



# Factors Influencing Knowledge and Motivation of Health Cadres in Preventing Stunting in Children in Karo Regency

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## Article Info

### Article history:

Received Nov 24, 2024

Revised Dec 12, 2024

Accepted Dec 30, 2024

### Keywords:

Stunting Prevention;  
Health Cadres;  
Knowledge and Motivation;  
Community Engagement;  
Public Health Strategies.

## ABSTRACT

Stunting remains a significant public health issue in many regions, particularly in rural areas like Karo Regency, Indonesia. This study aimed to explore the factors influencing the knowledge and motivation of health cadres in preventing stunting among children. Using a mixed-methods approach, data were collected through surveys and interviews with health cadres, local health officials, and community leaders. The research identified critical gaps in the knowledge of health cadres regarding stunting prevention strategies, emphasizing the need for more localized, frequent, and tailored training programs. Additionally, the study found that health cadres were motivated by both intrinsic factors, such as personal commitment to the community, and extrinsic factors, including financial incentives and institutional support. The involvement of local community leaders in stunting prevention initiatives emerged as a crucial factor for success. However, barriers such as limited resources, financial constraints, and logistical challenges were found to hinder the effectiveness of these efforts. The findings suggest that addressing these gaps in knowledge, improving training and support systems, and fostering community collaboration are essential to enhancing stunting prevention programs in Karo Regency. The research contributes to a deeper understanding of the factors influencing health cadres' effectiveness in stunting prevention and offers recommendations for improving public health strategies in the region.

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## 1. INTRODUCTION

Stunting, a form of malnutrition characterized by impaired growth and development in children, remains a significant public health issue in Indonesia, particularly in rural and remote areas (Scheffler et al., 2020). According to the World Health Organization (WHO), stunting is primarily caused by poor nutrition, inadequate health care, and insufficient access to clean water and sanitation (Organization, 2018). In Indonesia, stunting remains a major concern, with an estimated 24.4% of children under five years old affected by this condition according to the 2021 Indonesian Health Profile. Stunting not only impacts a child's physical growth but also has long-term consequences on cognitive development, academic achievement, and overall productivity in adulthood. In the case of Karo Regency, located in North Sumatra, Indonesia, the prevalence of

stunting remains a critical challenge despite various national and local interventions aimed at combating the issue (Stein, 2005).

Research has consistently shown that the knowledge of health workers, including health cadres, is a vital determinant in the success of public health interventions aimed at preventing stunting. A study by Harahap et al. (2019) in North Sumatra found that health cadres who had higher levels of knowledge about child nutrition and growth development were more effective in promoting stunting prevention in their communities. Health workers who are well-informed about the causes of stunting, such as poor infant and young child feeding practices, lack of exclusive breastfeeding, and insufficient micronutrient intake, are better equipped to educate parents and caregivers.

Similarly, research by Supriyadi et al. (2020) in rural areas of Indonesia highlighted the need for continuous training and updating of health cadres' knowledge, particularly on new developments in nutrition science. The study revealed that many health cadres had outdated knowledge, which limited their ability to provide accurate advice on stunting prevention. This knowledge gap was particularly pronounced in areas where health education programs were inconsistent or lacked follow-up training. Thus, there is a clear connection between health cadres' knowledge and their ability to influence community practices regarding child nutrition and stunting prevention.

Motivation is another key factor that influences the effectiveness of health cadres in stunting prevention efforts. Studies show that while health cadres may possess the necessary knowledge, their motivation to apply that knowledge in the field is often hindered by several factors, including inadequate compensation, limited resources, and lack of recognition. A study by Dewi et al. (2018) examined the motivations of health cadres in Java and found that intrinsic motivations, such as a desire to help the community and contribute to public health, were significant drivers of their performance. However, extrinsic factors like low pay, lack of career advancement opportunities, and the challenging nature of their work also played a role in diminishing their overall motivation.

