

# Enhancing Caregiver Skills in Malnutrition Risk Screening for Infants and the Elderly A Community Health Disaster Prevention Initiative through Focus Group Discussions

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## Abstract

*The issue of malnutrition among infants and the elderly presents a significant public health challenge, particularly in communities with limited healthcare resources. This study's contributions include enhancing the skills of caregivers in screening for malnutrition risks as a preventive measure against health disasters through the use of Focus Group Discussions (FGDs). The method involved the collection and analysis of health service management data by health cadres, followed by the design and implementation of FGD programs targeting caregivers. The study involved 16 health cadres selected based on specific inclusion criteria: active involvement in the community's health programs, experience in nutritional screening, and a minimum of one year of service as a health cadre. The FGDs were conducted in October and November 2023. The program comprised stages of preparation, introduction, topic discussion, analysis, conclusion, and evaluation, utilizing various media tools. The findings revealed an improvement in knowledge and awareness among caregivers regarding malnutrition screening, with the majority having undergone specialized malnutrition training. However, the application of screening practices remains suboptimal. This initiative highlights the potential of community-based interventions in addressing malnutrition risks among vulnerable groups, suggesting a need for continued education, improved screening practices, and enhanced access to nutrition information. The study concludes that FGDs are an effective method for improving caregiver capabilities in malnutrition risk screening, thereby contributing to the prevention of health disasters in community settings. This underscores the need for integrating such community-based approaches into nursing practice and education to enhance caregiver training and health outcomes.*

**Keywords:** Caregiver; Community; Malnutrition; Screening

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## 1. Introduction

Malnutrition remains a critical public health issue that disproportionately affects vulnerable populations, such as infants and the elderly. This condition, which can manifest as undernutrition or overnutrition, significantly contributes to morbidity and mortality rates worldwide ([World Health Organization, 2023](#)). A robust body of literature has established the adverse effects of malnutrition on physical health, cognitive development, and overall well-being of individuals, highlighting the urgent need for effective prevention and intervention strategies ([Bommer et al., 2020](#)).

Recent studies have emphasized the importance of early detection and screening for malnutrition risk factors as pivotal components of public health initiatives aimed at curbing its prevalence

([Metwally et al., 2023](#)). Caregivers play a crucial role in this process, as they are often the first to observe changes in nutritional status and health indicators among infants and the elderly ([Na'imah et al., 2023](#)). However, the effectiveness of these efforts is contingent upon the caregivers' knowledge and skills in identifying and addressing malnutrition risks ([Avgerinou et al., 2019](#); [Browne et al., 2022](#)).

Despite the growing awareness of the critical role of caregivers in malnutrition screening, there exists a gap in the literature regarding targeted interventions designed to enhance their capabilities in this area. Most existing research focuses on the outcomes of malnutrition or the efficacy of nutritional programs, with less attention given to

the empowerment of caregivers through education and practical training (Marshall et al., 2019).

This article introduces a novel approach to filling this gap by focusing on a community-based initiative that leverages Focus Group Discussions (FGDs) to enhance the malnutrition screening capabilities of caregivers in Purwomartani Village. This initiative not only aims to improve caregivers' understanding of malnutrition risks but also seeks to equip them with the necessary skills to implement effective screening processes for infants and the elderly. The scientific novelty of this article lies in its exploration of FGDs as a mechanism for knowledge transfer and skill development among caregivers, an area that has been underexplored in the context of malnutrition risk screening.

The research problem addressed by this article centers on the effectiveness of FGDs in enhancing the malnutrition screening capabilities of caregivers. It hypothesizes that targeted FGDs can significantly improve caregivers' knowledge and skills related to malnutrition risk identification and intervention strategies, thereby contributing to the prevention of health disasters among vulnerable populations.

The objectives of this article are twofold: to evaluate the impact of FGDs on caregivers' abilities to screen for malnutrition risks among infants and the elderly, and to assess the potential of this

approach as a scalable and sustainable model for community health improvement. Through this investigation, the article seeks to contribute to the field of nursing by providing empirical evidence on the efficacy of FGDs in empowering caregivers. This empowerment is crucial for mitigating the prevalence of malnutrition and its associated health risks, thereby enhancing the quality of care and health outcomes in nursing practice.

