowledge to action.

Based on this rationale, this study aimed to develop a family mentoring module for Posyandu cadres in stunting prevention using the ADDIE model. The specific objectives were to identify cadres' learning needs, design and develop the module, assess its feasibility through expert review and limited cadre review, and conduct preliminary implementation to determine its practicality for cadre use.

RESEARCH METHOD

This study employed a research and development design using the ADDIE framework, comprising Analysis, Design, Development, Implementation, and Evaluation (Spatioti et al., 2023). The study was conducted in Jetis Village, Sukoharjo Regency, Central Java, Indonesia. The analysis stage involved a literature review and a needs assessment with five Posyandu cadres. The design process was conducted based on the findings of the analysis and involved the preparation of a module blueprint and learning materials.

The development stage involved producing the module according to the blueprint and conducting expert validity testing, followed by revision based on the assessment results. Expert validation involved experts with relevant backgrounds in pediatric nursing, nutrition, and public health. A four-point assessment scale was used to evaluate the module. After revision, a limited user review was conducted with three Posyandu cadres to obtain feedback on the developed module before preliminary implementation.

The implementation stage involved a preliminary trial of the revised module with Posyandu cadres using several learning activities and field-based mentoring practices. The evaluation focused on the feasibility and practicality of the developed module. Data from the needs assessment and user review were analyzed descriptively, while expert assessment results were summarized using mean scores.

RESULT AND DISCUSSION

The needs assessment involving five Posyandu cadres showed that cadres required more practical and focused material to support family mentoring. The priority topics identified were child nutrition, picky eating, growth and development, especially developmental stimulation, as well as growth monitoring and family mentoring. These findings indicate that cadres did not only need additional factual knowledge; they needed material that could help them explain, demonstrate, and monitor family practices.

Table 1. Results of the needs assessment among five Posyandu cadres

	Needs Identified	Implication for Module Content
1.	Child Nutrition	Practical nutrition messages and age-appropriate feeding guidance
2.	Picky eater	Recognition of feeding difficulties and practical caregiver guidance
3.	Growth and Development	Growth monitoring and understanding developmental milestones
4.	Developmental stimulation	Examples of simple stimulation activities that families can practice
5.	Family Mentoring	Structured communication, target setting, follow-up, and documentation
6.	Home Visit	Step-by-step assessment and mentoring guidance
7.	Referral	Warning signs and situations requiring referral

The needs profile is consistent with evidence from Indonesia showing that cadres benefit from structured learning on child growth, development, and infant and young child feeding. Siswati et al. (2022) demonstrated that cadre training combined with simulation and home visits improved knowledge in these areas and strengthened confidence in assisting families. The present module extends this concept by providing a reusable reference that remains available during routine mentoring. This approach is consistent with evidence that community health workers can contribute to community-based health services, but their performance is influenced by the availability of appropriate training, workload management, supervision, and supportive mechanisms. A systematic review specifically examining community health workers and lessons for Indonesia emphasized the importance of structured supervision and support systems in sustaining CHW performance (Care et al., 2024)

Design and module blueprint. The design stage translated the identified needs into a blueprint before the full content was written. This step was important because the module was intended to function as a practical guide rather than a collection of disconnected topics. The blueprint linked each topic to a cadre competency and a family-mentoring action.

Table 2. Module blueprint and expected cadre competencies

Section	Main content	Expected cadre action
Understanding stunting	Definition, causes, risk and prevention	Explain and identify risk
Nutrition	Balanced diet, feeding practices, picky eating	Provide practical guidance
Growth and development	Growth monitoring and developmental milestones	Monitor and identify concerns
Developmental stimulation	Simple stimulation activities	Demonstrate and guide caregivers
Family mentoring	Communication, goal setting, follow-up	Develop family action plans
Home visits	Assessment, observation and documentation	Conduct structured visits
Referral	Warning signs and referral	Facilitate referral
Monitoring and evaluation	Follow-up and reflection	Review progress and next steps