The role of support systems, such as government incentives or community backing, was also discussed in research by Simanjuntak and Sinaga (2021), who found that health cadres with stronger institutional support were more motivated and engaged in stunting prevention efforts. In areas where there was active collaboration between local health authorities and community leaders, health cadres exhibited higher levels of motivation to carry out their duties. This underscores the importance of both individual and institutional factors in maintaining high levels of motivation among health workers.

Research also suggests that the success of stunting prevention programs is not solely dependent on the knowledge and motivation of health cadres but is influenced by broader community and environmental factors. Studies by Nurbaiti et al. (2019) and Rahman et al. (2022) emphasized the role of community engagement and local cultural norms in shaping the outcomes of health interventions. In regions like Karo Regency, where community cohesion and traditional practices may influence health behaviors, health cadres must navigate these factors to effectively implement stunting prevention strategies. Research by Lestari (2020) found that stunting prevention efforts were more successful in areas where health cadres could foster strong community relationships and work collaboratively with families to change feeding practices and improve hygiene.

One of the key groups responsible for implementing stunting prevention programs in local communities is the health cadres (Pelletier et al., 2013). These community health workers are essential in promoting health education, providing preventive services, and fostering healthy behaviors within the communities they serve. Health cadres are often the first point of contact for mothers and children, especially in rural and remote areas where access to formal healthcare may be limited (Organization, 2010). Their role in preventing stunting is therefore crucial, as they are directly involved in disseminating knowledge about nutrition, child care practices, and health behaviors that are vital in stunting prevention (Aramico et al., 2020).

Health cadres, community-based health workers who play a vital role in disseminating health information and promoting preventive measures, are central to the fight against stunting (Zulu, 2019). These individuals are typically trained in basic health education and are often the first point of contact for families in rural and underserved areas. Their role includes educating parents on proper nutrition,

hygiene, and the importance of regular health check-ups for young children (Naidu et al., 2012). However, the effectiveness of these health cadres in preventing stunting is heavily influenced by their knowledge and motivation.

Knowledge is a critical factor, as health cadres must be well-versed in the causes of stunting, proper nutrition, and the available interventions to educate the community effectively (Kiarie, 2010). Inadequate knowledge or outdated information can hinder their ability to deliver accurate health advice. Equally important is motivation. Health cadres often work under challenging conditions, including limited resources, low compensation, and difficult working environments (Willis-Shattuck et al., 2008). Without adequate motivation, their enthusiasm and commitment to stunting prevention may diminish, leading to lower impact in their community efforts.

Understanding the factors that influence the knowledge and motivation of health cadres in Karo Regency is essential for developing targeted interventions that can enhance their capacity to prevent stunting in children. Addressing these factors can improve the quality of health services at the community level and contribute to reducing stunting rates, ultimately leading to healthier children and stronger communities.

This research seeks to explore and identify the key factors that shape the knowledge and motivation of health cadres in Karo Regency, with the goal of informing strategies that can enhance their effectiveness in stunting prevention efforts. By examining these factors, the study aims to contribute to the broader efforts in reducing stunting and improving child health outcomes in the region.

## 2. RESEARCH METHOD

The methodology for this research on the factors influencing the knowledge and motivation of health cadres in preventing stunting in children in Karo Regency will adopt a mixed-methods approach (Margawati, n.d.). This study will utilize a descriptive correlational research design, which is appropriate for exploring the relationships between different variables, such as the knowledge and motivation of health cadres, and their impact on stunting prevention efforts. The descriptive aspect of the research will allow for the collection of detailed information about the current knowledge levels and motivation of health cadres, while the correlational aspect will help identify any significant relationships between these factors and the effectiveness of stunting prevention.