## 2. Method

This study employed a quantitative research design, focusing on the use of focus group discussions (FGDs) as the primary method for collecting information on caregiver capabilities in screening for malnutrition risk among infants and the elderly. The research was conducted in the vibrant community of Purwomartani Village, specifically at the Posyandu Sambiroto, during the third week of October and November 2023 in Indonesia. The selection of this timeframe and location was strategic, allowing for the engagement of active health cadres and caregivers within a setting familiar to the participants, thus facilitating open and insightful discussions.

The research flowchart is illustrated in Figure 1, detailing the sequential steps of the study from planning to conclusion.

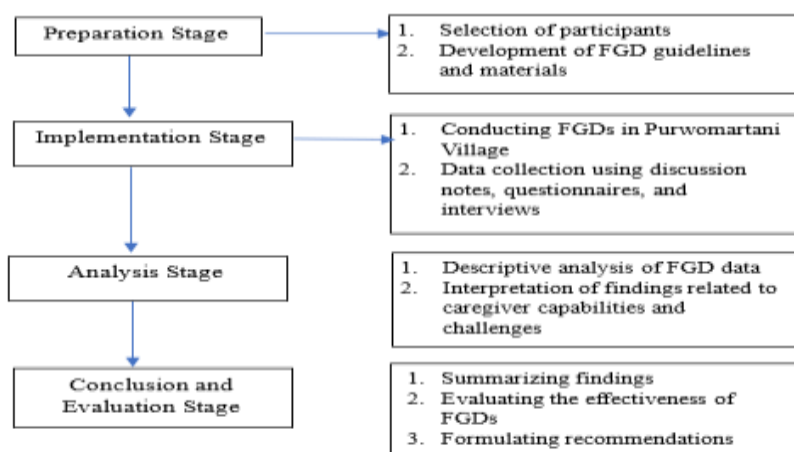


Figure 1: Research Flowchart

The population of this study encompassed caregivers who are actively involved in the nutritional screening of infants and the elderly within the community. Specifically, the study included a total of 23 caregivers and 16 female health cadres who have shown dedication to addressing malnutrition issues. A purposive sampling technique was utilized to select these participants, ensuring that those chosen had direct experience and involvement in nutritional screening processes. This approach was intended to ensure

that the gathered data was rich and relevant to the study objectives.

The FGDs were structured into several main phases: introduction, topic discussion, analysis and conclusion, and evaluation. Each session began with an introduction by the facilitator, followed by an in-depth discussion on malnutrition risk screening among infants and the elderly. Participants were encouraged to share their experiences and insights, which were then analyzed to draw conclusions on the current state of

caregiver capabilities and areas for improvement. The final phase involved evaluating the effectiveness of the FGD in enhancing the participants' screening skills, utilizing questionnaires and brief interviews to gather feedback.

Data analysis was carried out through descriptive approach, where the information collected during the FGDs was related to the research objectives. This approach allowed for a comprehensive understanding of the challenges and opportunities in enhancing caregiver skills in malnutrition risk screening, thereby informing the development of targeted interventions for health disaster prevention in the community.

The main set of tools, including the LCD projector, laptop, and writing materials, played a crucial role in the successful execution of this research. These instruments not only facilitated the smooth conduct of the FGDs but also ensured that valuable data was captured and documented effectively, supporting the overall aim of the study to improve community health outcomes.

This study was conducted in accordance with the ethical standards. All participants provided informed consent prior to their involvement in the FGDs. The confidentiality and anonymity of the participants were strictly maintained throughout the study. Participants were informed about the purpose of the study, their right to withdraw at any time without any consequences, and the measures taken to ensure the confidentiality of the data collected.

