J Community Health (2015) 40:780–788
DOI 10.1007/s10900-015-9999-y

ORIGINAL PAPER

Community Health Workers as Agents of Health Promotion: Analyzing Thailand's Village Health Volunteer Program

S. D. Kowitt · D. Emmerling · E. B. Fisher · C. Tanasugarn

Published online: 6 March 2015

Abstract The village health volunteers (VHVs) have been a regular part of Thailand's health system since the 1960s. Despite widespread recognition, little research has been conducted to describe VHV activities, the settings in which VHVs provide help, how the program is administered, and how changing politics and health problems in Thailand have influenced the program. In order to understand the roles and practices of the VHVs, we conducted in-depth semi-structured interviews and focus groups with VHVs, community leaders and members, and public health officials in three semi-urban communities in central Thailand. Using the Social Ecological Framework, we mapped factors that influenced how the VHVs provided support, including governmental oversight, collaboration with public health officials, and community trust. These influences are discussed as "points of consideration," which help to identify the strengths and tensions within the VHV program and best practices in supporting and assessing community health worker efforts.

S. D. Kowitt · E. B. Fisher
Peers for Progress, American Academy of Family Physicians Foundation, and Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA

D. Emmerling
Developing World Healthcare Technology Lab, Duke University, Durham, NC 27088, USA

C. Tanasugarn (✉)
Department of Health Education and Behavioral Science, Faculty of Public Health, Mahidol University, Bangkok 10400, Thailand
e-mail: phctn@mahidol.ac.th

Keywords Community health workers · Thailand · Social support · Health promotion · Health services · Qualitative · Social ecological framework

Introduction

The village health volunteers (VHVs), Thailand's community health worker force, have long been recognized as an international model for community-based public health and acclaimed as a global success by the World Health Organization [1, 2]. For instance, research has demonstrated the VHVs' effectiveness in avian flu surveillance [2], HIV prevention and control activities [3], and promotion of children's oral health [4] in addition to general health promotion and disease control activities [1, 5]. In 2010, there were more than 800,000 active volunteers providing coverage to over 12 million households throughout every province in Thailand [1, 5, 6].

To ensure VHVs understand the needs of the community, community members are informally encouraged to apply for VHV positions by village leaders and primary health care center staff [1]. After acceptance through a formal application process, each volunteer receives 7 days of training in primary health care and 15 days of specialized on-the-job training in health promotion, disease prevention, and health education [2, 5, 7]. Following these trainings, VHVs are assigned to assist 7–15 households in their communities with supervision from public health officials [2, 5, 7]. Although the original VHV program did not include financial incentives for the volunteers, in 2010, the VHVs were given a monthly 600 Baht (about 20 USD) government allowance to assist with implementing their duties [5].

Despite documentation of the successes achieved by the VHVs, research has not described the current scope and activities of the VHVs and the few studies that exist are outdated [5]. As public health problems of malnutrition and infectious disease continue to decline, the VHVs are now more generally tasked with chronic disease prevention and management [8, 9]. Additionally, rapid urbanization, decreased support for primary health care, and a changing political landscape have changed VHV activities [5]. For instance, with the movement toward more democratic governance, the role of the VHVs has become increasingly politicized and politicians have vied for VHV support to increase their representation in local villages [5]. In light of these considerations, research is needed to document VHV activities and how they are done, the populations served, and the factors that facilitate and impede their success [10].

The research presented here explored the activities of VHVs and used the Social Ecological Framework to analyze how Thailand's changing political and health context influenced these activities. Ecological models incorporate multiple levels of influence (i.e., intrapersonal, interpersonal, community, organizational, policy) to conceptualize and explain the multitude of interacting determinants of behaviors, in this case, the services of the VHVs [11].

Methods

Setting

This qualitative study was conducted over a three-month period in three semi-urban communities in Central Thailand: Bang Nam Pung, Sao Hai, and Phanat Nikhom. The research team was composed of two Master's students and one senior-level faculty member from the University of North Carolina at Chapel Hill as well as three Thai doctoral students and one senior-level Thai faculty member of Mahidol University Faculty of Public Health in Thailand. The Thai faculty member selected the communities to represent different levels of experience and success in implementing VHV health projects. The communities also differed with regards to community assets and individual and community-wide health problems as summarized in Table 1.