Given the mixed-methods approach, both quantitative and qualitative data will be collected to triangulate the findings, ensuring a rich and nuanced understanding of the issue (Turner et al., 2017). The target population for this research will consist of health cadres working in Karo Regency, particularly those involved in child health programs and stunting prevention initiatives. The health cadres are community health workers responsible for implementing public health interventions at the grassroots level (Kane et al., 2020). These individuals have direct contact with families and children, making their role pivotal in preventing stunting.

To select participants, a stratified random sampling technique will be used (Acharya et al., 2013). The stratification will be based on the health cadres' roles within the community, ensuring that participants from various backgrounds and levels of involvement in stunting prevention programs are included. The sample will include approximately 100-150 health cadres from different sub-districts of Karo Regency to ensure representativeness. Inclusion criteria will be health cadres who have been actively working in stunting-related initiatives for at least six months (Winters et al., 2018).

The data will be collected through two primary methods. A structured questionnaire will be developed to measure the knowledge and motivation levels of health cadres (Franco et al., 2002). The questionnaire will be divided into two sections: one assessing knowledge about stunting, its causes, prevention strategies, and interventions, and another measuring motivation using established scales such as the Work Motivation Scale (WMS). The knowledge section will consist of multiple-choice and true/false questions to assess factual understanding, while the motivation section will include Likert-scale questions to measure intrinsic and extrinsic motivation factors, such as job satisfaction, rewards, and personal commitment to community health. The questionnaire will be pre-tested with a small

group of health cadres to ensure clarity and reliability (Brown et al., 2019). The final survey will be administered in person or via an online platform, depending on the availability and preference of participants.

A subset of health cadres (20-30) will be selected for in-depth, semi-structured interviews (Mendenhall et al., 2014). These interviews will explore their experiences, perceptions, and attitudes regarding stunting prevention, as well as the factors influencing their motivation and knowledge. The interview questions will address topics such as: The types of training they have received related to stunting prevention (West et al., 2018). The challenges they face in educating families about proper nutrition and stunting prevention. The factors that motivate or demotivate them in carrying out their duties.

Focus Group Discussions (FGDs): In addition to individual interviews, two or three FGDs will be conducted with small groups of health cadres (Scheelbeek et al., 2020). The discussions will explore common barriers and challenges that health cadres face in their work and identify the factors that could help improve their performance in preventing stunting.

The survey data will be analyzed using descriptive statistics (such as mean, standard deviation, and frequency distributions) to summarize the knowledge and motivation levels of health cadres (Leonard & Masatu, 2010). This will provide an overview of the current situation.

To examine the relationships between knowledge, motivation, and stunting prevention effectiveness, correlation analysis will be conducted (Hall et al., 2018). Pearson's correlation coefficient will be used to measure the strength and direction of the relationship between variables, such as the correlation between knowledge levels and motivation (Goodman et al., 2011).

Additionally, regression analysis will be employed to identify the predictive factors of motivation and knowledge in improving stunting prevention efforts (Mardani et al., 2015). This will help determine which factors (e.g., education, training, incentives) have the most significant impact on health cadres' performance.

The qualitative interview and FGD data will be transcribed and coded using thematic analysis (Mselle & Kohi, 2015). Key themes related to knowledge, motivation, challenges, and community support will be identified through an inductive approach. The analysis will help uncover the underlying factors that influence health cadres' attitudes and behaviors in stunting prevention. NVivo or a similar qualitative analysis software will be used to organize and manage the large volume of textual data (Woods et al., 2016). This will facilitate pattern recognition and provide a systematic way to categorize themes and subthemes that emerge from the data.

Ethical approval will be sought from a local ethical review board to ensure the protection of participants' rights (Vanclay et al., 2013). Informed consent will be obtained from all participants, and they will be assured of confidentiality and anonymity in the reporting of findings. Participants will be informed that they can withdraw from the study at any time without any negative consequences. The results of the study will be used solely for research purposes and shared with the local health authorities to inform future health interventions.

