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Community Health Cadres as Community Mediators in Supporting Families at Risk of Stunting: A Qualitative Study within Maternal and Child Health Services in Indonesia

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Abstract

Background

Stunting remains a major public health challenge shaped by socio cultural factors that influence caregiving practices, nutrition, and health-seeking behaviours. Although community health cadres play important roles in stunting prevention, limited evidence exists regarding their function as community mediators within maternal and child health services. This study explored how community health cadres function as community mediators in supporting families at risk of stunting within socio-cultural contexts.

Methods

A qualitative descriptive study was conducted in the Mandala Health Center service area, Lebak Regency, Banten Province, Indonesia. Thirty eight participants, including community health cadres, parents from families at risk of stunting, healthcare workers, community leaders, and a local government representative, were purposively recruited. Data were collected through in-depth interviews, focus group discussions, participant observation, and field notes and analysed using thematic analysis.

Results

Three themes were identified: community perceptions and engagement in family accompaniment, community health cadres as community mediators, and factors influencing accompaniment practices. Cadres acted as trusted community mediators who facilitated communication, strengthened family engagement, connected families with maternal and child health services, and adapted health messages to local socio-cultural contexts. The effectiveness of accompaniment was influenced by family participation, cultural beliefs, community support, and health system factors.

Conclusion

Community health cadres function as community mediators who bridge families, communities, and maternal and child health services through culturally responsive and relationship-centred accompaniment. Strengthening cadre capacity and supportive community systems may enhance community-based stunting prevention efforts.

Introduction

Stunting prevention requires sustained engagement with families and communities because many of the behaviours and practices affecting child nutrition are enacted within everyday social environments. Despite global progress in reducing child malnutrition, approximately 150.2 million children under five years of age were affected by stunting worldwide in 2024, representing 23.2% of the global under-five population.[1,2] In Indonesia, community-based maternal and child health services rely substantially on community health cadres

to connect families with health information, services, and local support. Their position within the community places them at an important interface between families, community structures, and formal health services. [1,2]

Although global stunting prevalence has declined substantially over the last two decades, the current rate of reduction remains insufficient to achieve the Sustainable Development Goal (SDG) target of ending all forms of malnutrition by 2030.[3] Beyond impaired linear growth, stunting is associated with irreversible consequences across the life course, including delayed cognitive development, poor educational attainment, reduced productivity, lower lifetime earnings, and diminished human capital.[4,5] Consequently, stunting is increasingly recognized not only as a nutritional problem but also as a major development challenge closely linked to poverty, inequality, and social well-being.[6]

As scientific evidence continues to evolve, stunting is increasingly recognized not merely as a consequence of inadequate nutritional intake, but as the result of a complex interaction among social, cultural, economic, and environmental factors.[7,8] A growing body of research indicates that child-feeding practices, food taboos, gender norms, parenting patterns, and health literacy shape how families make decisions regarding child health and nutrition.[9–12] Lokossou et al. (2021) found that socio-cultural beliefs continue to influence maternal and child feeding practices, including restrictions on the consumption of certain foods during pregnancy and child-rearing periods, potentially limiting the intake of essential nutrients required for optimal growth and development.[12]

Similar findings were reported by Uddin et al. (2026) in a qualitative systematic review conducted in South Asia, which demonstrated that spiritual beliefs, superstition, gender inequality, economic constraints, and prevailing social norms within families and communities contribute to child undernutrition by influencing caregiving practices, feeding behaviors, and healthcare utilization.[13] Furthermore, Ayue et al. (2025) identified maternal education, socioeconomic status, sanitation, and feeding and caregiving practices as the most consistent determinants associated with stunting across diverse global settings.[14] These findings suggest that family vulnerability to stunting is shaped by complex socio-cultural influences that extend beyond nutritional factors alone. Addressing these challenges requires community based approaches that can strengthen family engagement, facilitate communication, and connect households with maternal and child health services within their local socio-cultural contexts.

In the Indonesian context, Mustofa et al. (2026) showed that although many families possess basic knowledge regarding the importance of child nutrition, household economic priorities, caregivers' educational attainment, and family decision-making patterns often hinder the implementation of optimal feeding practices.[15] These findings are further supported by Ginting and Hadi (2023), who concluded that maternal nutritional intake, exclusive breastfeeding, complementary feeding practices, parenting behaviors, environmental hygiene, and household economic conditions are important socio-cultural factors contributing to childhood stunting in Indonesia. [16]

Collectively, these studies suggest that socio-cultural factors not only directly influence health-related behaviors but also shape family vulnerability through limitations in resources, access to information, gender relations, and decision-making capacity that support child growth and development. Therefore, stunting can be understood as a socially embedded phenomenon, requiring prevention strategies that extend beyond nutrition-

specific interventions to address the broader cultural and social dynamics shaping family health behaviors.[11,17] Such strategies require community-based actors who can facilitate communication, strengthen family engagement, and connect households with available maternal and child health services within their socio cultural contexts.

In response to the complex socio cultural factors associated with stunting, community health cadres have become key community based mediators in maternal and child health programs.[18–20] As trusted members of the community, cadres occupy a unique position that enables them to mediate relationships between families, communities, and health services, particularly among households at risk of stunting. Beyond delivering health information, cadres provide ongoing support through home visits, growth monitoring, counseling, and community engagement activities.[21–24] These activities represent key components of maternal and child health services, particularly in supporting pregnancy care, child growth monitoring, nutrition counselling, and early stunting prevention.

