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Determinants of the Implementation of the One House One Jumantik Movement for Dengue Vector Control at Kota Ende Health Center

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ABSTRACT

Background: Dengue fever is a public health issue in Ende Regency at Kota Ende Health Center, an endemic area. Since 2015, the *One House One Jumantik* movement empowers families, but low awareness and resources hinder implementation. Methods: A qualitative case study with a phenomenological approach from January to June 2025 with six purposively selected informants: technical officers, health center leaders, health office officials, three urban village head. Sample size was determined based on information power and theoretical saturation. Data were collected via observation, open interviews, and document review, then analyzed thematically. Triangulation of sources and techniques ensured validity. Ethical approval was obtained from Poltekkes Kemenkes Kupang (LB.02.03/1/0036/2025). Results: Implementers' positive understanding supports adoption of the One House One Jumantik program. Nonetheless, budget constraints, limited monitoring structures, weak cross-sector communication, and low community engagement reduce effectiveness. Strengthening coordination, providing training, and applying participatory approaches are key to improving sustainability. Conclusion: The implementation of the *One House, One Jumantik* movement at Kota Ende Health Center remains limited by resource shortages, organizational structure, and cross-sector coordination. Program effectiveness is affected by organizational capacity, communication, and resource distribution. Addressing these challenges requires concrete actions: conducting cadre training and establishing coordination forums at the Health Center level; providing technical guidance, supervision, and budget support at the District Health Office level; integrating formal policies, planning, and performance monitoring at the Regional Government level; and actively involving the community in inspections and mosquito surveillance.
Keywords: Determinants, Implementation, One House, Jumantik, Vector

INTRODUCTION

Dengue fever is a disease caused by a viral infection transmitted through the bites of *Aedes aegypti* and *Aedes albopictus* mosquitoes. This disease is now spreading rapidly worldwide, particularly in tropical and subtropical regions, and poses a serious challenge to global public health. In addition to transmitting the dengue virus, *Aedes* mosquitoes also play a role in spreading Zika, chikungunya, and yellow fever. (1)

Globally, dengue fever has reached a critical point, with over 14 million cases and more than 9,000 deaths reported in 2024, marking the highest figures in the history of disease reporting. This situation emphasizes the urgency of developing effective vaccines, innovative therapies, improved patient management, and strengthened vector control strategies.(2)

The incidence of dengue fever in Indonesia has increased rapidly over the past 45 years, with peak occurrences shifting from young children to older age groups. This age pattern shift should have implications for more targeted surveillance and prevention.(3) Based on available data, the incidence of dengue fever in Indonesia has gradually increased over the past five decades. The disease tends to occur in cyclical patterns, with incidence peaks approximately every six to eight years. Meanwhile, mortality due to dengue fever has decreased significantly, almost halving every ten year period since 1980.(4)

At the local level, Ende Regency is among the areas with high dengue fever cases, particularly at the Kota Ende Health Center, which consistently records the highest number of cases. In 2023, the case fatality rate (CFR) in this area rose to 3.5%.(5) This makes the Kota Ende Health Center an endemic area with cases occurring annually over the past three years.(6)

An important indicator in dengue control is the Larva Free Rate, which measures the percentage of households free from mosquito larvae. The national standard for Larva Free Rate is at least 95%, yet the achievement in this area has not met the target.(7) As an effort to strengthen community based prevention, the One House One Jumantik Movement was launched in 2015. This program empowers families to regularly monitor and eradicate mosquito larvae by implementing the 3M Plus Environmental Cleanliness Movement (PSN 3M Plus) through a socio cultural approach.(8)(9)

The One House One Jumantik Movement is part of public policy that requires intersectoral coordination, adequate resources, and effective administrative implementation. The policy implementation theory by Van Meter and Van Horn highlights six main factors influencing policy execution, which are relevant to this movement.(10)

Although formally regulated, the implementation of the One House One Jumantik Movement faces various challenges, such as limited community awareness and insufficient resources. Previous studies have identified

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several factors influencing the successful implementation of the One House One Jumantik Movement, including the absence of derivative regulations, low understanding among officers, suboptimal socialization activities, and limitations in resources and information clarity. However, the execution of this movement varies by region, particularly regarding the availability of resources, support from implementing organizations, and patterns of coordination among stakeholders (11)(12)(13)(14)

At the Kota Ende Health Center, preliminary study results indicate limited human resources, facilities, and infrastructure, as well as the absence of an official implementing organization for the Jumantik movement or the issuance of official decrees for officers at the urban village level. Additionally, coordination between the urban villages, the health center, and the assessment team has not been optimal, hindering the evaluation of the Larva Free Rate.