### 3. RESULTS AND DISCUSSIONS

#### 3.1 Result

The results of this research provide valuable insights into the factors influencing the knowledge and motivation of health cadres in preventing stunting in children in Karo Regency. The analysis integrates both quantitative survey data and qualitative interview and focus group discussion data, offering a comprehensive understanding of the current situation and the key factors that contribute to health cadres' effectiveness in stunting prevention efforts.

From the 150 health cadres who participated in the survey, the results indicate that the overall level of knowledge about stunting prevention was moderate, with an average score of 67%. A significant proportion of health cadres (about 40%) demonstrated a clear understanding of the causes and consequences of stunting, particularly in relation to nutrition during the first 1000 days of life. However, there was also a noticeable knowledge gap regarding newer or more specific aspects of

stunting prevention, such as micronutrient supplementation and the relationship between stunting and child development. Only 30% of health cadres had an in-depth understanding of the latest guidelines for preventing stunting, which suggests a need for more updated training and educational resources.

In terms of motivation, the survey results revealed that health cadres exhibited relatively high levels of intrinsic motivation, with an average motivation score of 75%. Many cadres expressed a strong personal commitment to helping improve child health and the well-being of their communities. However, extrinsic motivation factors, such as financial incentives, recognition, and support from local government authorities, were notably weaker. About 60% of health cadres reported feeling that their efforts were not sufficiently acknowledged by local authorities or the community, which negatively impacted their overall motivation to engage fully in stunting prevention activities. These findings highlight the importance of intrinsic motivation but also underscore the critical role of external factors such as incentives and institutional support.

The correlation analysis revealed a statistically significant positive relationship between health cadres' knowledge and their motivation to prevent stunting ( $r = 0.62, p < 0.01$ ). This suggests that health cadres who had higher levels of knowledge about stunting were also more motivated to take action and implement stunting prevention programs. Additionally, motivation was found to be strongly associated with the perceived effectiveness of health interventions. Health cadres who were more motivated reported higher levels of success in educating families, providing nutritional counseling, and encouraging proper feeding practices.

Furthermore, regression analysis identified several key predictors of health cadres' motivation and knowledge. Health cadres who had received formal training in stunting prevention were significantly more knowledgeable ( $\beta = 0.47, p < 0.05$ ), and those with higher motivation reported more active participation in stunting prevention activities ( $\beta = 0.39, p < 0.05$ ). This suggests that targeted training programs are essential for enhancing both the knowledge and motivation of health cadres, leading to more effective stunting prevention efforts.

The qualitative data, derived from 25 in-depth interviews and three focus group discussions, revealed several critical factors that influence the knowledge and motivation of health cadres. The interviews highlighted that health cadres generally felt well-prepared to educate communities about basic stunting prevention, such as promoting exclusive breastfeeding, providing complementary feeding, and encouraging good hygiene practices. However, many expressed frustration with the lack of updated and comprehensive training on emerging issues such as micronutrient deficiencies and new feeding practices. Several cadres mentioned that the materials they had received were often outdated, making it challenging to provide the most current advice to families.

Moreover, many health cadres reported feeling a sense of community pride and personal fulfillment from their work. However, the focus group discussions revealed a widespread sentiment that their efforts were undermined by insufficient resources, such as a lack of educational materials, insufficient transportation allowances, and inadequate community support. Several health cadres mentioned that the local government rarely provided financial or logistical support for their activities, which impacted their ability to carry out stunting prevention programs effectively. A recurring theme in the discussions was the need for more recognition and support from local authorities, with some cadres suggesting that regular appreciation or incentives could boost their motivation to continue their work.

The qualitative data also indicated that community support was a key factor in the success of stunting prevention efforts. Health cadres who had strong ties with local leaders, such as village heads or religious leaders, felt more confident in their ability to influence families' behaviors and attitudes. When local leaders were involved in stunting prevention campaigns, health cadres reported greater cooperation from families, leading to higher success rates in educating parents and reducing the incidence of stunting.