Data Collection Procedure

To provide contextual information on how VHVs provided support and what factors influenced their activities, we used an inductive qualitative methodology [12]. Table 2 presents the content areas that guided our semi-structured interviews and focus groups [13, 14]. While semi-structured interview and focus group guides were used, we asked open-ended questions and used extensive probing to explore topics relevant to community that may not have been included in the interview guides. The three Thai doctoral students translated the iterated interview guides into Thai and reviewed it for applicability, appropriateness, and content validity. Institutional Review Board approval for this research was obtained through Mahidol University and the University of North Carolina at Chapel Hill, and verbal consent from all participants was given for interviews.

Participants

In total, we conducted 31 individual interviews with VHVs, community leaders, community members, and public health officials, as well as three focus groups with VHVs and public health officials and 25 observations of VHVs performing home visits. Summary information appears in Table 3. Community leaders arranged the majority of interviews purposively to show a range of perspectives on their villages. To triangulate information, we also interviewed eight community members who were not preselected by village leaders. All interviews and focus groups were conducted in Thai by the three doctoral students and translated into English. The two American student researchers discussed the translation of transcripts with the three Thai doctoral students to ensure accuracy and resole any potential translation errors. Interviews were supplemented by structured observations of the VHVs at work to examine how and what support they provided.

Data Analysis

Using principles from grounded theory [14], which allows themes and observations to emerge from the data without a prior theoretical framework, we reviewed the transcripts of interviews and focus groups, as well as the written notes taken during observations to identify patterns and themes. Data analysis began while data collection was still ongoing, which helped shape the direction of subsequent interviews, focus groups, and observations. After initial reviews of transcripts and written notes, we wrote analytic memos on key concepts, phrases, questions, and future research directions and organized and consolidated themes into a codebook. The two American student researchers used focused coding to code each transcript and generate emergent themes [14]. Any discrepancies were discussed and then reconciled with the entire research team. After coding with demographic and descriptive codes, we created four interpretative categories regarding factors that influenced how the VHVs performed their duties. Matrices were used to organize emergent themes and visual depictions of the data were developed to understand relationships

Table 1 Characteristics of communities

Community name	Bang Nam Pung	Sao Hai	Phanat Nikhom
Community overview	Semi-urban, fairly affluent built around the weekend market	Semi-urban with clusters of high affluence and high education	Semi-urban with strong PH leadership and infrastructure
Community strengths	High level of community cohesion and participation. VHV are sources of community empowerment	Strong community leaders and data driven decision making	Mutual respect and collaboration between PH personnel and VHV
Community problems	Chronic disease, aging population, environmental problems	Economic disparities, aging population, diabetes, hypertension	Dengue fever, diabetes, hypertension, drugs, smoking, underage pregnancy

Table 2 Content areas and interview questions

Content area	Questions asked
Community identity and cohesion	Would you describe the community to us? What is this community known for? How big is it? What are the occupations in the community? What are the characteristics of the community? How well do people in the community know each other?
Community resources and strengths	How are decisions made in your community? What organizations are active in your community? How involved are people in the community? Who are the formal leaders of the community? How are they selected? Who are the informal leaders of the community? What are the other strengths of the community, we haven't talked about yet?
Problems facing the community	What are the challenges that your community is facing? How are you working to face these challenges? What are the most common health problems in the community? What is being done to confront those problems? How do differences in standing or wealth affect the lives of members of your community?
VHV support	What services do you provide for members of the community? Could you describe a time that someone has had a problem and you have offered them support? What other types of support do you provide? How often do you provide this kind of support? How, if at all, do you offer them counseling or emotional support? How, if at all, do you help them make any decisions? How do you think that the support you give impacts the people who receive it? Different people need different types of support at different times. How do you figure out the specific way in which to be supportive to someone? How flexible are you in choosing the type of support to provide?
VHV program	How do you plan your work? How do you divide the tasks among the VHVs? How do you prepare for your work? How do you decide the focus of your work? How closely do you work with the village health centers? How do health care providers use the information that you share? How do you select the people that you work with? How long-term are the relationships with the people that you work? What support is available to you for your work?
VHV changes	How has your work changed as the community has changed? How, if at all, do you provide different services now as compared to when you first started as a VHV? How, if at all, has your view of the VHV program changed over time? How, if at all, has receiving money changed your feelings or activities in your role? How has your position stayed the same? How flexible is your work in responding to changing needs of the community? How have the results of your work been different than you expected?