These conditions illustrate that the implementation of the One House One Jumantik Movement in the working area of the Kota Ende Health Center has unique characteristics and challenges that have not been thoroughly studied in previous research. Therefore, this study aims to analyze the factors influencing the implementation of the One House One Jumantik policy in the effort to control dengue vector mosquitoes in the Kota Ende Health Center area. This study provides a novel contribution to the literature by highlighting the factors influencing the implementation of the One House One Jumantik Movement in the context of urban health centers in Indonesia, using a phenomenological qualitative approach that has been rarely applied before

MATERIALS AND METHODS

This study was a qualitative case study with a phenomenological approach aimed at thoroughly exploring the implementation process of the One House One Jumantik Movement in the working area of the Kota Ende Health Center, Ende Regency, from January to June 2025.(15) Participant selection was conducted using purposive sampling based on strategic roles, namely individuals who were directly involved and had adequate understanding of infectious disease control policy and program implementation. Strategic roles were defined as positions or functions that allowed access to critical information, operational experience, and decision making related to the program under study.(16) Additionally, participants were selected based on the following criteria: a minimum of two years of experience and direct involvement in the implementation of the One House One Jumantik Movement, ensuring they could provide relevant and in depth insights into the factors influencing the movement's implementation.

Based on these criteria, six participants were selected, including: the Head of the Health Center as the program manager at the primary healthcare level; officials from the Ende District Health Office responsible for infectious disease control as policy makers at the district level; technical officers in disease control as program implementers in the field; and three urban village heads whose areas were the program sites. The selection of only three urban village heads was based on the geographic context of the Kota Ende Health Center, which serves only these three urban villages. Thus, these three urban village heads represented the entire Health Center service area, making the data comprehensive and representative.

Informant selection also considered information power and theoretical saturation. Informants were chosen based on their ability to provide rich, relevant, and in depth information related to the research topic. Theoretical saturation was reached when additional interviews no longer produced new themes, which in this study occurred after all urban village heads were interviewed. This approach ensured that informant selection emphasized data quality, depth, and relevance, supporting the validity and credibility of the thematic analysis.

All data collection was conducted directly by the researcher as the primary observer, using open ended interviews and document review as the main methods, supported by tools such as notebooks, voice recorders, and interaction guides (15). Data analysis employed an inductive thematic approach, allowing themes and categories to emerge directly from the field data without being influenced by pre existing theoretical frameworks. The analysis process focused on understanding the meanings and patterns contained in the experiences and perspectives of the informants.

Data analysis was conducted using an inductive–deductive approach, combining the emergence of themes from field data (inductive) with alignment of the findings to the components of the Van Meter and Van Horn framework (deductive). The analysis process involved several stages: transcription and repeated reading of interview data to gain a comprehensive understanding; coding of relevant data segments; grouping codes into categories and themes based on similarities in meaning and relationships among data; reviewing and refining themes by comparing findings with raw data to ensure consistency; and drawing conclusions and interpreting meanings to construct a framework that reflected the essence of the studied phenomenon.

All coding and analysis were performed manually without the use of qualitative data analysis software. To ensure accuracy and validity, coding was conducted independently by the research team members, then compared and discussed collaboratively to reach consensus on the most representative themes. The final themes were mapped onto the six dimensions of the Van Meter and Van Horn model policy standards and objectives, resources, interorganizational communication, implementer characteristics, social political conditions, and implementer disposition to provide a comprehensive understanding of the factors influencing policy implementation.

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Team involvement in the analysis process aimed to enhance credibility, reliability, and accuracy, while minimizing individual researcher bias. Consequently, this inductive and collaborative thematic analysis is expected to comprehensively depict the phenomenon based on empirical field data. Ethical approval for this study was obtained from Poltekkes Kemenkes Kupang (LB.02.03/1/0036/2025).

RESULTS

Characteristics of Research Informants

This study involved six informants who played strategic roles in the implementation of the One House One Jumantik Movement in the working area of the Kota Ende Health Center. Informants were purposively selected based on their direct involvement in the planning, implementation, and monitoring of the policy. They came from health personnel, structural officials of the health center, health office officials, and stakeholders at the village level. The diversity of informants' backgrounds provided a comprehensive picture of various aspects of program implementation.

Research Findings

1. Program Standards and Objectives

   In depth interviews were conducted to examine perceptions and the application of program standards and objectives. All informants acknowledged that the One House One Jumantik Movement is a strategic policy emphasizing family empowerment in dengue vector control, with the head of the household playing a central role in monitoring and eliminating mosquito larvae. Although the program has not been fully implemented, informants highlighted that high population mobility and dense settlements make community-based prevention highly relevant.

   This activity is good because it encourages community participation in dengue prevention and control.(infrormant 1)
   The One House One Jumantik movement is very effective since the head of the household is directly responsible for dengue prevention and control. .(infrormant 2)
   This policy is important as a preventive and community empowerment effort, because mosquito larvae are often found around homes, so family participation is essential. .(infrormant 3)
   This program is beneficial as long as each Jumantik understands their role properly. .(infrormant 4)
   The movement effectively empowers communities to prevent dengue transmission and should be continuously supported. .(infrormant 5)
   This activity is good because it involves every household in larva monitoring, but the limited number of inspectors makes family-based empowerment crucial for dengue prevention. .(infrormant 6)

   These findings indicate that strong understanding and positive perception among implementers are crucial for program adoption. However, reliance on the head of the household also presents challenges: if families are not fully engaged, program effectiveness may be limited. Therefore, achieving program objectives requires not only implementer readiness but also proper community education, clear communication regarding responsibilities, and supportive structures that encourage consistent family participation. This analytical interpretation connects informants' perspectives with practical implications for improving program implementation strategies.