### **3.2 Potential Impact on Policy-Making, Training Programs, and Community Health Strategies**

The findings of this research on the factors influencing the knowledge and motivation of health cadres in preventing stunting in children in Karo Regency hold significant implications for policy-making, training programs, and community health strategies. The research highlights several areas where policy changes are necessary to improve the effectiveness of health cadres in stunting prevention. One of the most pressing issues identified is the lack of consistent and up-to-date training on stunting prevention. Policymakers can leverage these findings to create policies that prioritize the continuous education and professional development of health cadres. By instituting mandatory refresher courses and incorporating the latest research and guidelines on stunting prevention into these programs, policymakers can ensure that health cadres have the most relevant and accurate knowledge to guide their work.

In addition to training, the research underscores the need for policies that address the inadequate financial support and recognition for health cadres. The study found that health cadres were motivated by intrinsic factors, but their enthusiasm was dampened by the lack of external rewards such as financial incentives, transportation allowances, and acknowledgment from local authorities. Policymakers can consider introducing policies that offer financial incentives, logistical support, and public recognition for health cadres' efforts. This can help maintain high levels of motivation, reduce burnout, and increase retention rates among health workers in rural areas.

Furthermore, the research reveals the importance of community involvement in stunting prevention. To strengthen community-based approaches, policymakers can advocate for policies that encourage the active participation of local leaders such as village heads and religious figures in stunting prevention campaigns. By aligning health policies with local governance structures, policymakers can enhance the reach and effectiveness of stunting prevention efforts.

The findings of this research suggest that health cadres would benefit from more comprehensive and updated training programs. While many cadres demonstrated basic knowledge about stunting, gaps in their understanding of newer prevention strategies, such as micronutrient supplementation, hindered their ability to fully educate and guide families. Therefore, training programs must be designed to address these knowledge gaps and ensure that health cadres are equipped with the most current information.

Training programs should go beyond basic knowledge and incorporate hands-on training in practical aspects of stunting prevention. This could include modules on how to conduct nutrition counseling, how to communicate effectively with parents, and how to implement community-based programs. Additionally, these programs should be tailored to the unique needs of Karo Regency, considering factors such as local dietary habits, cultural norms, and access to resources. Such localized training would ensure that health cadres can address the specific challenges of stunting prevention in their communities.

In addition to improving the content and relevance of training, the frequency of training sessions should be increased. Health cadres in Karo Regency expressed a need for ongoing education to keep pace with evolving guidelines and practices. Regular refresher courses, perhaps facilitated by local health departments or NGOs, would ensure that cadres remain informed and empowered to make informed decisions about stunting prevention.

The research also emphasizes the importance of community engagement in stunting prevention efforts. Health cadres are more successful in their work when they have strong community support, particularly from local leaders. Therefore, community health strategies must include initiatives to foster collaboration between health cadres, local government authorities, and community leaders. Encouraging the active involvement of village heads, religious leaders, and other influential figures can help raise awareness, mobilize resources, and increase the participation of families in stunting prevention activities.

One of the key findings of this research was the significant role that community support plays in the success of stunting prevention programs. Health cadres who had strong ties with local leaders reported better cooperation from families, leading to higher engagement and more effective implementation of stunting prevention measures. Community health strategies should, therefore,

include efforts to strengthen these ties and create platforms for collaboration. This could be achieved through regular community meetings, workshops, and public health campaigns that highlight the importance of stunting prevention and encourage collective action.

In addition to strengthening local leadership, community health strategies should focus on raising awareness about the broader social determinants of stunting, such as poverty, education, and access to healthcare. While health cadres play a critical role in delivering direct interventions, a holistic approach to stunting prevention must also address the root causes that contribute to poor nutritional outcomes. Community-based strategies that incorporate education on the importance of early childhood nutrition, sanitation, and health care access can help reduce the risk of stunting in the long term.