Table 3 Interview by community

community name	Phanat Nikhom	Sao Hai	Bang Nam Pung
Overall number of data points	5 interviews, 6 observations, and 3 focus groups	12 interviews and 7 observations	24 interviews and 12 observations
Number of VHVs interviewed	35	5	9
Ages of VHV interviewed	Median age: 55	Median age: 65	Median age: 56
	Range: 45–71	Range: 50–70	Range: 46–76
Mean number of years being a VHV	18	13	14

between different concepts [12, 15]. To assist with interpretation of results, we presented the findings to the public health faculty of Mahidol University.

Results

Results are organized into two broad categories, "Activities of the VHVs" and "Factors that Influence those Activities". Within each of those broad categories, the Social Ecological Framework provides structure to document the activities of and influences on the activities of the VHVs. This is illustrated in Fig. 1. Some influences on the VHV program affect one another, and so when appropriate, arrows are used to illustrate the relationships among concepts.

Activities of the VHVs

In each community, VHVs reported providing support to communities that were dealing with a common set of public health problems, including dengue fever surveillance and prevention, maternal and child health, mental health (e.g., depression and loneliness), non-communicable disease (e.g., diabetes, hypertension, obesity, high cholesterol, cancer), food safety, and care for the elderly. However, VHVs also reported responding to context-specific concerns. For instance, when asked during a focus group why VHVs were focusing on tobacco control in Phanat Nikhom, one VHV responded, "Last year the district governor had information that youth smoking rate was very high in this area so the district governor encouraged the project… The public health officers were concerned, so they set up a project about how to confront smoking."

Policy, Organizational, and Community-Level Activities of the VHVs

In each community, VHVs reported engaging in community, organizational, and policy-level activities to provide support to community members. At the policy level, VHVs gathered data that were useful for both community and national policy. Nationally, VHVs contributed data that provide policy makers with an understanding of disease incidence and trends, and that inform national health promotion campaigns. Data also helped VHVs and public health officials direct community and organizational programs, priorities, and policies to meet community needs.

At organizational and community levels, VHVs reported serving as links to clinical care and community resources, especially when they had been unable to address an individual's health problem themselves. During a regular home visit, one VHV spoke of her approach for helping patients with high blood pressure and stress management. Specifically, she said, "When advising patients, if their blood pressure is high, I will tell them to go see a doctor. I will tell them to take care of their breathing and not work in the garden." She explained further, "If I see that the patient