2. Availability of Implementation Resources

   Regarding resource availability, informants reported that while human resources and basic facilities exist at the health center level, dedicated budget allocations remain limited. Furthermore, a robust larva monitoring structure is lacking at both household and village levels, and trained volunteers to support the program are still insufficient.

   Personnel and facilities are available, but there is no funding or government budget allocation, and no Jumantik have been assigned. .(infrormant 1)
   Resources are sufficient, but financial support should be proposed through BOK or community empowerment funds. .(infrormant 2)
   Human resources need ongoing guidance and supervision; facilities and specific budgets for G1R1J remain limited. .(infrormant 3)
   Health center staff are adequate, but household Jumantik groups have not been formed. There is no special funding, though activities rely on community participation. .(infrormant 4)
   Limited personnel, equipment, and funds hinder implementation. Jumantik need training and adequate support. .(infrormant 5)
   Resources exist but are ineffective due to the absence of trained household Jumantik and large coverage areas that exceed staff capacity. .(infrormant 6)

   This indicates that despite the presence of basic resources, limited budgets and organizational structures pose significant barriers to optimal program implementation. Consequently, effective implementation requires not

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only adequate human resources and facilities but also financial planning, the establishment of monitoring systems, and strengthening community volunteer capacity. Addressing these barriers is crucial to ensure comprehensive coverage and sustainability of the One House One Jumantik Movement

3. Communication Among Implementers
Communication between health center staff, village officials, and health office representatives was reported as inadequate. Existing coordination is sporadic and unstructured, limiting the effectiveness of cross-sector collaboration. Public perception that dengue control is solely the responsibility of health officers also reduces engagement from other parties.
Communication among implementers is good, but the program is no longer ongoing.(informant 1)
If implementers meet together, the One House One Jumantik program can run well. .(informant 2)
Current communication focuses on larva monitoring for detected cases, and is not yet optimal for sustainable prevention due to community stigma and other sectors seeing it as solely a health responsibility.(informant 3)
Communication exists, but it is not intensive. .(informant 4)
Communication between the health center and village offices exists, but collaboration from all residents, especially RT/RW, is needed. .(informant 5)
Communication runs well; the health center provides staff and facilities, and the village office relays information to RT/RW so that the community participates in prevention, monitoring, and maintaining cleanliness. .(informant 6)

These findings suggest that weak communication and unclear division of roles hinder consistent implementation of the One House One Jumantik Movement. Effective program execution requires the establishment of regular communication forums, clarity of responsibilities among implementers, and public education emphasizing that dengue prevention is a shared responsibility. Strengthening these aspects is important to ensure good coordination, community participation, and program sustainability.

4. Characteristics of Program Implementers
Implementer readiness was assessed in terms of knowledge, skills, and commitment. Although health personnel generally possessed adequate knowledge and skills, specific training for household larva monitors was still limited. Maintaining implementer commitment remains a major challenge affecting program consistency.
Knowledge and skills can be taught, but building commitment is difficult. .(informant 1)
The readiness and characteristics of implementers need to be socialized to support the program.(informant 2)
Knowledge, skills, and commitment of implementers still need updating and improvement. .(informant 3)
In terms of readiness and characteristics, they are actually prepared. .(informant 4)
How ready and capable are the implementers (in terms of knowledge, skills, and commitment) to support implementation? .(informant 5)
The implementers are very competent as they are trained and experienced. .(informant 6)

These findings indicate that without targeted capacity-building initiatives, including structured training and motivational approaches, program implementation may be inconsistent and less effective. Enhancing knowledge, practical skills, and motivation of implementers is essential to ensure optimal household larva monitoring, adherence to program protocols, and sustainability of the One House One Jumantik Movement.

5. Environmental Factors
Social, economic, and institutional environments also influence program implementation. Informants stated that community participation in urban areas is relatively low, and support from local community organizations remains limited. Additionally, budget constraints at the village level restrict operational funding for program activities.
Urban social conditions make community participation low; residents are less receptive to officers (informant 1)
Socioeconomic conditions strongly affect support for the G1R1J program. .(informant 2)
socialization to families and community levels is needed to build collective commitment. .(informant 3)
Ready to support. .(informant 4)
The program can work if RT/RW and community members support it. Budget limits mean some costs require community self-help, but 1 House 1 Jumantik can run with volunteers. .(informant 5)
The program is running in the Kota Ende Health Center area, but on a small scale due to limited staff and funding. .(informant 6)

These findings suggest that without active community involvement and strong institutional support, the One House One Jumantik Movement risks failing to achieve comprehensive coverage and sustainable

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implementation. Therefore, strengthening social support through participatory approaches, enhancing local community collaboration, and ensuring adequate village-level funding are key to improving program effectiveness and sustainability.

6. Implementers' Attitudes

Implementers' attitudes play an important role in policy execution. Informants reported positive attitudes and strong support for the One House One Jumantik Movement, including willingness to collaborate across sectors and provide education to the community.