Previous studies have shown that community health workers contribute to improved maternal and child health outcomes by enhancing health literacy, facilitating access to health services, and promoting recommended nutrition and caregiving practices.[25,26] Importantly, their close social and cultural proximity to community members enables them to adapt communication strategies to local contexts, build trust, and encourage community participation in health programs.[27] These contributions position cadres not only as health educators but also as community mediators who connect families with health resources and support behaviour change. Through these roles, they facilitate communication, strengthen family engagement, connect households with maternal and child health services, and support the adoption of practices that contribute to stunting prevention.[25,28]

Although the contribution of community health cadres to stunting prevention has been widely recognized, existing studies have predominantly focused on intervention effectiveness, health outcomes, cadre competencies, and service delivery performance.[25,28,29] Previous evidence demonstrates that community-based interventions can improve maternal and child nutrition, strengthen health literacy, promote recommended feeding practices, and increase access to health services. [1,22,30]. Similarly, community health workers have been shown to play an important role in facilitating behavior change through home visits, health education, peer support, and community mobilization activities.[31]

However, despite growing recognition that socio-cultural factors such as family norms, gender relations, traditional beliefs, and local practices influence child nutrition and participation in health programs, limited research has explored how community health cadres operationalize their roles within these complex social environments.[27,32] In particular, little is known about how cadres adapt communication strategies, negotiate cultural barriers, build trust with families, and facilitate engagement among families at risk of stunting during the accompaniment process. Understanding these processes is important because the success of community based stunting prevention efforts may depend not only on the availability of interventions or the technical competence of cadres, but also on their ability to respond to local socio-cultural realities and establish meaningful relationships with families and communities.

Moreover, limited evidence exists regarding how cadres function as community mediators who bridge families, communities, and maternal and child health services within these socio-cultural contexts. Therefore, further qualitative research is needed to explore how community health cadres function as community mediators in supporting families at risk of stunting within maternal and child health services and socio-cultural contexts.[11,18,33]

Despite growing recognition of the role of community health cadres in stunting prevention, limited evidence has examined how cadres function as community mediators in everyday family accompaniment, particularly within the social and cultural contexts in which families make decisions about child health and nutrition. Existing studies have largely focused on cadre competencies, programme implementation, or health outcomes, leaving less understanding of the relational and mediating processes through which cadres facilitate communication, build trust, strengthen family engagement, and connect families with maternal and child health services. Therefore, this study aimed to explore how community health cadres function as community mediators in supporting families at risk of stunting within socio-cultural contexts.

Methods

This study employed a qualitative descriptive design to explore how community health cadres function as community mediators in supporting families at risk of stunting within socio cultural contexts. A qualitative descriptive approach was considered appropriate because it enables an in-depth exploration of participants' experiences, perceptions, and perspectives regarding cadre accompaniment practices in real-world community settings. The study sought to understand how cadres facilitate communication, build trust, strengthen family engagement, and connect families with health services while responding to the socio-cultural factors that influence stunting prevention efforts among families at risk. The study is reported in accordance with the Standards for Reporting Qualitative Research (SRQR) to enhance methodological transparency and reporting quality.

Study Setting

The study was conducted between December 2025 and June 2026 in the service area of Mandala Health Center, Lebak Regency, Banten Province, Indonesia. These areas were purposively selected because they represented communities with a high burden of stunting and active community-based maternal and child health programmes. The study setting included integrated community health posts (Posyandu), villages, and community-based family accompaniment activities where community health cadres routinely supported maternal and child health programmes

Participants and Sampling

Participants were recruited using purposive sampling based on their involvement and experience in stunting prevention activities. Eligible participants were selected because they were directly involved in family accompaniment or had experience interacting with community health cadres within maternal and child health programmes. The present manuscript reports a focused analysis of the qualitative dataset generated in the parent study. For this analysis, 38 participants whose experiences were directly relevant to the role of

community health cadres as community mediators were included, comprising 12 community health cadres, 12 mothers from families at risk of stunting, 6 healthcare workers, and 8 community leaders. The inclusion of these stakeholder groups enabled exploration of how community health cadres function as community mediators in supporting families at risk of stunting from the perspectives of cadres, families, healthcare providers, and community representatives. Recruitment and data collection continued until thematic saturation was achieved, whereby no new concepts or themes emerged from subsequent focus group discussions.

Researcher Characteristics and Reflexivity

Data collection and analysis were conducted by the principal researcher, who has experience in qualitative health research and maternal and child health. Throughout the research process, reflexivity was maintained through reflective and analytical memos documenting methodological decisions, emerging interpretations, and potential researcher assumptions. Regular discussions with the research team were conducted to critically examine emerging interpretations and consider how the researchers' perspectives and professional experiences might influence the analytical process. Reflexive discussions were particularly focused on interpreting the roles of community health cadres, family engagement, and interactions between community-based actors and maternal and child health services.

Data Collection

Data were collected through focus group discussions (FGDs) and in-depth interviews, complemented by participant observation and field notes. These methods were used to explore how community health cadres communicated with families, supported family engagement, facilitated access to maternal and child health services, and responded to contextual challenges encountered in community settings.

FGDs were conducted with community health cadres, mothers from families at risk of stunting, healthcare workers, and community leaders. The discussions explored participants' experiences and perceptions of cadre roles in facilitating communication, building trust, strengthening family engagement, conducting home visits, and connecting families with maternal and child health services. Questions also explored how cadres adapted communication and engagement strategies to different family and community circumstances.

In-depth interviews were conducted to obtain more detailed accounts of participants' experiences of cadre-mediated engagement and interactions with maternal and child health services. The interviews allowed participants to elaborate on issues that required greater depth than could be obtained through group discussion, including communication practices, home visits, family engagement, collaboration with healthcare providers, and challenges encountered in community-based stunting prevention.