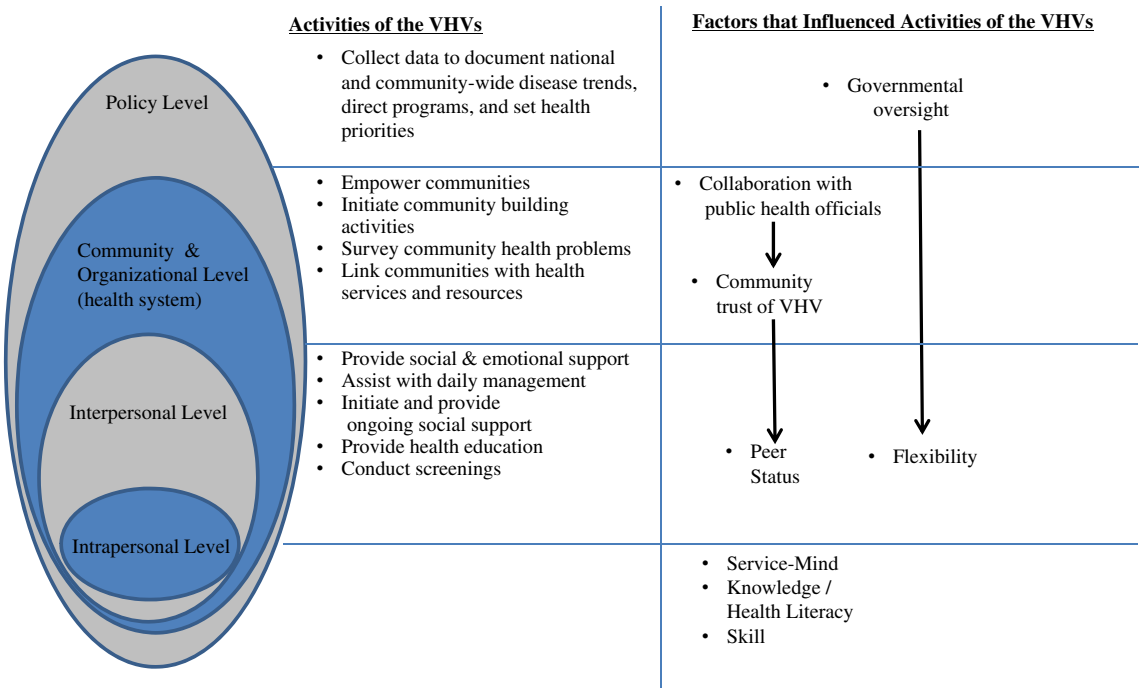

Fig. 1 VHV activities and factors that influenced VHV activities

has not gone to the hospital, I might go and take him to the hospital, or go to the hospital to see if he's arrived, and if not, take the doctor to him." In other instances, VHVs reported providing information on community resources, assisting with proposals for community-wide projects, developing community maps, identifying community assets, and connecting community members with traditional medicine resources.

Interpersonal-Level Activities of the VHVs

In addition to larger community, organizational, and policy-level activities, VHVs also reported regularly providing emotional and implicit support through family counseling, individual discussions, and informal conversations [16, 17]. For instance, to address the problems of a hypertensive woman in Bang Nam Pung, the assigned VHV completed home visits over the course of several months to inquire about the patient's status and relevant stressors. Upon learning that the patient's son was causing her anxiety, the VHV reported listening to her, offering her advice, and speaking with the son to reduce her stress. This illustrates how the role of the VHV includes not only counseling individuals but also taking initiative to address family and social influences on individual health. Through culturally and personally appropriate support strategies, the VHV reported being able to provide continuing care to the woman over an extended period of time.

In addition to assisting with social and emotional health problems, VHVs also spoke of helping patients prevent health problems and aid in self-management tasks in tailored and flexible ways. For example, in Sao Hai, a VHV described cooking healthy food directly for some patients and providing information on healthy and unhealthy foods for others. More in-depth examples of VHVs' interpersonal-level activities, which have been organized by Peers for Progress' "Four Key Functions" framework, can be found in Table 4 [18, 19].

Factors that Influenced VHV Activities

Policy-Level Factors that Influenced VHV Activities

At the broadest level, a variety of policy-level factors influenced VHV activities. When asked to describe the aspects of work affecting their activities, many VHVs spoke of increased trainings in protocols, requirements to fill out twice-monthly activity logs, and increased monitoring and quality control over the scope and focus of their work. For some VHVs, the activity logs and increased monthly meetings were a source of contention. One VHV stated, "Now we have to send many reports. The job is so much more than previously. We used to not have meetings every month. Now every month we have a meeting and we will get a new job or responsibility." In many communities, VHVs were also expected to use computer systems to fill out reports, which exacerbated concerns for some older VHVs who lacked the requisite skills.

VHVs also articulated that the emphasis on specific protocols and required activities decreased the flexibility with which they were able to provide support in accordance with their understanding of community needs. One VHV stated, "Sometimes the commands [from the government] are not suitable for the community. It is not the role of the VHV. We receive commands that do not match needs." In Sao Hai, childcare protocols stipulated that VHVs should repeatedly ask new mothers to read to their children. Community members reported expressing annoyance at VHVs' repetitive questions. Increased reliance on protocols in this case impeded VHVs' ability to tailor information to community members.