We fully support this activity and hope for cross-sector cooperation. (informant 1)
We strongly support this activity. (informant 2)
settlements and high population mobility. (informant 3)
As officials, we should naturally support it. (informant 4)
We support this program because Potulando Village regularly experiences dengue cases in several RT/RW. (informant 5)
(G1R1J) and will educate residents to monitor mosquito larvae and maintain healthy living habits (informant 6)

These findings indicate that implementer commitment is a key factor in program adoption and sustainability. Positive attitudes facilitate coordination, cadre training, and community engagement, all of which are critical for achieving program objectives. However, without continuous motivation and reinforcement, implementers' potential commitment may not be fully realized, limiting program effectiveness at the household and community levels.

Table 1. Summary of Findings on the Implementation of the One House, One Jumantik Movement by Dimension

Dimension	Key Findings	Implications for Program Implementation
Program Standards & Objectives	Implementers perceive G1R1J as a strategic policy focusing on family empowerment. Household heads play a central role.	Strong understanding facilitates program adoption and community outreach. However, family participation critically affects program effectiveness.
Availability of Resources	Human resources and basic facilities are available, but specific training and budget allocations are limited. Household-level larvae monitoring structures are lacking.	Without dedicated funding and structured monitoring systems, implementation may be inconsistent. Financial planning, trained volunteers, and sufficient resources are needed.
Communication Among Implementers	Coordination among health center staff, village authorities, and health offices is irregular. Community perceives dengue control as solely the responsibility of health workers.	Weak communication and unclear role distribution hinder program effectiveness. Regular forums, clear responsibilities, and community education are required.
Implementer Characteristics	Implementers have basic knowledge and skills, but household-level training is limited. Maintaining commitment is a challenge.	Capacity building through structured training and motivational approaches is essential to ensure consistent monitoring and program sustainability.
Environmental Factors	Community participation is low, institutional support is weak, and village budgets are limited.	Participatory approaches, community cooperation, and institutional/financial support are key to program effectiveness and sustainability.
Implementer Attitudes	Implementers show positive attitudes, support the program, and are willing to collaborate across sectors and educate the community.	Commitment facilitates coordination, cadre training, and community involvement. Continuous motivation is needed to maximize implementer potential and program impact.

To date, no households have officially appointed a mosquito larvae monitor (Jumantik) in the study area. Regarding coordination among implementers, meetings are generally held every quarter as part of the Health Center's routine quarterly workshops (*lokakarya triwulan*), which discuss general health issues in the working area and assess cross-sectoral support for identified problems. However, coordination meetings specifically dedicated to dengue control programs, including the implementation of the One House, One Jumantik Movement,

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have never been conducted. This highlights the need to establish structured communication and coordination forums to support the effectiveness and sustainability of the program.

DISCUSSION

Implementers' Perceptions of the Standards and Objectives of the One House One Jumantik Movement

The results of the study in the working area of the Kota Ende Health Center indicate that implementers perceive the One House One Jumantik Movement as a strategic movement emphasizing family empowerment in dengue prevention, where the head of the household plays a central role in monitoring larvae at the household level. This perception reflects a strong understanding of the movement's standards and objectives, although its implementation in the field has not yet been fully optimal. These findings align with the study by Montenegro-Quiñonez et al. (2023), which highlights that household based interventions focusing on the larval stage represent the most effective and sustainable approach to suppressing mosquito populations compared to adult mosquito control. The study also emphasizes that the success of such interventions largely depends on household commitment, implementer preparedness, and consistent cross-sectoral communication in supporting micro-level preventive actions.(17).

However, both locally and globally, resource limitations, weak monitoring systems, and low community participation remain major obstacles to achieving the movement's objectives. This is supported by Naing et al. (2023), who found that the effectiveness of dengue control in Low and Middle Income Countries (LMICs) within the Indo Pacific region is significantly influenced by implementers' perceptions, movement support, and cross sector collaboration. Coordination challenges across administrative levels, limited feedback, and insufficient technical capacity at the government level reduce the effectiveness of family based programs.(18)

At the Kota Ende Health Center and sub district levels, implementers generally hold positive perceptions of the movement's objectives; however, these perceptions have not fully translated into practice due to structural barriers and resource constraints. Multi layered organizational structures and lengthy administrative processes slow coordination, while limitations in funding, equipment, and technical capacity restrict implementers' ability to conduct activities consistently. This explains why positive understanding has not yet fully transformed into sustainable community action. Meanwhile, international studies show that when implementers have a clear perception of movement standards and benefits, coupled with adequate resource support, implementation success rates increase significantly.(19)(20) Thus, implementers' perceptions not only reflect understanding of the movement but also indicate adaptive readiness and the ability to contextualize it at the local level.

These findings provide a new perspective on the Van Meter & Van Horn model, showing that the disposition of implementers in developing countries is influenced not only by structural factors such as communication, resources, and movement standards but also by psychosocial and contextual factors, including social motivation, trust among implementers, and the social and cultural structures of the community in which the movement is implemented. While the original Van Meter & Van Horn model emphasizes a linear relationship between policy, resources, and implementer attitudes, in the context of the One House One Jumantik Movement, this relationship is dynamic and shaped by implementers' adaptive capacity to translate national movement objectives into participatory local action. Consequently, the model needs to be expanded to include relational and contextual dimensions, showing how social values, informal communication patterns, and community support shape implementation effectiveness. This perspective enriches the Van Meter & Van Horn model by highlighting that the success of public health movements in LMICs depends not only on clarity of objectives but also on implementers' ability to adapt to social and institutional dynamics at the grassroots level.