Semi-structured FGD and in-depth interview guides were developed based on the study objectives, relevant literature, and concepts related to community mediation, family engagement, and maternal and child health services. The English versions of the FGD and in-depth interview guides are provided as Additional File 1. All FGDs and in-depth interviews were facilitated by the principal researcher, audio-recorded with participants' permission, and transcribed verbatim.

Reflective field notes were completed immediately following each data collection session to document contextual observations, participant interactions, non-verbal communication, and preliminary analytical reflections. Participant observation was conducted during relevant community-based activities, including Posyandu and home visits, to complement participants' accounts and provide contextual understanding of cadre–family interactions.

Data collection and preliminary analysis proceeded iteratively. Insights emerging from earlier FGDs, interviews, observations, and field notes informed subsequent data collection until thematic saturation was achieved.

Data Analysis

Qualitative data were analysed using Braun and Clarke's six-phase reflexive thematic analysis (Braun & Clarke, 2021). An inductive analytical approach was used to identify patterns of meaning related to how community health cadres functioned as community mediators within maternal and child health services. The analysis focused on participants' accounts of communication, relationship-building, family engagement, home visits, linkages with health services, and contextual factors influencing cadre-mediated practices.

Data management, coding, retrieval, and organisation were supported using NVivo. In keeping with reflexive thematic analysis, numerical inter-coder reliability was not applied because the analysis emphasised researcher reflexivity, interpretative engagement with the dataset, and transparency of analytical decisions (Braun & Clarke, 2021).

The six phases of the thematic analysis process, including familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report, are described in Additional File 2. The additional file also presents the analytical pathway from data extracts and initial codes to categories, subthemes, and final themes

Rigor and Trustworthiness

Trustworthiness was addressed through strategies relating to credibility, dependability, confirmability, and transferability, following the principles proposed by Lincoln and Guba. These strategies were integrated throughout data collection, analysis, interpretation, and reporting.

Credibility

Credibility was enhanced through methodological triangulation and source triangulation, incorporating focus group discussions Aand field notes. Multiple stakeholder groups, including community health cadres, mothers, fathers, healthcare workers, community leaders, and programme representatives, contributed diverse perspectives on the mediating roles of community health cadres. Member checking was conducted with selected participants to verify the accuracy of interpretations, while peer debriefing with qualitative research experts supported critical reflection and strengthened analytical rigour.

Dependability

Dependability was supported through the maintenance of a comprehensive audit trail, documenting methodological decisions, coding processes, analytical memos, and theme development throughout the study.

This documentation enhanced the transparency and consistency of the analytical process.

Confirmability

Confirmability was strengthened through researcher reflexivity, reflective and analytical memos, and regular discussions among the research team during coding and theme refinement. These strategies helped ensure that interpretations remained grounded in participants' accounts rather than researchers' assumptions.

Transferability

Transferability was enhanced through thick description of the study setting, participant characteristics, community context, and research procedures, enabling readers to determine the applicability of the findings to similar maternal and child health settings.

The strategies implemented to ensure trustworthiness throughout the study are summarised in Fig. 1.

Ethical Considerations

The study was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the Universitas Padjadjaran, Indonesia prior to data collection (Approval No. 1074/UN6.KEP/EC/2025). All participants received verbal and written information regarding the study objectives, procedures, confidentiality, voluntary participation, and their right to withdraw from the study at any time without consequence. Written informed consent was obtained before all interviews, focus group discussions, and participant observations were conducted. To protect participants' privacy, all identifying information was removed from transcripts and reports, and pseudonyms were used when reporting participant quotations. All electronic data were stored on password-protected devices, while hard-copy research materials were securely stored with access restricted to the research team.

Results

Participant Characteristics

A total of 38 participants were included in the focused analysis, comprising 12 community health cadres, 12 mothers from families at risk of stunting, 6 healthcare workers, and 8 community leaders. The inclusion of these stakeholder groups provided diverse perspectives on cadre mediation, family engagement, and community-based maternal and child health services in stunting prevention

Table 1
Characteristics of Participants (N = 38)

Characteristics	N	%
Participant Category		
Community health cadres	12	31.6
Mothers from families at risk of stunting	12	31.6
Healthcare workers	6	15.8
Community leaders	8	21.1
Total	**38**	**100.0**

Overview of Themes

Thematic analysis identified three overarching themes and nine subthemes describing participants' experiences and perspectives regarding cadre accompaniment for families at risk of stunting. The themes encompassed community perceptions and engagement in accompaniment, the strategic roles performed by community health cadres, and the factors that facilitated or constrained accompaniment practices within socio-cultural contexts. The identified themes and subthemes are presented in Table 2.

Table 2
Themes and Subthemes Identified Through Thematic Analysis

Theme	Subtheme	Codes
Community Health Cadres as Community Mediators in Supporting Families at Risk of Stunting	Community Perceptions and Engagement in Stunting Prevention	1. Expectations of cadre support and engagement 2. Gaps in community understanding of stunting 3. Family and community engagement
	Community Health Cadres as Community Mediators	1. Home visits, monitoring, and family engagement 2. Communication and health education 3. Bridging families and maternal and child health services 4. Adaptive communication and contextual engagement
	Enabling and Constraining Factors in Cadre-Mediated Engagement	1. Health system and community support 2. Challenges in cadre-mediated family engagement

The identified themes illustrate how community health cadres function as community mediators in supporting families at risk of stunting within socio-cultural contexts. The findings demonstrate how cadres navigate community expectations, deliver accompaniment activities, adapt to local socio-cultural conditions, and respond to various challenges encountered during the implementation of stunting prevention efforts. Each theme is described in detail below.