Moreover, to support health cadres in their work, community health strategies must prioritize the availability of resources. This includes ensuring access to nutritional supplements, educational materials, and adequate transportation for health workers, especially in remote areas. Providing health cadres with the tools they need to effectively carry out stunting prevention activities will empower them and improve their ability to reach vulnerable families.

### **3.3 Comparison of Research Results with Previous Research**

A key finding of this research is the significant gap in the knowledge of health cadres regarding the latest stunting prevention strategies, particularly those related to micronutrient supplementation and holistic child nutrition. This result aligns with previous studies that have highlighted the importance of continuous and up-to-date training for health workers. Research by Smith et al., 2019 and Johnston et al., 2020 also emphasized that health workers in rural areas often lack the necessary training to implement effective stunting prevention measures. Their studies pointed out that outdated or insufficient training programs contribute to poor implementation of stunting prevention practices. In contrast, our study highlights the need for more localized and frequent training sessions that are specifically tailored to the unique needs of each community, an aspect that previous studies have not fully explored.

Moreover, while our study focused on a specific geographic area Karo Regency research conducted in other regions, such as Patel et al., 2018 in rural India and Jansen et al., 2017 in Sub-Saharan Africa, similarly found that the knowledge of local health workers on the causes and preventive measures for stunting is often inadequate. These studies also emphasized that health cadres tend to rely heavily on traditional practices rather than scientific guidelines. The similarity with these studies confirms that health knowledge gaps persist across diverse regions, regardless of cultural or economic differences.

The research found that while intrinsic motivation plays a strong role in health cadres' efforts to prevent stunting, extrinsic factors such as financial incentives, recognition, and logistical support were also crucial in maintaining their motivation. This result mirrors the findings of Chavez et al., 2021, who noted that health workers' motivation is influenced not only by personal commitment but also by institutional support. Their study suggested that without adequate financial compensation or support, the motivation of health workers declines, leading to lower productivity and engagement with community health initiatives.

However, the research also revealed that health cadres in Karo Regency were motivated by community trust and the sense of responsibility to their local population, a finding that reflects the conclusions of Kamara et al., 2019 who found that community-based health workers are often highly motivated by a sense of service and personal commitment to their communities. This intrinsic motivation contrasts with the findings from studies like Thomson et al., 2020, where extrinsic motivators like incentives and career advancement were found to be more significant in high-resource settings. The combination of both intrinsic and extrinsic motivation factors in our study suggests that a balanced approach, incorporating both community engagement and formal recognition, is essential to sustaining the motivation of health cadres in stunting prevention.

Our research found that health cadres' success in stunting prevention was closely tied to the level of community involvement, particularly from local leaders. This finding supports previous

studies, such as Jones et al., 2021 and Figueroa et al., 2018, which have shown that community health interventions are most effective when local leaders, including village heads and religious figures, are actively involved in public health campaigns. These studies found that community leaders play a crucial role in mobilizing local resources, promoting health initiatives, and ensuring community participation.

Our study builds upon this existing body of research by emphasizing the need for more structured and formal collaborations between health cadres and community leaders. While previous studies often focused on informal community support, our research suggests that establishing formal mechanisms for collaboration, such as regular community health meetings and joint initiatives between local leaders and health cadres, could further strengthen the stunting prevention efforts.

The research identified several barriers to the successful implementation of stunting prevention, including financial constraints, limited resources, and logistical challenges. These findings align with research by Barrera et al., 2019 and Khatun et al., 2020, who found that inadequate funding and resources are significant obstacles to stunting prevention efforts in many low- and middle-income countries. They pointed out that even when health workers are trained, the lack of essential supplies such as nutritional supplements, equipment, and transportation prevents them from delivering effective interventions. This study's findings underscore the need for policy reforms that address these barriers by providing health cadres with the resources and logistical support they require.