However, other stakeholders of the VHV program, notably public health officials, emphasized the importance of this increased oversight as a means to standardize the support that VHVs provided and control the quality of information provided. One public health official in Sao Hai stated, "The reports can make them [VHVs] work. VHVs know what to do and have objectives, and reports give structure. VHVs know tomorrow what they should do because of reports." However, many VHVs reported that the purpose behind the reports and/or monthly meetings was not communicated to them.

Many of these changes were introduced in conjunction with the 2010 monthly 600 Baht allowance, which has caused many VHVs to associate the allowance with increased governmental oversight. One VHV stated, "The allowance controls us and makes us do specific functional duties. Previously, we did whatever we wanted to do." In addition to decreased flexibility to perform their duties, other VHVs worried that the monetary incentives would change the spirit of the program. These volunteers reported feeling that the money could cause people to apply who did not embrace the "service minds" tradition, discussed below. However, not all opinions of the 600 Baht allowance were negative and some VHVs stated that the money increased their ability to afford gas for transportation, decreased their need to rely on family members for funds, and provided a sense of pride for being recognized monetarily. One VHV explained how the money could be both good and bad saying, "The salary has affected the VHV in two aspects. The negative aspect is that the VHVs should be natural helpers. The salary can change their perspective. They should not need to receive anything. The positive aspect is that the money may be useful for someone and useful to do their duties."

Table 4 Examples between communities regarding the four key functions

Four key function	Bang Nam Pung	Sao Hai	Phanat Nikhom
Emotional support	The VHVs organized a weekly walking group for elderly community members, which provided them with an opportunity to enjoy each other's company and talk about any problems, either health or non-health related	In the case of a hypertensive woman, the VHV asked her about her problems and stressors during home visits. Upon learning that her son was causing her anxiety, the VHV listened to her, offered her advice, and intervened with the son to reduce her stress	During home visits, the VHVs provided encouragement to smokers who were ready to quit or who had recently quit. They would offer motivational phrases, such as "you can do this" or suggest reasonable reductions in the number of cigarettes smoked
Linkage to clinical care	For pregnant women in the community, the VHVs inquired about their status and took them to the hospital when they started to go through labor	After a home visit with a patient with depression, a VHV consulted a public health official about the depressive symptoms of a patient. The public health official gave the VHV a scale to calculate the patient's depression score. After submitting the report, the public health official gave the VHV advice on how to follow-up and support the patient and also conducted a home visit	The VHVs referred persons at risk for hypertension or diabetes to the hospital for more thorough screenings
Ongoing support	In the case of a woman with lupus, a VHV supplemented her routine home visits with additional ones so that she could visit the patient after she had recently seen the doctor. This way the VHV would be able to offer more timely follow-up support	The VHV used data within local family folders to identify patients at-risk for Non-Communicable Diseases and conducted home visits to provide more frequent continuous care of these individuals	The VHVs conducted home visits to assess patients' history of smoking, progress towards cessation, and status after quitting providing continuous support
Assistance with daily management	In the case of an elderly woman with an artificial blood vessel, a VHV listened to how her doctor visits went and assisted the patient in following the doctor's advice to check the blood vessel	The VHVs conducted communal screenings of village people's blood sugar levels to inform them of their status/risk for diabetes and provide them with advice for improving their behaviors	The VHVs organized dance activities to help elderly members exercise and prevent the progression of Alzheimer's
Empowerment	The VHVs worked to empower community members to develop their own capacity. They facilitated knowledge sharing, innovation, and support of community members' attempts to address their own problems. For example, they helped an elderly group write proposals to address their desire to visit other provinces and drink soy milk together	The VHVs focused more on "doing for" the patient instead of letting them do it on their own, which may be consistent with Thai culture. As one VHV said, "If you need something, a VHV will go instead of you"	The VHVs worked to empower and involve community members in addressing their own problems. For example, in their smoking cessation campaign, the VHVs identified community participation and desire to confront communal problems as strategies to promote health

Community and Organizational-Level Factors that Influenced VHV Activities

At the community and organizational levels, perceptions of VHV activities were influenced by collaboration with public health officials. For instance, during community screenings of fasting glucose levels to determine pre-diabetes and diabetes, some VHVs reported community distrust of the VHVs' competence to use needles. This varied however according to public health partners' involvement. In Phanat Nikhom, one VHV explained community trust of their competence because, "When we were trained, the community knew that we were trained to do blood sugar screenings. The public health staff is there to supervise us every time." The high level of collaboration between public health officials and VHVs in Phanat Nikhom positively influenced the community's perception of VHV competence. Supporting this mutual collaboration, one public health official stated, "The VHV is the key person in public health. You cannot have success without them." Through training, guidance, and connections with the Ministry of Health, public health officials partnered with VHVs and influenced community-wide activities and perceptions.