Theme 1. Community Perceptions and Engagement in Family Accompaniment for Stunting Prevention

Participants described diverse perceptions regarding cadre accompaniment for families at risk of stunting. Cadres were generally perceived as trusted community members who provided information, support, and guidance related to maternal and child health. However, participants also reported differences in understanding of stunting and varying levels of family engagement in accompaniment activities. Three subthemes emerged from this theme: expectations toward cadre accompaniment, community understanding of accompaniment, and family and community engagement.

Expectations Toward Cadre Accompaniment

Participants expressed positive expectations regarding the continuity and strengthening of cadre accompaniment activities. Mothers described cadres as important sources of information who helped them monitor child growth, understand health-related issues, and access maternal and child health services. Participants emphasized the importance of ongoing accompaniment and expected cadres to provide guidance that was relevant to their daily circumstances.

“The role of health cadres is very important. Without them, I probably wouldn't know exactly how my child is developing. They help provide information and remind mothers to take their children for regular health check-ups, so they are very helpful in maintaining children's health.” (Mother 1)

Participants also highlighted the need for accompaniment approaches that were adapted to local conditions and family capacities.

“The role of health cadres is important, but I think their approach also needs to be adapted to the community's circumstances. For example, the way they provide health education or interact with families should match the community's habits and capabilities.” (Mother 5)

In addition, healthcare stakeholders emphasized the need for continuous training and support to strengthen cadres’ communication skills and effectiveness in delivering health messages.

These findings indicate that accompaniment was viewed as a continuous process requiring both sustained community engagement and ongoing capacity strengthening for cadres.

Theme 2. Community Health Cadres as Community Mediators

Participants described community health cadres as community mediators supporting families at risk of stunting through various accompaniment activities. Beyond their involvement in routine Posyandu services, cadres facilitated growth monitoring, health education, family accompaniment, communication, and linkages between families and healthcare services. Four subthemes emerged from this theme: accompaniment

activities, communication and health education, bridging families and health services, and adaptive socio-cultural strategies.

Accompaniment Activities Through Monitoring and Home Visits

Participants reported that cadres regularly conducted Posyandu activities, monitored child growth and development, provided nutrition education, and conducted home visits for families requiring additional support. Home visits were particularly important for pregnant women, children with growth concerns, and families who rarely attended Posyandu services.

“We conduct weight measurements, height assessments, and record the results in the maternal and child health book. This helps us monitor whether children are growing normally or need additional attention.” (Cadre 8)

“We often conduct home visits, especially for pregnant women or children who rarely attend Posyandu.” (Cadre 7)

Participants perceived home visits as opportunities for more personalized communication and support.

“At home, communication feels more relaxed and I feel more comfortable asking questions.” (Mother 4)

These findings suggest that accompaniment activities extended beyond routine community health services and included personalized support tailored to family needs.

Communication and Health Education

Participants consistently emphasized the importance of communication in cadre accompaniment. Cadres commonly used informal and conversational approaches, relying on simple language and culturally familiar expressions to facilitate understanding. Communication occurred during Posyandu sessions, home visits, and through digital platforms such as WhatsApp groups.

“We usually use a relaxed approach. If communication is too formal, mothers may feel uncomfortable asking questions.” (Cadre 9)

“If the explanation is simple, I can understand it. But when there are too many technical terms, it becomes difficult to follow.” (Mother 8)

Several participants noted that repeated communication helped reinforce health messages and encouraged behavioral change among families.

These findings indicate that effective accompaniment depended not only on the content of health information but also on the communication approaches used by cadres. Participants described that cadres supported families through regular communication, growth monitoring, home visits, and direct engagement with families. Home-based accompaniment enabled cadres to provide more individualised support and respond to the specific needs and circumstances of families at risk of stunting.

Bridging Families and Health Services

Participants described cadres as important community mediators connecting families with healthcare providers and community health programs. Their close relationships with community members enabled them to identify concerns, facilitate referrals, and encourage participation in health services.

“We are the ones who interact directly with the community. We serve as a bridge between health workers and residents.” (Cadre 7)

“Cadres are the frontline actors in the field. Without them, stunting prevention programs would be difficult to implement effectively.” (Healthcare Worker 5)

Families also regarded cadres as trusted sources of information and support.

“With cadres around, we have someone to ask and receive explanations from. It makes us feel more confident in caring for our children.” (Mother 11)

These findings demonstrate that cadres function as community mediators who bridge families, communities, and formal healthcare systems.

Adaptive Strategies Within Socio-Cultural Contexts

Participants highlighted the need for flexibility in accompaniment practices. Cadres reported adapting their communication styles according to family characteristics, educational backgrounds, and local social norms. They frequently used practical examples, repeated explanations, and non-judgmental communication to improve acceptance of health messages.

“Not everyone immediately understands or accepts the information, so we explain it repeatedly using different approaches.” (Cadre 9)

“We usually provide suggestions rather than direct instructions, so mothers do not feel pressured.” (Cadre 7)

“Sometimes we demonstrate directly how to prepare nutritious meals using simple ingredients.” (Cadre 8)

These adaptive strategies enabled cadres to navigate diverse socio-cultural contexts, facilitate the acceptance of health messages, and strengthen engagement with families at risk of stunting.

Theme 3. Enabling and Constraining Factors in Cadre Accompaniment

Participants identified several factors that influenced the implementation of cadre accompaniment. These factors included support from health systems and communities, as well as various social, cultural, and economic challenges that affected participation and behavior change. Two subthemes emerged: health system and community support, and multidimensional challenges in accompaniment.

Health System and Community Support

Participants reported that cadre accompaniment was strengthened through collaboration with healthcare workers, government programs, and routine community health services such as Posyandu. These support systems facilitated monitoring activities, health education, referrals, and follow-up services.

“We assist in activities organized by the health center, including health education and community programs.” (Cadre 9)

“Without cadres, stunting prevention programs would be difficult to implement because healthcare workers cannot reach all community members.” (Healthcare Worker 5)

Community leaders also recognized cadres as important actors in ensuring that health programs reached families.