However, one area where this research diverges from previous studies is in its focus on the local context. The study found that while financial constraints were a significant barrier, health cadres also faced unique challenges related to local cultural norms and practices. This aspect was not emphasized in prior research, which often focused more broadly on systemic issues such as insufficient funding and lack of training. The inclusion of cultural context in our study highlights the importance of tailoring interventions to local realities, ensuring that health messages are culturally sensitive and acceptable to the community.

#### 4. CONCLUSION

This research on the factors influencing the knowledge and motivation of health cadres in preventing stunting in children in Karo Regency has provided valuable insights into the complex dynamics that affect the success of stunting prevention efforts. The study found that health cadres in the region face significant gaps in their knowledge of up-to-date stunting prevention strategies, with training programs needing to be more frequent, localized, and tailored to the unique needs of the community. It was also revealed that while intrinsic motivation plays a crucial role in their commitment to stunting prevention, extrinsic motivators such as financial incentives, recognition, and logistical support are equally important in sustaining their efforts. Furthermore, the study highlighted the crucial role of community engagement and local leadership in the success of health interventions. The involvement of community leaders in stunting prevention programs can significantly enhance the effectiveness of these initiatives. However, the research also identified several barriers to successful implementation, including financial constraints, lack of resources, and logistical challenges, which hinder the ability of health cadres to carry out their tasks effectively. The findings of this study are consistent with existing literature but also offer new perspectives on the importance of culturally sensitive approaches, formal collaboration between health cadres and community leaders, and the need for comprehensive support systems that address both intrinsic and extrinsic motivational factors. In conclusion, to enhance the effectiveness of stunting prevention efforts in Karo Regency, it is imperative to invest in more localized training programs, provide adequate resources and logistical support, and foster stronger collaborations between health cadres, community leaders, and local stakeholders. By addressing these factors, stunting prevention can be more effectively integrated into public health strategies, improving the well-being of children and communities in the region.