Rather than being marginalized by health professionals' presence, collaboration with public health professionals enhanced the credibility of VHVs with the community. In fact, working in partnership with public health officials allowed the VHVs to gain the trust and respect of fellow community members. Thus, alignment with the public health officials was not viewed as compromising the VHVs' connection with their communities but as enhancing it through the trust it engendered.

Interpersonal-Level Factors that Influenced VHV Activities

Many VHVs also articulated that their ability to help others stemmed from their knowledge of the communities they served and ability to relate to fellow community members. For instance, when asked how he was able to perform his duties, one VHV in Phanat Nikhom replied, "I had a good relationship with everyone before becoming a VHV. Most people are my relatives, so it is easy for them to talk to me and meet with me." VHVs in other villages echoed these statements by discussing how their ability to provide support to one another was closely intertwined with their ability to act as peers, the trust they received from community members, and the support from fellow VHVs. In this sense, the VHV program complemented their interpersonal activities. As one individual stated, "Because we have a strong network of people, it makes our work easy. I use my experience with diabetes, not the guidelines from the government to provide education about diabetes… I support each patient differently."

The extensive interactions and ties with their communities establish a relationship stock that provides an important base for VHV services. As one VHV in Phanat Nikhom put it, "I also visit every house at least once a month, so we have a close relationship." Rather than having to introduce themselves, e.g., at the time they are assigned a patient with a particular health problem, VHVs in Thailand address health problems from the strength of existing and trusted relationships.

Intrapersonal-Level Factors that Influenced VHV Activities: A "Service Mind"

While national, community, and interpersonal factors all influenced the VHVs' activities, many VHVs felt their ability to serve and provide support was a direct result of their inherent desire to help others. One VHV said, "I like talking to encourage people, especially elderly. When I talk with them, the patients feel lively and happy. I feel I can give new life to them." Other VHVs spoke of their pride and happiness from assisting others and the respect that their role provided. One VHV explained that, "skills are not as important as the mind of the person. You can train someone for anything, but to be a VHV, you need a service mind." Other VHVs echoed these sentiments and reported that while certain pre-requisites, such as knowledge, and skills, were important in providing support, having a "service mind" and natural helper characteristics were essential in creating successful health programs for communities and individuals. The importance of the "service mind" appears to build on a part of Thai collectivist culture in which anticipating and acting to meet others' needs is expected and revered.

Discussion

Consideration 1: Flexibility in Protocols for Activities is Important in Providing Tailored Support

In the VHV program, new activity logs and protocols for duties provided guidelines and structure for the VHVs' activities. Public health officials in Sao Hai and Phanat Nikhom endorsed the logs and protocols as a method for structuring activities to quantify the effects of VHV work and decrease the probability of incorrect information being provided. Standardization thus allows for quantification, quality assurance, and dissemination of effective strategies and programs. However, it can occur at the expense of tailoring approaches to individuals, creativity, and flexibility. VHVs reported that this standardization detracted from their use of knowledge about the community and led to frustration, especially because standards were generally developed without clear communication and input from VHVs.

Although guidelines for practice may be useful in achieving standards of care, they have not been written to address the social determinants of health that many VHVs confront nor do they reflect context-specific information, including cultural sensitivity. Quantification of VHVs' activities might be designed to capture more holistically the range of activities and tailored types of informational, emotional, and instrumental support offered to community members. In concert with such quantitative documentation, participatory methods, such as story telling through which VHVs describe specific problems and how they have dealt with them might facilitate more nuanced conveyance of lessons learned.