“Cadres help ensure that government health programs reach the community.” (Community Leader 8)

These findings suggest that effective accompaniment relied on strong collaboration between cadres, healthcare providers, and community stakeholders.

Multidimensional Challenges in Accompaniment

Despite the presence of support systems, participants described multiple barriers that limited the effectiveness of accompaniment activities. These included limited health literacy, low paternal involvement, economic constraints, child feeding challenges, socio-cultural beliefs, and limited time availability among cadres.

“Sometimes we have to explain the same information repeatedly because not everyone understands it immediately.” (Cadre 9)

“Because of our financial situation, we cannot always provide the foods that are recommended.” (Mother 7)

Participants also reported that some traditional beliefs and daily practices influenced the adoption of health recommendations.

“Sometimes it is difficult, especially when children refuse to eat.” (Mother 10)

In addition, cadres acknowledged challenges in balancing accompaniment activities with household responsibilities and other commitments.

“Sometimes home responsibilities delay planned visits.” (Cadre 10)

These findings indicate that accompaniment occurs within complex social and cultural environments, where family dynamics, economic conditions, local practices, and resource limitations interact to influence the implementation of stunting prevention efforts.

Discussion

This study explored how community health cadres function as community mediators in supporting families at risk of stunting within maternal and child health services. The findings revealed that cadre roles extended beyond routine growth monitoring and health education. Cadres functioned as community mediators who facilitated communication, provided health education, strengthened family engagement, and connected families with maternal and child health services. The findings also highlighted that the effectiveness of cadre

mediation was shaped by community perceptions, family engagement, communication approaches, local practices, and support from community and health systems. Furthermore, cadres demonstrated adaptive strategies in responding to diverse family circumstances and community conditions, indicating that effective stunting prevention within maternal and child health services requires not only technical interventions but also relationship-centred approaches that strengthen connections between families, communities, and health services.

Community Contexts Shape Cadre-Mediated Family Engagement

The findings of this study suggest that community health cadres operate within diverse family and community contexts that influence how health information is understood, discussed, and acted upon. Participants described varying levels of understanding regarding stunting, differences in family participation, and the persistence of beliefs and practices that influenced child feeding and health-seeking behaviours. These findings indicate that cadre mediation involves more than the delivery of standardised health information; cadres must navigate local beliefs, family circumstances, and community practices to engage families effectively in stunting prevention and facilitate their connection with maternal and child health services. Previous studies have shown that socio-cultural beliefs continue to influence maternal and child feeding practices, including food restrictions during pregnancy and early childhood, perceptions of child growth, and decisions regarding healthcare utilization.[12]

Similarly, Uddin et al. (2026) reported that spiritual beliefs, gender inequalities, social norms, and household decision-making processes contribute to child malnutrition through their influence on feeding practices, caregiving behaviours, and access to health services.[13] A global review by Ayue et al. (2025) further identified maternal education, socioeconomic conditions, sanitation, and caregiving practices as important determinants of stunting across diverse settings.[14] Rather than positioning these factors solely as sources of family vulnerability, the present findings highlight the need for cadres to recognise and respond to these contextual differences when facilitating engagement between families and maternal and child health services.

The present study also revealed substantial variation in family engagement during stunting prevention efforts, particularly regarding parental participation, understanding of child nutrition, and responsiveness to health recommendations. Several participants highlighted limited paternal involvement, competing economic priorities, and differences in caregiver knowledge as factors influencing family participation in cadre-led health activities. These findings are consistent with studies showing that educational, economic, and relational factors within households can influence families' engagement with recommended child health practices. In Indonesia, Mustofa et al. (2026) demonstrated that although many caregivers possess basic knowledge regarding child nutrition, economic constraints and family decision-making dynamics often limit the adoption of recommended feeding practices. Similarly, Ginting and Hadi (2023) identified maternal nutrition, exclusive breastfeeding, complementary feeding practices, parenting behaviours, environmental hygiene, and household economic conditions as important contributors to stunting.[16]

Evidence from Zambia further suggests that when caregivers receive information regarding child growth and development, parental engagement and feeding-related behaviours can improve, highlighting the critical role of

family awareness and participation in child nutrition outcomes.[34] Taken together, these findings suggest that cadres need to work with the circumstances that shape family participation rather than relying solely on the delivery of health information. By recognising differences in knowledge, resources, and family priorities, cadres can adapt their communication and engagement strategies to strengthen families' participation in maternal and child health services.

Another important finding from this study is that addressing differences in family circumstances requires more than the provision of nutritional information alone. Participants described the need for engagement approaches that consider local beliefs, family circumstances, communication preferences, and everyday challenges faced by caregivers. This finding aligns with evidence demonstrating that behaviour change interventions are more effective when they are adapted to local contexts and delivered through culturally appropriate communication strategies. Zaman et al. (2008) reported that strengthening communication and counselling skills among frontline health workers improved maternal feeding practices and reduced growth faltering among children.[35] Similarly, Martinez et al. (2018) found that individualized and context-sensitive caregiver education was more effective in improving child feeding practices than standardized approaches.[36] In Guatemala, Juarez et al. (2021) further emphasized that inadequate attention to contextual realities, community engagement, and frontline implementation capacity can limit the effectiveness of stunting reduction programs.[37] Taken together, these findings suggest that effective cadre mediation requires communication and engagement strategies that are responsive to family circumstances and local contexts, enabling cadres to support families in accessing and using maternal and child health services.