### 3. Results and Discussion

The cadres had a mean age of 41.4 years (SD = 4.8) and predominantly held high schools or below (50.0%). Among caregivers, the mean age was 35.4 years (SD = 2.3), with a similar distribution of educational levels. Most cadres were employed in non-health-related fields (87.5%), while caregivers were predominantly non-health workers (100%).

The analysis of the FGDs revealed several key findings related to caregiver knowledge, awareness, and application of malnutrition risk screening. Firstly, caregivers demonstrated a fairly high level of knowledge regarding malnutrition signs in both infants and the elderly, with average scores of 3.7 and 3.2 respectively on a Likert scale ranging from 1 to 5. This indicates a good foundational understanding among caregivers about malnutrition indicators, which is critical for effective screening.

Awareness about the importance of malnutrition screening was notably high, with an average score of 4.1. This suggests that caregivers recognize the critical role of screening in preventing adverse health outcomes associated with malnutrition in vulnerable populations. Despite this awareness, the actual application of screening practices was less optimal, as indicated by average frequencies of

screening for infants and the elderly at 2.9 and 2.5 respectively. This gap between knowledge and practice highlights a key area for intervention to enhance screening effectiveness.

Table 1. Characteristic of Respondents

Characteristic	Cadres	Caregivers
Age (years)	41.4±4.8	35.4±2.3
Education Level		
- High School or Below	8 (50.0%)	10 (43.5%)
- Diploma	2 (12.5%)	4 (17.4%)
- Bachelor's Degree	5 (31.3%)	7 (30.4%)
- Master's Degree or Above	1 (6.3%)	2 (8.7%)
Occupation		
- Health Worker	2 (12.5%)	0 (0.0%)
- Non-Health Worker	14 (87.5%)	23 (100.0%)

Table 2. Summary of Research Findings on Caregiver Capabilities in Malnutrition Risk Screening for Infants and the Elderly (n=23)

Indicators	Average Score	Range (Min - Max)	Categorize
Knowledge about Malnutrition (Infants)	3.7	1 - 5	Good
Knowledge about Malnutrition (Elderly)	3.2	1 - 4	Moderate
Awareness about Importance of Screening	4.1	1 - 5	Good
Awareness of Malnutrition Impact on Infants	3.8	1 - 5	Good
Awareness of Malnutrition Impact on Elderly	3.4	1 - 4	Moderate
Screening Frequency (Infants)	2.9	1 - 4	Moderate
Screening Frequency (Elderly)	2.5	1 - 3	Moderate
Knowledge about Prevention of Malnutrition (Infants)	3.9	1 - 5	Good
Knowledge about Prevention of Malnutrition (Elderly)	3.6	1 - 5	Good
Access to Nutritional Information	3.3	1 - 4	Moderate
Trust in Nutritional Information Sources	3.8	1 - 5	Good

The FGDs underscored the importance of nutritional education, with caregivers showing substantial understanding of healthy dietary patterns for infants and the elderly, evidenced by average scores of 3.9 and 3.6. However, access to reliable nutrition information and trust in

information sources presented challenges, with average scores of 3.3 for information access and 3.8 for trust in sources, indicating room for improvement in information dissemination and credibility.

The findings from this study underscore the complexity of enhancing caregiver capabilities in malnutrition risk screening. The relatively high levels of knowledge and awareness among caregivers provide a solid foundation for building effective screening practices. However, the disparity between knowledge and actual screening application suggests that barriers exist which prevent the translation of awareness into action. These barriers could be related to limited access to resources, lack of confidence in screening procedures, or insufficient reinforcement of training.

The findings from the focus group discussions (FGDs) conducted in Purwomartani Village provide valuable insights into the dynamics of caregiver capabilities regarding malnutrition risk screening among infants and the elderly. This discussion aims to contextualize these findings within the broader scope of recent research and theoretical frameworks, particularly focusing on the interplay between knowledge, awareness, application of screening practices, and the challenges related to nutritional education and information access.