Consideration 2: VHVs and Public Health Officials are Better Able to Perform Their Duties When They are Partners

Research has recognized supervision of community health workers as one of the most critical elements of successful community health worker programs [1, 20], without

distinguishing among different possible relationships of VHVs with health professionals. Across all three communities, our study found that VHVs received different types of support from a variety of sources, including family members, hospitals, government staff, public health officials, and other VHVs. Of these sources of support, partnerships with public health officials were especially influential in affecting the community's perception of VHV activities. When trusted by the community, VHVs were able to use their status as peers to provide tailored support in ways that would have not been possible for public health officials or doctors who are guided by medical treatment protocols. Thus, a collaborative rather than subordinate relationship between VHVs and public health officials allowed VHVs to more successfully share information, provide support, and implement community-wide programs.

We observed several factors that fostered stronger relationships between the VHVs and public health officials, including public health officials' appreciation of the strengths and contributions of the VHVs, regular meetings between public health officials and VHVs, involvement of VHVs in planning and implementation of programs, and encouragement by public health officials for VHVs to seek recognition from outside agencies, such as local and national government. For communities in which collaboration is limited, program planners and community leaders/organizers could use these factors to enhance cooperation and promote a more participatory culture with input from VHVs. Further research is needed to identify and prioritize the characteristics and structures that allowed for some public health officials and VHVs to create more equitable partnerships.

Consideration 3: Financial Support for VHV has Unintended Consequences

The VHV program provided an interesting case study for both the benefits and unintended consequences of providing financial incentives for community health workers. Opinions of the 600 Baht allowance were mixed among the VHVs. Since implementing the allowance, some communities have reported having to identify new selection processes and criteria in order to select qualified applicants due to increased interest in the positions. Although several objected to regulations accompanying the payment that reduce their autonomy and flexibility, other VHVs reported that the allowance provided them with recognition and financial compensation for their duties.

Upon reflection, in preparation for implementing financial incentives, the community should be consulted as active partners in deciding sustainable and appropriate recompense. The purpose behind allowances should also be clearly communicated. Whether it be for recognition for services or support for day-to-day activities such as transportation, transparency regarding why allowances are implemented is important to prevent misunderstandings. More research and case studies specifically investigating the consequences of providing financial incentives are necessary in order to gain a more nuanced understanding for best practices for global community health workers programs.

Limitations

We acknowledge several limitations. First, interviews were primarily arranged through community leaders, which could have biased opinions toward more positive perceptions of the community programs. Second, findings may only reflect opinions in semi-urban communities in the central region of Thailand and may not be generalizable to other provinces or countries. Third, some nuance may have been lost in translation, as is common with cross-cultural research studies. Lastly, without objective, quantitative data, it is impossible to conclude prevalence of phenomenon, such as attitudes of VHVs. However, due to saturation within our collected data, triangulation of data sources from various stakeholders and communities, and use of skilled translators, we believe that our findings provide rich contextual information from various stakeholders of the VHV program, including VHVs, public health officials, community leaders, and community members.

Conclusions

In this exploratory qualitative study, we analyzed the activities of and influences on the VHV program using the Social Ecological Framework. We believe that the findings of this study accurately describe important features of the VHV program and may provide lessons learned relevant to community health worker programs globally. As more countries incorporate and provide increased support for community health worker programs, research identifying and refining best practices in supporting and assessing community health worker efforts are needed.

Acknowledgments The authors thank Nareeman Neelapaichit, Thanyaporn Wanichritta, and Hataya Petcharoen for their help in participant recruitment, data collection, and translation. Thank you as well to Allan Steckler for his help in reviewing the manuscript and providing guidance and support throughout the study. Funding for this research is provided by the American Academy of Family Physicians Foundation (AAFP Foundation). E. Fisher has received compensation for serving as a speaker/consultant/advisory board member for the AAFP Foundation. S. Kowitt, D. Emmerling, and E. Fisher were all

supported by the Eli Lilly and Company Foundation and the Bristol-Myers Squibb Foundation.