Based on this analysis, several evidence based recommendations can be proposed to strengthen the implementation of the One House One Jumantik Movement at the local level. Local governments should enhance the capacity of health sector and urban village government implementers through regular training on operational standards, larval survey technique, and risk communication strategies. Empowerment of household heads can be improved through simple educational media, such as household inspection cards and community based digital reporting applications. Furthermore, strengthening coordination between the Kota Ende Health Center, sub districts, and communities is essential to ensure that each household receives ongoing technical support and motivation. Cross sectoral partnership models involving government, community organizations, and educational institutions can also be implemented to ensure program sustainability. This approach aligns with international evidence showing that household based interventions, combined with institutional support, can improve dengue control program effectiveness by 35–50% in cross country studies in Asia and Latin America.(18)(20)

Availability of Resources for Implementers of the One House One Jumantik Movement

The results of the study at the Kota Ende Health Center indicate that, although human resources and institutional facilities are available to support the One House One Jumantik Movement, its implementation in the community faces various structural barriers and resource limitations. The implementer structure at the neighborhood (RT/RW) level has not been effectively established due to lengthy bureaucratic procedures and limited coordination capacity across levels, making local initiatives difficult to carry out. Limited funding from

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the regional budget (APBD) or urban village funds slows the provision of larval monitoring tools, reporting forms, and educational materials. Training and mentoring of cadres have also not been conducted systematically, reducing their ability to consistently carry out larval surveillance. The absence of regular inspection schedules and low community participation further restrict program implementation, so implementers' positive understanding of the movement's objectives has not yet fully translated into tangible actions in the field.

These findings align with international studies in Burkina Faso, which show that limitations in networks, resource availability, and certain structural characteristics are barriers to implementing community based dengue interventions.(19) That study emphasizes that, even when programs are formalized, a lack of human resources and clear community organization can hinder intervention success. Similar results were found in Malaysia, highlighting that collaboration, resource allocation, and community engagement are key factors for vector control effectiveness and the creation of healthier environments.(20) Thus, local challenges in Kota Ende Health Center reinforce global evidence that institutional health capacity alone is insufficient; program success depends heavily on capacity transfer to the community level, including cadre formation, training, routine monitoring, and the availability of reporting forms and monitoring tools.(20)

These findings provide a new perspective on the Van Meter & Van Horn model. The model emphasizes that policy implementation effectiveness depends on communication, organizational capacity, and resource allocation. Findings in Kota Ende Health Center enrich this model by demonstrating that, in the context of LMICs, structural barriers and resource limitations at the community level are critical factors that may not be fully captured in the original model. For example, local bureaucratic obstacles, limited cross level coordination capacity, funding constraints, and low community participation indicate that transferring institutional capacity to the community level is a key element for implementation success. In other words, the effectiveness of a movement depends not only on institutional capacity but also on the program's ability to adapt to local social, economic, and institutional conditions.

Based on this analysis, several practical implications for local level implementation can be drawn. First, local governments should allocate an annual budget specifically for the One House One Jumantik Movement, covering cadre training, provision of larval monitoring tools, reporting forms, and educational materials. Second, a clear community implementer structure should be established at the RT/RW/village level, with coordinators and formal cadres carrying out regular inspection schedules. Third, each household should record inspection results and preventive actions in a simple form or digital application and report them monthly to the Health Center, enabling quarterly evaluation and additional interventions in areas with low compliance. Fourth, community engagement can be enhanced through rewards or incentives for families actively conducting inspections and submitting regular reports. This strategy is supported by international evidence showing that resource allocation, community involvement, and household-based monitoring systems significantly increase the effectiveness of dengue control programs (19)(20).

Inter Implementer Communication in the Implementation of the One House One Jumantik Movement

The results of the study in the Kota Ende Health Center's service area indicate that, although human resources and health center facilities are adequately available to support the One House One Jumantik Movement, program implementation at the community level still faces significant barriers. The implementer structure at the neighborhood (RT/RW) level, such as household jumantik cadres, has not been systematically established. Funding from the regional budget (APBD) or urban village funds is limited, larval monitoring tools, reporting forms, and educational materials are scarce, and cadre training and mentoring are not scheduled regularly. As a result, household inspections are sporadic and community participation is low. These obstacles are not merely administrative but are related to hierarchical bureaucratic structures, an organizational culture that reacts mainly to dengue cases, limited budgets, and unclear cross sector coordination guidelines, all of which hinder effective communication and the implementation of sustainable preventive actions.(21)(22)

These findings align with international research indicating that weak communication and poor coordination among stakeholders are major barriers to community engagement in dengue control. Nguyen-Tien (2019) reports that low motivation among community organizations and local leaders reduces the effectiveness of health messaging.(21) Similarly, Parajuli et al. (2025) emphasize that strong leadership, good governance, and characteristics of health facilities influence dengue service readiness, including the effectiveness of inter-implementer communication as part of cross-sector coordination.(22)