Community Health Cadres as Community Mediators of Behaviour Change

A central finding of this study is that community health cadres functioned not merely as providers of health information but as community mediators who facilitated communication, strengthened relationships, and supported behaviour change among families at risk of stunting. Participants consistently described cadres as trusted individuals who engaged families through home visits, growth monitoring activities, counselling sessions, and routine interactions within the community. Through these interactions, cadres served as community mediators between families and formal health services while simultaneously helping families interpret and apply health information within their everyday lives. This finding suggests that cadre-mediated engagement extends beyond knowledge transfer and relies heavily on trust, social connectedness, and sustained interaction between families and maternal and child health services.

The role of community-based health workers as bridges between health systems and communities has been widely documented. Community-based approaches are considered particularly effective because they facilitate direct engagement with households and create opportunities for continuous interaction between families and frontline health workers.[38,39] Similarly, Perry et al. (2015) demonstrated that peer-to-peer health promotion delivered through community volunteers can achieve high levels of community participation and improve maternal and child health practices through regular contact, social support, and community engagement. Consistent with these findings, participants in the present study perceived cadres as accessible

and trusted sources of information who were able to identify family needs, encourage participation in health service, and facilitate connections with maternal and child health providers and available services.[40]

Importantly, the findings indicate that cadres influence behaviour change through social processes rather than through information delivery alone. Participants reported that cadres adapted communication approaches according to family circumstances, educational backgrounds, and local social norms. Similar observations were reported by Altobelli et al. (2020), who found that culturally competent community health workers were more effective in promoting maternal and child health behaviours because they were able to build trust, understand local beliefs, and adapt interventions to community realities.[33] Likewise, Chapman et al. (2024) emphasized that local cultural values, gender relations, social norms, and community perceptions strongly influence the acceptance and effectiveness of stunting interventions. These findings suggest that successful behaviour change depends not only on the content of health messages but also on the ability of frontline workers to communicate in culturally meaningful and socially acceptable ways.[27]

Another important finding of this study is that cadres translated technical health recommendations into practical and contextually appropriate actions for families. Families often face challenges related to financial constraints, caregiving responsibilities, family dynamics, and local beliefs that may limit the adoption of recommended practices. Within these circumstances, cadres helped families interpret health information, identify feasible solutions, and connect recommendations with the resources and services available through the local maternal and child health system. Evidence from Ethiopia demonstrated that behaviour change communication delivered through community-level actors significantly improved complementary feeding practices and dietary adequacy among young children.[41] Similarly, Zaman et al. (2008) reported that strengthening communication and counselling skills among frontline health workers improved caregiver feeding practices and reduced growth faltering among children. These findings reinforce the notion that cadres play an active role in transforming health information into actionable practices through continuous accompaniment and supportive interpersonal relationships.[35]

The present findings further highlight that cadres contribute not only to individual behaviour change but also to broader processes of community empowerment. Rifkin (2003) argued that community participation and empowerment are fundamental mechanisms through which communities gain greater control over health-related decisions and achieve improved health outcomes.[42] Likewise, Laverack (2007) emphasized that empowerment involves strengthening participation, local leadership, problem-solving capacity, resource mobilization, and linkages between communities and external support systems.[43] Viewed from this perspective, cadres function as community mediators who trengthen family engagement, facilitate access to maternal and child health services, and reinforce linkages between families, communities, and healthcare providers. Therefore, cadres should not be viewed merely as volunteers delivering health messages but as community-based actors who help bridge households and formal maternal and child health services. Through this mediating role, cadres help translate biomedical recommendations into practical actions for families while supporting their engagement with appropriate health services.

Community-Based Accompaniment as a Relationship-Centred Strategy

An important finding of this study is that family engagement was largely relationship-centred rather than solely information centred. Participants consistently described home visits, informal communication, repeated interactions, and personalized support as key elements of effective cadre engagement with families. Families often reported feeling more comfortable discussing concerns, asking questions, and sharing challenges when interactions occurred in familiar settings and through trusted interpersonal relationships. These findings suggest that the effectiveness of cadre-mediated engagement t is strongly influenced by the quality of relationships established between cadres and families.

The findings support growing evidence that home-based and relationship-oriented approaches provide valuable opportunities to strengthen family engagement and facilitate behaviour change. Rockers et al. (2023) demonstrated that community health worker home visits improved caregiver engagement and supported positive child development outcomes through regular interaction and individualized support.[44] Similarly, Horwood et al. (2017) found that household-level contact between community health workers and caregivers contributed to improved maternal knowledge and child health practices.[38] The present study extends these findings by showing that home visits provide an important interface between families and community-based maternal and child health services, creating opportunities for cadres to identify family needs, provide tailored support, and facilitate linkages with healthcare providers.

Participants also emphasized the importance of communication approaches that were adapted to individual family circumstances. Cadres frequently adjusted the language, examples, and delivery of health messages according to caregivers' educational backgrounds, social conditions, and levels of understanding. Similar findings were reported by Martinez et al. (2018), who found that individualized caregiver education was more effective than standardized approaches because it allowed health messages to be tailored to the specific needs and circumstances of families.[36] Evidence from Ethiopia further demonstrated that nutrition education interventions based on the Health Belief Model significantly improved nutritional knowledge and dietary practices by addressing individual perceptions, beliefs, and motivations related to health behaviour.[45] In addition, Meher and Zaluchu (2025) highlighted the importance of culturally relevant communication strategies, showing that health education interventions adapted to local contexts enhanced community understanding and engagement in stunting prevention efforts. These findings reinforce the mediating role of cadres in adapting health messages to family needs and facilitating meaningful engagement with maternal and child health services.