Development and expert validation. The development stage produced a cadre-oriented module integrating educational content with practical family-mentoring guidance. TEMANI card was integrated within the module as a job aid. It supports a structured sequence of assessment, target setting, monitoring, evaluation, and referral. This design is consistent with the need for community health workers to have both training and supportive tools for field practice (Ahmed et al., 2022)

Expert evaluation resulted in mean feasibility scores of 3.60 and 3.59. These scores indicate that the module was considered feasible to use, with revisions required. The expert review involved expertise in pediatric nursing, nutrition, and public health, allowing the module to be considered from complementary perspectives: child health, nutritional adequacy, and community-level prevention.

The use of expert review before user implementation is consistent with contemporary module-development practice. Recent ADDIE-based educational development studies have used expert review to identify content and usability issues before broader testing (Nowicki et al., 2024). In this study, expert feedback was used to refine the module before it was introduced to cadres.

Preliminary implementation. The revised module was introduced through discussion, trigger cases, roleplay, simulation, and family visits. This sequence was selected to move cadres from conceptual understanding to practical application. Trigger cases helped cadres identify family problems; roleplay allowed them to practice communication; simulation allowed them to practice structured assessment and mentoring; and family visits provided an opportunity to apply the approach in a real context.

The approach is supported by evidence that practical and active learning can strengthen cadre capacity. Siswati et al. (2022) used theory and simulation followed by home visits and found improvements in cadres' knowledge of growth monitoring, development monitoring, and infant and young child feeding. Similarly, Indonesian studies have emphasized the importance of simulation and practice when developing cadre capacity for stunting prevention. The present module combines these learning approaches with a reusable written guide.

Module feasibility and usability. Based on the expert scores and preliminary implementation, the module can be considered usable after revision for cadre learning and guided family mentoring. Its practical value lies in combining content with action steps. The module is not intended to replace professional assessment or clinical decision-making; instead, it helps cadres recognize risks, provide appropriate basic education, monitor family practices, and facilitate referral when a problem exceeds the cadre's role. The practical value of the module also lies in its integration of learning materials with action-oriented mentoring steps. Instead of providing information about stunting as an isolated topic, the module guides cadres in recognizing potential risks, communicating with caregivers, providing basic nutrition and developmental guidance, monitoring family practices, and facilitating referral when a problem exceeds the cadre's role. This approach is consistent with evidence that community health workers can contribute to health equity when they are supported by appropriate training, supervision, and integration within community health systems. In the Indonesian context, structured cadre training that combines explanation, discussion, role-play, and practical activities has also been reported to strengthen cadres' capacity for early detection and parent education related to stunting (Dwihestie et al., 2024)

Implications for stunting prevention. The module provides a prevention-oriented resource that can be used across different family situations. Families may need preventive nutrition education, support for picky eating, growth monitoring, developmental stimulation, or more intensive follow-up. By integrating these topics, the module supports a continuum of family mentoring rather than limiting cadre activities to identifying children who are already stunted.

Limitations. The development was conducted in one village and involved a small number of cadres in needs assessment and preliminary user testing. The study therefore does not establish effectiveness on child growth, caregiver behaviour, or stunting prevalence. Future research should use a larger sample to assess usability and cadre competency and should evaluate whether sustained module-supported mentoring improves family practices and child outcomes.

CONCLUSION

The ADDIE-based development process produced a family mentoring module for Posyandu cadres in stunting prevention. Needs assessment among five cadres identified priorities in child nutrition, picky eating, growth and development, developmental

stimulation, growth monitoring, and family mentoring. These needs were translated into a module blueprint and practical content, followed by expert review. Mean expert feasibility scores of 3.60 and 3.59 indicated that the module was feasible for use with revision. A limited three-cadre user review and preliminary implementation through discussion, trigger cases, roleplay, simulation, and family visits supported the practicality of the module. TEMANI card strengthened the module by providing a structured job aid for family visits. Further formal usability testing and effectiveness studies are recommended before wider implementation.

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