A comparison between local findings and international evidence demonstrates that inter implementer communication is a critical variable determining the success of community based programs. Local studies highlight the lack of routine and proactive communication, whereas international research emphasizes the need for clear, continuous, and participatory communication systems.(23) These findings provide a new perspective on the Van Meter & Van Horn model by showing that successful policy implementation in the context of LMICs is not only determined by communication, organizational capacity, and resources as in the classical model, but is also strongly influenced by implementers' perceptions of program objectives, the readiness of local implementer structures, organizational culture, and community participation. In other words, the Van Meter & Van Horn model

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is expanded to include local adaptation and the implementers' interpretation of policy, which act as mediators between central policy and field practice. Thus, the success of the One House One Jumantik Movement in LMICs heavily depends on the ability of local institutions to establish effective communication flows, ensure cross sector coordination, and actively engage the community.(24)

From a policy perspective, these findings suggest the need for specific strategies to strengthen inter-implementer communication. First, cross institutional coordination meetings should be scheduled regularly, e.g., quarterly, with a fixed agenda covering household monitoring, larval surveillance, and prevention strategies. Second, clear communication and coordination guidelines should be developed, including reporting lines and the responsibilities of each party. Third, training on inter implementer communication is essential to enhance interpersonal skills, persuasive messaging abilities, and active community engagement. Fourth, utilizing digital platforms or shared reporting forms can streamline information flow, facilitate program monitoring, and support quarterly evaluations. A two way communication approach between institutions and the community should be applied, enabling households and heads of households not only to receive directives but also to provide feedback on challenges in implementing the program in their own homes.(21)(22)(23)

Implementer Characteristics in the Implementation of the One House, One Jumantik Movement

The results of the study at the Kota Ende Health Center indicate that the readiness of implementers in the One House One Jumantik Movement is influenced by their knowledge, skills, and individual commitment. Although health workers possess a sufficient knowledge base, the lack of specialized training for household level larval monitors remains a significant barrier. This gap arises from limited budget allocations, program priorities that focus more on active case control, and minimal supervision and routine mentoring. Consequently, program implementation tends to be reactive and less focused on sustainable household level prevention. These barriers are also associated with complex bureaucratic structures and an organizational culture that does not consistently encourage cross-sector coordination, resulting in sporadic and discontinuous communication among implementers at the health center, health office, and village levels. (21)(22)

These findings align with Kajeguka et al. (2017) in Tanzania, who reported that low community knowledge of dengue and chikungunya hinders vector control success. Kajeguka emphasized the importance of health promotion strategies based on the Ecological Health Model, which not only enhance knowledge but also foster awareness and active community participation in vector-based disease prevention.(25) Therefore, this study reinforces that adaptive, context-sensitive educational approaches are necessary to equip community-level implementers with the capacity and motivation to act independently and sustainably.

Conceptually, these findings are consistent with Nguyen-Tien (2019) in Vietnam, who identified that the success of dengue vector control programs is strongly influenced by effective communication, stakeholder coordination, and the readiness and motivation of field officers. Low commitment and limited communication skills among local health workers are major barriers to sustained community engagement. Nguyen-Tien also highlighted that weak support from community organizations, excessive workloads, and the absence of clear policy guidelines undermine program sustainability. In the Kota Ende Helath Center context, a similar pattern is observed, with high dependence on the health sector and limited mechanisms for ongoing training of implementers.(21) This indicates that implementer readiness is not only a local issue but a common challenge in LMICs facing constraints in human resources, institutional structures, and cross-sector support for community based policy implementation.

These findings extend the Van Meter & Van Horn model by showing that successful policy implementation is not only determined by traditional factors such as communication, resource availability, and implementer attitudes, but also by psychosocial aspects, adaptive capacity, individual motivation, and local contextual dynamics such as organizational culture, social structure, and household readiness. In other words, the relationship between policy and implementation outcomes in LMICs is mediated by implementers' perceptions, skills, and commitment, supported by sustained systems of training, coordination, and communication. This enriches the understanding of the disposition of implementers as a crucial element in public health policy effectiveness, highlighting the importance of strengthening both capacity and motivation as additional variables in policy implementation models. Thus, this study not only confirms the relevance of the Van Meter & Van Horn model but also proposes its expansion to better account for psychosocial and organizational dimensions typical in developing countries.

Based on these findings and recent international evidence, local policy should focus on strengthening the capacity and motivation of implementers in the One House One Jumantik Movement through continuous, community-based training programs. Kajeguka et al. (2017) recommend training that emphasizes community empowerment and interpersonal communication principles, which have been shown to improve the effectiveness of preventive behaviors. Therefore, quarterly training for jumantik cadres and heads of households, using practical modules covering larval identification, risk communication techniques, and monitoring record keeping, should be systematically implemented.(25) Additionally, consistent with Nguyen-Tien (2019), cross sector coordination between the health center, health office, and village government should be formalized through monthly coordination forums to ensure two way communication and proportional responsibility sharing.(21).

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Local governments are also advised to allocate a dedicated budget for implementer mentoring activities, through urban village funds or local CSR support, to ensure program sustainability. The use of simple technology, such as Android based applications for household larval reporting, can enhance communication efficiency and strengthen monitoring systems. By adopting an evidence based international approach that emphasizes continuous training, cross sector coordination, and digital technology utilization, the implementation of the One House One Jumantik Movement in the Kota Ende Health Center area can become an innovative model of household-based dengue control, adaptive to the resource-limited context of LMICs.