The critical role of caregiver knowledge and awareness in the early detection and prevention of malnutrition is well documented in the literature. According to a study that caregiver awareness about the signs of malnutrition and the importance of screening can significantly influence the health outcomes of vulnerable populations (Mishra et al., 2019; Bullock et al., 2021). This aligns with the high levels of knowledge and awareness observed among caregivers in the present study, indicating a solid foundation upon which effective screening practices can be built. However, the discrepancy between this knowledge and the actual application of screening practices points to an essential gap that needs addressing. Theoretical models, such as the Health Belief Model by Rosenstock in 1974, suggest that while knowledge and awareness are critical, the perceived benefits, barriers, and cues to action significantly influence health behavior implementation (Green et al., 2020). This gap between knowledge and practice may be attributed to perceived barriers, such as lack of time, resources, or confidence in applying screening techniques effectively.

The less optimal application of screening practices, despite high awareness levels, echoes findings from recent studies that highlight the challenges caregivers face in implementing health interventions. For instance, a study in a similar context emphasized the need for practical training

and resources to bridge the gap between knowledge and action (Carr, 2021). The findings suggest that while caregivers may understand the importance of screening and have a good grasp of malnutrition indicators, the lack of practical skills and confidence can hinder effective application (Reber et al., 2019; Serón-Arbeloa et al., 2022). This indicates a critical area for intervention, where targeted training programs that focus on hands-on skills and confidence-building could enhance screening effectiveness.

Moreover, the importance of nutritional education observed in the FGDs, with caregivers showing substantial understanding of healthy dietary patterns, resonates with the growing recognition of the role of nutrition education in malnutrition prevention. Recent research saws underscores the impact of comprehensive nutritional education programs on caregiver behavior and dietary practices (Bommer et al., 2020). These programs not only improve knowledge but also empower caregivers to make informed decisions about nutrition and health. However, the challenges related to access to reliable nutrition information and trust in information sources highlight a significant barrier to effective education. In the digital age, where information overload and misinformation are prevalent, building trust and ensuring access to credible and practical nutrition information are paramount. The Theory of Planned Behavior by Ajzen in 1991, suggests that attitudes towards behavior, subjective norms, and perceived behavioral control play a crucial role in the intention to perform a behavior (Ajzen, 2020; Conner, 2020). In this context, improving access to trustworthy information and fostering positive attitudes towards credible sources could significantly influence caregivers' intentions to apply screening practices and nutritional guidelines.

The insights gathered from the focus group discussions (FGDs) underscore the crucial role that nutritional education plays in the prevention of malnutrition, an observation that is increasingly acknowledged within the health community (Von Salmuth et al., 2021; Majid et al., 2023). The evidence of caregivers' solid grasp on appropriate dietary habits for both infants and the elderly supports the assertion that comprehensive nutritional education is instrumental in mitigating malnutrition risks. Drawing on findings from a study that the positive impact of well-rounded nutritional education initiatives on the behaviors and dietary choices of caregivers becomes evident (Bommer et al., 2020; Bleiweiss-Sande et al., 2021; Round et al., 2022). These educational endeavors do more than merely enhance knowledge; they equip caregivers with the autonomy to make well-informed decisions regarding nutrition and overall

health. Nonetheless, the hurdles associated with securing dependable nutritional information and establishing trust in these sources present considerable challenges to the effectiveness of such educational programs. In an era dominated by the proliferation of information and the potential for misinformation, the importance of establishing trustworthy communication channels and ensuring the availability of accurate, actionable nutritional advice cannot be overstated. The Theory of Planned Behavior, proposed by Ajzen in 1991, sheds light on how attitudes toward behavior, societal norms, and the perception of control over one's actions significantly shape the likelihood of engaging in specific behaviors (Ajzen, 2020). Within this framework, enhancing the accessibility of reliable information and cultivating positive perceptions towards reputable sources are pivotal steps that could profoundly influence caregivers' readiness to implement screening measures and adhere to nutritional recommendations (Olivares et al., 2014; Metwally et al., 2023).