Another notable finding is that repeated interaction appeared to strengthen trust and increase the likelihood that families would adopt recommended health practices. Participants described how ongoing communication enabled cadres to monitor progress, provide encouragement, and address emerging barriers over time. This finding aligns with evidence from community-based health promotion programs showing that regular contact between community volunteers and families strengthens behaviour change through social support, reinforcement, and accountability mechanisms.[40] Likewise, Nenobais and Katmini (2021) reported that the application of Health Belief Model principles significantly influenced nutritional fulfilment behaviours associated with stunting prevention, highlighting the importance of continuous motivation and reinforcement in supporting behavioural change. Behaviour change is rarely achieved through a single educational encounter; instead, it often develops gradually through continuous interaction and reinforcement within trusted social relationships.[46] These findings suggest that repeated contact enables cadres to sustain family engagement,

monitor emerging needs, and reinforce connections between families and maternal and child health services over time.

The findings further indicate that effective cadre-mediated engagement involves influencing how families perceive and respond to the risks associated with stunting. Poy et al. (2025) found that perceptions of vulnerability, severity, benefits, barriers, and cues to action were all significantly associated with maternal efforts to prevent stunting. These findings help explain why cadres in the present study devoted considerable effort to repeated counselling, discussion, and personalized support. Through sustained interaction, cadres were able not only to deliver information but also to shape perceptions, strengthen motivation, and encourage families to translate health knowledge into everyday caregiving practices.[8] In this way, cadres functioned as mediators who helped families interpret health information and translate it into appropriate actions within their everyday lives.

Taken together, these findings indicate that adre-mediated family engagement is not merely a mechanism for delivering health information but a relationship-building process that supports trust, behavioural adaptation, and continued connection with health services. The success of community-based stunting prevention efforts may therefore depend not only on what information is delivered, but also on how relationships are established and maintained between cadres and families. Strengthening cadres' interpersonal communication skills, home-visiting capacity, and culturally responsive approaches may consequently enhance the effectiveness of family accompaniment programs in stunting prevention.

Community Systems Supporting Stunting Prevention

The findings of this study highlight that effective stunting prevention is not solely dependent on individual cadres or families but is supported by a broader community and primary health system involving healthcare providers, community leaders, government institutions, and community-based health programs. Participants consistently emphasized the importance of collaboration between cadres, healthcare workers, Posyandu services, community leaders, and local government stakeholders in facilitating family engagement and access to maternal and child health services. These findings suggest that stunting prevention operates as a collective community effort in which multiple actors contribute to supporting family health, nutrition, and child development.

The present findings are consistent with evidence demonstrating that community-based health interventions are most effective when embedded within supportive health and social systems. Horwood et al. (2017) reported that community health worker programs achieved better maternal and child health outcomes when supported by structured supervision, mentoring, and integration with primary healthcare services.[38] Mediani et al. (2020) emphasized that community health workers function most effectively when they operate as part of an integrated health system that facilitates communication between households and formal healthcare providers. In the Indonesian context, Posyandu remains a critical platform for stunting prevention, with health cadres serving as key actors in growth monitoring, nutrition education, referral services, and community mobilization.[47] These findings support the experiences of participants in the present study, who described cadres as working collaboratively with health centres and community stakeholders to identify problems, monitor child growth, and facilitate access to health services. This collaborative position places cadres at an

important interface between households and primary maternal and child health services, allowing them to extend the reach of formal health services into community settings.

An important finding of this study is that community support extended beyond the health sector alone. Participants described how community leaders, local organizations, and family networks contributed to the implementation of stunting prevention activities by encouraging participation in Posyandu services, disseminating health information, and supporting community mobilization efforts. This finding aligns with community empowerment theory, which emphasizes that sustainable health improvement requires active participation, local leadership, collective problem-solving, and community ownership of health initiatives.[42,43] From this perspective, cadres function as community mediators within a broader community ecosystem that supports their ability to engage families and facilitate connections with maternal and child health services.

Despite the presence of supportive systems, participants also identified multiple barriers that constrained accompaniment activities. These included limited family participation, economic hardship, competing caregiving responsibilities, low paternal involvement, and persistent socio-cultural beliefs that sometimes conflicted with health recommendations. Similar challenges have been reported in community-based nutrition programs, where the effectiveness of interventions is often influenced by contextual realities, implementation capacity, and community readiness for change. Juarez et al. (2021) emphasized that successful stunting reduction programs require not only evidence-based interventions but also adaptive implementation strategies, supportive supervision, continuous performance monitoring, and meaningful community engagement. Their findings demonstrated that strengthening frontline support systems significantly improved the delivery of nutrition interventions and child health outcomes. These observations highlight the importance of strengthening both structural and community-level support mechanisms that enable cadres to maintain effective engagement with families and link them with appropriate health service.[37]

Another important implication of the present findings concerns the need to strengthen the capacity and support systems surrounding community health cadres. While cadres play a critical role in family accompaniment, their effectiveness depends on access to training, supervision, resources, and institutional support. Previous studies have shown that continuous capacity-building initiatives improve cadres' competencies and strengthen their contributions to community health services.[48] Similarly, empowerment programs have been shown to enhance cadres' knowledge, motivation, and performance in supporting Posyandu-based stunting prevention activities.[47] In addition, current policy discussions in Indonesia increasingly recognize cadres as integral components of the national health system and emphasize the need for competency development, performance monitoring, retention strategies, and adequate support mechanisms to sustain their contributions.[49] Therefore, investments in cadre development should be viewed as investments in community health systems more broadly.

Taken together, these findings indicate that stunting prevention is best understood as a community system process rather than an individual-level intervention. The effectiveness of family accompaniment depends on the interaction between cadres, families, healthcare services, community leadership, and local institutions. Strengthening collaboration, supervision, capacity building, and community participation may enhance the sustainability and effectiveness of community-based stunting prevention programs while ensuring that interventions remain responsive to local needs and socio-cultural contexts.