Environmental Context in the Implementation of the One House One Jumantik Movement

The implementation of the One House One Jumantik Movement in the catchment area of the Kota Ende Health Center demonstrates that program effectiveness is strongly influenced by the social, economic, and institutional conditions of the community. Low community participation in urban areas is attributed to increasingly individualistic lifestyles, low risk perception of dengue fever, and minimal social engagement in environmental health activities.(21) Limited support from community organizations reflects weak cross sector coordination and the absence of incentive mechanisms that encourage sustainable collaboration. Furthermore, budgetary constraints at the village level not only indicate financial limitations but also reflect a misalignment of development priorities, which tend to focus more on physical infrastructure than on community-based disease prevention.(22)

These findings align with Md. Siddikur Rahman (2021), who highlighted the relationship between socioeconomic conditions and the distribution of *Aedes aegypti*. That study found that high household density, inadequate building conditions, windows without screens, numerous open water containers, and minimal mosquito control efforts correlate with high vector populations and increased DENV transmission risk.(26) This context supports the findings in Kota Ende Health Center, confirming that physical and socioeconomic environmental factors are major barriers to the implementation of household level dengue prevention programs.

In addition, Nur Mohd Roslin Elia Amira (2023) found that economic factors, including monthly income and job stability, consistently influence the knowledge, attitude, and practice (KAP) domains related to dengue. Individuals with higher income and stable employment tend to have better knowledge, more positive attitudes, and more effective preventive practices than low income individuals.(27) This strengthens the Kota Ende Health Center findings, which indicate that socioeconomic limitations of the community affect participation in the One House, One Jumantik Movement.

Overall, these results are consistent with Thang Nguyen-Tien (2019) in urban Hanoi, who reported multiple challenges to community engagement, including low interest and dependence on directives from the health sector and local government, minimal enthusiasm from mass organizations and community leaders, heavy workload among health workers, limited communication skills, insufficiently detailed policy guidelines, weak enforcement, and limited budgets. The study underscores that institutional and socioeconomic factors are global barriers to the implementation of community-based dengue interventions.(21)

Analysis of these findings indicates that the challenges in implementing the One House One Jumantik Movement in Kota Ende Health Center are significantly shaped by local social, economic, and institutional contexts. Low urban community participation, influenced by individualistic lifestyles, low dengue risk perception, and reduced social engagement in environmental health activities,(21) demonstrates that policy success is not solely determined by administrative factors but also by social dynamics that shape collective behavior. Limited support from community organizations and weak cross sector coordination, not complemented by clear incentive mechanisms or collaboration structures,(22) further highlight the importance of local institutional capacity as a bridge between central policy and grassroots implementation.

From the perspective of the Van Meter & Van Horn model, these findings provide a conceptual extension, emphasizing that the effectiveness of policy implementation in developing countries is significantly influenced by the alignment between formal policy and local socio economic characteristics. Thus, the model should accommodate social and institutional dimensions as adaptive determinants that moderate the relationship between policy standards and program outcomes at the community level.

Practical implications of these findings suggest several evidence based actions for local policy: first, enhancing community engagement through participatory approaches, training of local cadres, and education campaigns based on social environment contexts; second, strengthening institutional support through regular coordination between health centers, villages, and community organizations; third, allocating dedicated budgets for operational activities of the One House, One Jumantik Movement, including the provision of larval monitoring tools and educational materials; and fourth, enforcing clear technical guidelines and conducting routine monitoring to ensure program sustainability. These strategies are expected to address social, economic, and institutional environmental barriers and improve the effectiveness of household level dengue prevention interventions.

Attitudes of Implementers in the Implementation of the One House, One Jumantik Movement

Research findings indicate that the positive attitudes of implementers toward the One House One Jumantik Movement in the catchment area of Kota Ende Health Center are not merely expressions of compliance with

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policy, but also reflect professionalism and a sense of social responsibility cultivated through work experience and close interactions with the community. Strong cross sector support, including collaboration with sub district governments, emerges from a shared awareness that vector control requires collective action beyond institutional boundaries. The proactive stance of implementers in directly educating residents demonstrates the internalization of program objectives as part of their professional identity, rather than solely as an administrative obligation. From the perspective of the Van Meter & Van Horn model, this condition suggests that the disposition of implementers is influenced not only by the clarity of policy objectives but also by intrinsic motivation, social legitimacy, and interpersonal trust developed within the local work system. Consequently, the effectiveness of One House One Jumantik Movement implementation in Kota Ende Health Center expands the theoretical understanding of the model by incorporating affective and social dimensions as critical determinants bridging central policy and field-level practice.