References

1. Bhutta, Z. A., Lassi, Z. S., Pariyo, G., & Huicho, L. (2010). Global experience of community health workers for delivery of health related millennium development goals: A systematic review, country case studies, and recommendations for integration into national health systems. *Global Health Workforce Alliance, 1*, 249–261.
2. World Health Organization. (2007). *Role of village health volunteers in avian influenza surveillance in Thailand*. New Delhi: Regional office for South–East Asia 2007.
3. Kharel, R. K. (2006). *Participation of village health volunteers in HIV/AIDS prevention and control programme in Wattana-Nakorn district, Sakaeo province, Thailand.* Master of Primary Health Care Management Master's Thesis, Mahidol University, Mahidol University Library.
4. Vichayanrat, T., Steckler, A., Tanasugarn, C., & Lexomboon, D. (2012). The evaluation of a multi-level oral health intervention to improve oral health practices among caregivers of preschool children. *Southeast Asian Journal of Tropical Medicine and Public Health, 43*(2), 526–539.
5. Chuengsatiansup, K. (2007). *Health volunteers in the context of changes: Assessing the roles and potentials of village health volunteer in Thailand*. Thailand Ministry of Public Health. http://www.healthworkforce.info/aaah/2nd_Conf_2007/Cases/Thailand-Komatra%20Village%20Health%20Volunteers.rtf. Accessed Feb 2015.
6. Phomborphub, B., Pungrassami, P., & Boonkitjaroen, T. (2008). Village health volunteer participation in tuberculosis control in southern thailand. *The Southeast Asian journal of tropical medicine and public health, 39*(3), 542–548.
7. Kauffman, K. S., & Myers, D. H. (1997). The changing role of village health volunteers in northeast Thailand: An ethnographic field study. *International Journal of Nursing Studies, 34*(4), 249–255.
8. Dans, A., Ng, N., Varghese, C., Tai, E. S., Firestone, R., & Bonita, R. (2011). The rise of chronic non-communicable diseases in southeast Asia: Time for action. *The Lancet, 377*(9766), 680–689.
9. Sranacharoenpong, K., & Hanning, R. M. (2012). Diabetes prevention education program for community health care workers in Thailand. *Journal of Community Health, 37*(3), 610–618. doi:10.1007/s10900-011-9491-2.
10. Swider, S. M. (2002). Outcome effectiveness of community health workers: An integrative literature review. *Public Health Nursing, 19*(1), 11–20.
11. Sallis, J. F., Owen, N., & Fisher, E. B. (2008). Ecological models of health behavior. *Health Behavior and Health Education: Theory, Research, and Practice, 4*, 465–486.
12. Ulin, P. R., Robinson, E. T., & Tolley, E. E. (2004). *Qualitative methods in public health: A field guide for applied research*. Hoboken: Wiley.
13. Bernard, H. R., & Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches*. Thousand Oaks: Sage.
14. Charmaz, K. (2011). *Grounded theory methods in social justice research* (pp. 359–380). Thousand Oaks, CA: Sage.
15. Starks, H., & Trinidad, S. B. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative Health Research, 17*(10), 1372–1380.
16. Kim, H. S., Sherman, D. K., Ko, D., & Taylor, S. E. (2006). Pursuit of comfort and pursuit of harmony: Culture, relationships, and social support seeking. *Personality and Social Psychology Bulletin, 32*(12), 1595–1607.
17. Kowitt, S. D., Urlaub, D., Guzman-Corrales, L., et al. (2015). Emotional support for diabetes management: An international cross-cultural study. *Diabetes Educator*. doi:10.1177/0145721715574729.
18. Fisher, E. B., Boothroyd, R. I., Coufal, M. M., et al. (2012). Peer support for self-management of diabetes improved outcomes in international settings. *Health Affairs (Millwood), 31*(1), 130–139. doi:10.1377/hlthaff.2011.0914.
19. Boothroyd, R. I., & Fisher, E. B. (2010). Peers for progress: Promoting peer support for health around the world. *Family Practice, 27*(Suppl 1), i62–i68. doi:10.1093/fampra/cmq017.
20. Fisher, E. B., Coufal, M. M., Parada, H., et al. (2014). Peer support in health care and prevention: Cultural, organizational, and dissemination issues. *Annual Review of Public Health, 35*, 363–383.