The analysis of the current study's outcomes, juxtaposed with findings from recent research, underscores a recurring motif: the imperative for all-encompassing strategies that tackle the disparity between knowledge, awareness, and the practical application of malnutrition screening, alongside the obstacles impeding nutritional education and the dissemination of information. A holistic strategy that encompasses hands-on skill development, bolstering self-assurance, the dissemination of trustworthy information, and fostering community involvement stands to markedly advance the efforts aimed at malnutrition risk screening and its prevention (Olivares et al., 2014; Marshall et al., 2019; Norman et al., 2021). Moreover, the strategic utilization of technological innovations and social media channels to circulate accessible and verifiable nutritional data could effectively surmount the challenges associated with information accessibility, reflecting a broader move towards integrating digital solutions in health interventions (Vidayanti et al., 2022).

The observations derived from this study resonate with similar research endeavors, which collectively underscore the pivotal importance of knowledge and awareness in the realm of health screening practices. Nevertheless, this investigation offers distinctive insights specific to the context of Purwomartani Village, shedding light on the necessity for tailored solutions designed to address the unique set of challenges encountered by this community. This entails a commitment to understanding the specific needs and circumstances of the caregivers and health cadres within Purwomartani, ensuring that interventions are not only comprehensive but also contextually appropriate.

The significance of forging a deep connection between caregivers and the health education they receive cannot be overstated (Bilal et al., 2020; Paatsch & Toe, 2020). By engaging in dialogue, offering support, and providing resources that are directly relevant to their daily experiences, we can empower caregivers to become proactive participants in the fight against malnutrition (Mishra et al., 2019). This approach necessitates a departure from one-size-fits-all solutions, advocating instead for interventions that are as diverse and nuanced as the populations they aim to serve.

Furthermore, the engagement of caregivers in the design and implementation of nutritional education programs could foster a sense of ownership and accountability, enhancing the likelihood of sustained behavior change. This participatory approach could also facilitate the identification of culturally sensitive and practical dietary practices, thereby increasing the relevance and effectiveness of nutritional guidelines (Green et al., 2020).

In addition, the potential of digital platforms extends beyond merely serving as conduits for information dissemination. They offer opportunities for creating interactive, engaging educational content that can cater to different learning styles and preferences. Through the innovative use of digital tools, caregivers can access a wealth of resources at their fingertips, from instructional videos and webinars to online forums where they can share experiences and seek advice from peers and professionals alike.

The insights from Purwomartani Village's FGDs, therefore, not only contribute to the broader discourse on malnutrition prevention but also highlight the transformative potential of integrating traditional knowledge with modern technological advances. By embracing a multifaceted and adaptive approach, we can forge pathways towards more resilient and healthy communities, where the risks associated with malnutrition are significantly diminished.

This exploration into the dynamics of nutritional education and malnutrition risk screening in Purwomartani Village underscores a complex interplay of factors that influence caregiver behaviors and practices. By addressing these factors through targeted, culturally sensitive, and technologically enhanced interventions, we can make strides towards eradicating malnutrition and fostering a healthier future for both infants and the elderly. The commitment to continuous learning, adaptation, and community engagement will be crucial in navigating the challenges ahead and achieving lasting impact in the prevention of malnutrition.

#### 4. Conclusions and Suggestions

In conclusion, the Focus Group Discussions (FGDs) conducted in this study offer valuable insights into the capabilities and challenges of caregivers and health cadres in malnutrition risk screening among infants and the elderly in Purwomartani Village. The findings underscore the gap between caregivers' knowledge and the practical application of screening practices, highlighting the need for targeted interventions to bridge this disparity. Challenges such as limited access to reliable nutritional information and the lack of confidence in implementing screening techniques were evident.

Future research should explore multifaceted approaches that address these knowledge gaps, practical barriers, and informational challenges. By leveraging nursing theories and health behavior models, interventions can be designed not only to educate caregivers but also to empower them with the necessary skills and resources. This will not only enhance the effectiveness of malnutrition risk screening but also contribute to the prevention of health disasters associated with malnutrition among vulnerable populations in Purwomartani Village and similar communities.

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