The findings have implications for strengthening community-based maternal and child health services. Community health cadres can serve as an important link between families and primary health services, particularly through home visits, continuous communication, and referral or linkage with healthcare providers. Strengthening cadre capacity, supervision, communication skills, and practical guidance for home-based activities may enable cadres to function more effectively as community mediators and extend the reach of maternal and child health services to families at risk of stunting.

Limitations

The study was conducted in selected stunting-priority areas within a single district, which may limit the transferability of the findings to other geographical and cultural settings. The findings are based on participants' experiences and perceptions and therefore may not fully capture all dimensions of cadre accompaniment practices. In addition, this study focused on understanding accompaniment processes rather than evaluating the effectiveness of specific interventions or measuring changes in stunting outcomes. Future research may benefit from examining how cadre accompaniment models that strengthen the role of community health cadres as community mediators can be implemented and evaluated across different settings using mixed-methods or intervention designs.

Conclusion

This study demonstrates that community health cadres function as community mediators in supporting families at risk of stunting within socio-cultural contexts. Beyond their functions as health educators, cadres act as community mediators who facilitate communication, build trust, strengthen family engagement, and connect households with health services and community resources. The findings further indicate that the success of family accompaniment is influenced by socio-cultural factors, adaptive communication practices, relationship-centred interactions, and supportive community systems. Effective stunting prevention therefore requires approaches that extend beyond nutritional interventions and acknowledge the social and cultural realities that shape family behaviours and decision-making processes. Strengthening cadre capacity, culturally responsive accompaniment strategies, and community-based support systems may enhance the effectiveness of stunting prevention efforts. These findings provide an empirical basis for the future development of a locally contextualized cadre accompaniment model that strengthens the role of community health cadres as community mediators in supporting families at risk of stunting.

Abbreviations

There are no abbreviations used in this article.

Declarations

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Health Research Ethics Committee of Universitas Padjadjaran, Indonesia (Approval No. 1074/UN6.KEP/EC/2025)

Consent for Publication

Not applicable

Availability of data and materials

Research data are not publicly available due to privacy and ethical restrictions.

Competing Interest

The authors declare no competing interests

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Figures

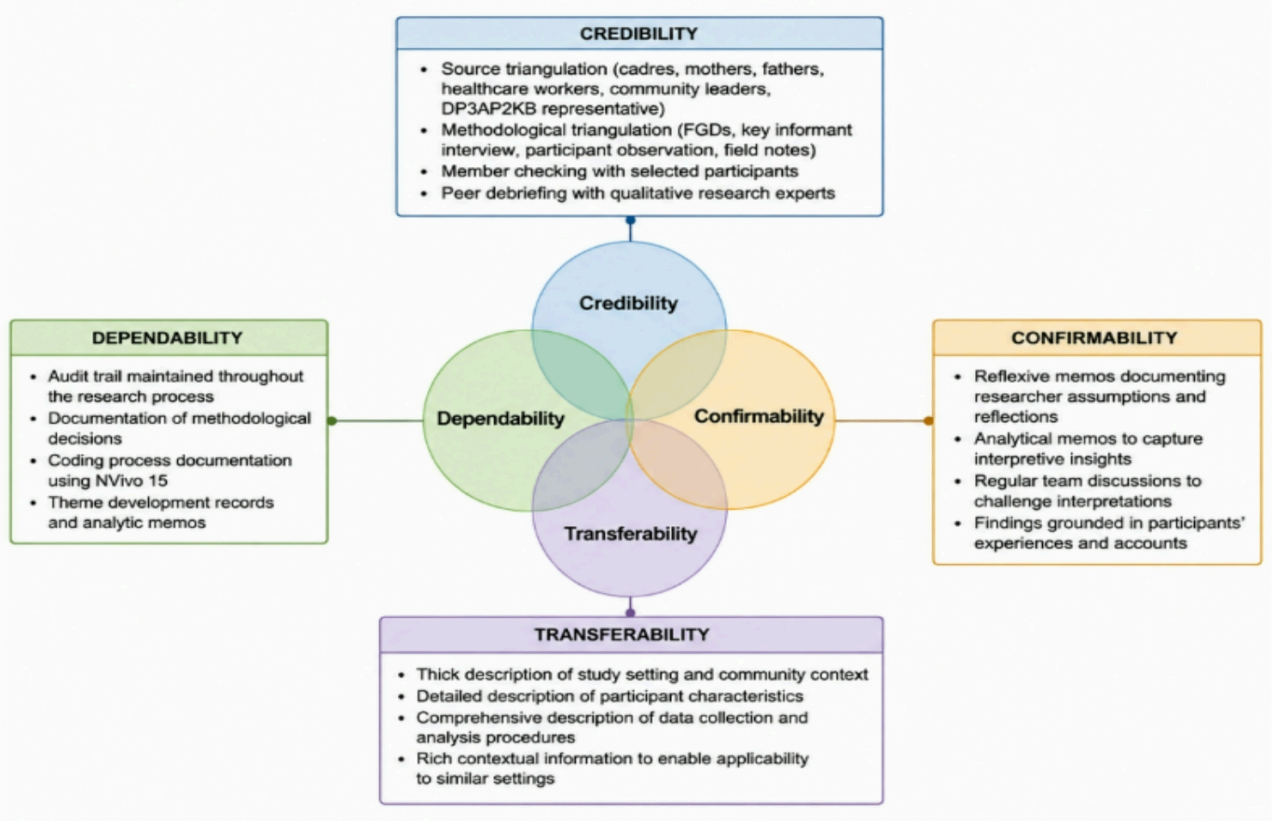


Figure 1

Strategies to Ensure Trustworthiness Throughout the Qualitative Research Process

Supplementary Files

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