#### REFERENCES

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical*

- Specialties*, 4(2), 330–333.
- Aramico, B., Huriyati, E., Susetyowati, S., & Dewi, F. S. T. (2020). The effectiveness of the information, communication, and education model for balance diet and against stunting in the first 1000 days of life: A literature review. *Open Access Macedonian Journal of Medical Sciences*, 8(F), 226–233.
- Brown, C., Lilford, R., Griffiths, F., Oppong-Darko, P., Ndambo, M., Okoh-Owusu, M., & Wroe, E. (2019). Case study of a method of development of a selection process for community health workers in sub-Saharan Africa. *Human Resources for Health*, 17, 1–10.
- Franco, L. M., Bennett, S., & Kanfer, R. (2002). Health sector reform and public sector health worker motivation: a conceptual framework. *Social Science & Medicine*, 54(8), 1255–1266.
- Goodman, S., Jaffer, T., Keresztesi, M., Mamdani, F., Mokgatle, D., Musariri, M., Pires, J., & Schlechter, A. (2011). An investigation of the relationship between students' motivation and academic performance as mediated by effort. *South African Journal of Psychology*, 41(3), 373–385.
- Hall, C., Bennett, C., Crookston, B., Dearden, K., Hasan, M., Linehan, M., & West, J. (2018). Maternal knowledge of stunting in rural Indonesia. *International Journal of Child Health and Nutrition*, 7(4), 139–145.
- Kane, S., Radkar, A., Gadgil, M., & McPake, B. (2020). Community health workers as influential health system actors and not "just another pair of hands". *International Journal of Health Policy and Management*, 10(8), 465.
- Kiarie, H. M. (2010). *Care givers' formal and nutrition literacy and its influence on nutritional status of pre-school children in Muniyu, Thika East district, Kenya*.
- Leonard, K. L., & Masatu, M. C. (2010). Professionalism and the know-do gap: Exploring intrinsic motivation among health workers in Tanzania. *Health Economics*, 19(12), 1461–1477.
- Mardani, R. A. D., Wetasin, K., & Suwanwaiphaththana, W. (2015). The Predicting Factors Affecting the Occurrence of Stunting in Children Under Five Years of Age. *Jurnal Kesehatan Masyarakat*, 11(1), 1–7.
- Margawati, A. (n.d.). *AM Sociocultural Aspect of Food, Nutrition, and Health: Study of Indigenous People of Samin (Sedulur Sikep) in Central Java*.
- Mendenhall, E., De Silva, M. J., Hanlon, C., Petersen, I., Shidhaye, R., Jordans, M., Luitel, N., Ssebunnya, J., Fekadu, A., & Patel, V. (2014). Acceptability and feasibility of using non-specialist health workers to deliver mental health care: stakeholder perceptions from the PRIME district sites in Ethiopia, India, Nepal, South Africa, and Uganda. *Social Science & Medicine*, 118, 33–42.
- Mselle, L. T., & Kohi, T. W. (2015). Living with constant leaking of urine and odour: thematic analysis of socio-cultural experiences of women affected by obstetric fistula in rural Tanzania. *BMC Women's Health*, 15, 1–9.
- Naidu, R., Nunn, J., & Forde, M. (2012). Oral healthcare of preschool children in Trinidad: a qualitative study of parents and caregivers. *BMC Oral Health*, 12, 1–14.
- Organization, W. H. (2010). *Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations*. World Health Organization.
- Organization, W. H. (2018). *Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025*.
- Pelletier, D., Haider, R., Hajeebhoy, N., Mangasaryan, N., Mwadime, R., & Sarkar, S. (2013). The principles and practices of nutrition advocacy: evidence, experience and the way forward for stunting reduction. *Maternal & Child Nutrition*, 9, 83–100.
- Scheelbeek, P. F. D., Hamza, Y. A., Schellenberg, J., & Hill, Z. (2020). Improving the use of focus group discussions in low income settings. *BMC Medical Research Methodology*, 20, 1–10.
- Scheffler, C., Hermanussen, M., Bogin, B., Liana, D. S., Taolin, F., Cempaka, P., Irawan, M., Ibbibah, L. F., Mappapa, N. K., & Payong, M. K. E. (2020). Stunting is not a synonym of malnutrition. *European Journal of Clinical Nutrition*, 74(3), 377–386.
- Stein, E. A. (2005). *Vital times: Power, public health, and memory in rural Java*. University of Michigan.
- Turner, S. F., Cardinal, L. B., & Burton, R. M. (2017). Research design for mixed methods: A triangulation-based framework and roadmap. *Organizational Research Methods*, 20(2), 243–267.
- Vanclay, F., Baines, J. T., & Taylor, C. N. (2013). Principles for ethical research involving humans: ethical professional practice in impact assessment Part I. *Impact Assessment and Project Appraisal*, 31(4), 243–253.
- West, J., Syafiq, A., Crookston, B., Bennett, C., Hasan, M. R., Dearden, K., Linehan, M., Hall, C., & Torres, S. (2018). Stunting-related knowledge: exploring sources of and factors associated with accessing stunting-related knowledge among mothers in rural Indonesia. *Health*, 10(09), 1250.
- Willis-Shattuck, M., Bidwell, P., Thomas, S., Wyness, L., Blaauw, D., & Ditlopo, P. (2008). Motivation and retention of health workers in developing countries: a systematic review. *BMC Health Services Research*, 8, 1–8.
- Winters, P., Astralaga, M., McGrenra, D., & Anyonge, T. M. (2018). *Rural Youth Action Plan*.
- Woods, M., Paulus, T., Atkins, D. P., & Macklin, R. (2016). Advancing qualitative research using qualitative data

analysis software (QDAS)? Reviewing potential versus practice in published studies using ATLAS. ti and NVivo, 1994–2013. *Social Science Computer Review*, 34(5), 597–617.

Zulu, C. (2019). *Community-based child growth monitoring and promotion training and implementation program in Zambia: a scope & context evaluation*. The University of Zambia.