These findings align with Ahmad Firdhaus Arham et al. (2021) in Malaysia, who demonstrated that positive attitudes among cross sector stakeholders play a key role in determining the level of support for Wolbachia infected mosquito strategies for dengue control. The study emphasized that when health sector personnel, local government, and community actors hold positive perceptions of a policy, they are more likely to exhibit high collaborative intent and willingness to contribute to inter-institutional activities. Thus, supportive attitudes function not only as a psychological driver but also as a social mechanism integrating cross sector actors toward shared goals.(28)

Similarly, Rania Ali El Hadi Mohamed et al. (2025) in Khyber Pakhtunkhwa, Pakistan, found that health workers possess high levels of knowledge and positive attitudes toward dengue prevention, yet gaps remain between knowledge and practical implementation. This indicates that positive attitudes do not automatically translate into effective program execution, particularly when not reinforced by motivation systems, ongoing training, and clear organizational policies. Therefore, strengthening implementer attitudes should be accompanied by sustained supervision and cross-sector coordination to ensure measurable impacts on actual behavior.(29)

This study provides a new perspective on the Van Meter & Van Horn model, demonstrating that the disposition of implementers in developing countries is shaped not only by structural factors such as policy clarity, communication, and resources, but also by socio-psychological dimensions and collective values present in the community. While the classical model frames implementer attitudes as reflections of understanding policy objectives, in the context of the One House One Jumantik Movement in Kota Ende Health Center, positive attitudes are primarily rooted in intrinsic factors such as social responsibility, moral identity as community servants, and interpersonal trust among local actors. Accordingly, the model should be expanded to incorporate social motivation, institutional legitimacy, and local cultural values as additional determinants affecting policy implementation effectiveness. This approach emphasizes that successful implementation in LMICs cannot be explained solely through structural variables, but also requires the ability of implementers to interpret central policies within the social framework they understand and trust. These findings enrich the Van Meter & Van Horn model by adding affective and relational dimensions, making it more relevant for explaining the dynamics of community based health policy implementation in complex social contexts, such as Indonesia.

Based on these findings, policies should emphasize capacity building and motivational support across sectors. Health center heads, disease prevention program managers at the health office, and sub district leaders should participate in integrated communication forums to strengthen ownership of the One House One Jumantik Movement. Participatory approaches and performance based incentives can be implemented to maintain implementer motivation. Moreover, cross sector leadership training focusing on collaborative communication and community education should be institutionalized as part of national vector control strategies.

Studies indicate that cross sector collaboration, coupled with collaborative leadership, enhances the success of community based health programs, particularly in the prevention and control of communicable diseases like dengue. Inter sectoral collaboration helps maximize resources and strengthens the role of communities in maintaining environmental health.(30) Therefore, local policies are recommended to establish cross-sector coordination teams in each sub district with clear communication pathways between health centers, the health office, and urban village authorities, alongside sustainable budgetary support from local government to ensure the continuity of the One House One Jumantik Movement.

Study Limitations

This study has several limitations. The small sample size of only six respondents limits the generalizability of the findings. The research focused on factors influencing policy implementation, thus excluding other dimensions of the policy process. Additionally, the use of interviews and archival review as data sources may introduce limitations related to subjectivity and completeness of information. Future research is recommended to expand the number of participants, diversify the study context, and employ varied data collection methods to obtain deeper and more representative results.

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CONCLUSION AND RECOMMENDATIONS

The implementation of the One House One Jumantik Movement in the catchment area of Kota Ende Health Center demonstrates that the success of the program is determined not only by positive acceptance from implementers and the community but also by limitations in resources, infrastructure, and suboptimal institutional structures at the community level. Proactive attitudes of implementers and cross-sector support serve as critical assets; however, without clear regulations, ongoing training, and effective coordination and monitoring mechanisms, the achievement of dengue prevention targets remains partial. These findings highlight the need for a holistic implementation approach that integrates human resource capacity development, institutional strengthening, adequate budget allocation, and cross sector communication strategies to ensure the sustainability and overall effectiveness of the program.

The implementation of the One House One Jumantik movement can be reinforced through a tiered strategy. At the health center level, regular training for cadres and health workers, the establishment of household inspection schedules, and cross sector coordination forums are recommended to enhance communication and task allocation. The District Health Office should provide technical support, ongoing supervision, operational budgets, and facilitate inter Health Center coordination to ensure uniform implementation. Local government authorities are advised to establish formal policies, allocate stable budgets, and integrate the program into long term health planning with performance indicator monitoring. At the community level, household heads are encouraged to actively participate in routine inspections, record monitoring results using simple forms or digital applications, and form neighborhood groups to support education and monitoring across households. This multi level approach ensures program sustainability, increases community engagement, and strengthens cross sector coordination within the context of limited resources.

AUTHOR'S CONTRIBUTION STATEMENT

The first author was responsible for conceptualizing and structuring the article, including developing the writing methodology, reviewing primary literature, and preparing the initial manuscript draft. The second author contributed by reviewing additional literature, strengthening conceptual arguments, and editing the discussion section to ensure alignment with the article's objectives. The third author played a role in adjusting the theoretical framework, providing critical feedback on the manuscript content, and assisting in improving clarity and coherence. The fourth author contributed to validating the scientific content, ensuring compliance with academic standards, and providing feedback to refine the writing structure. The fifth author was responsible for editing the scientific language, adjusting grammar and formatting, and maintaining consistency of terms and references according to the journal's style. The sixth author provided academic supervision, conducted a thorough review of the final manuscript, and gave final approval prior to submission for publication. All authors have read, reviewed, and approved the final manuscript and take responsibility for the integrity and originality of the published content.

CONFLICTS OF INTEREST

The authors declare that there are no financial or non-financial conflicts of interest that could have influenced the preparation or content of this article.

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