SSM - Health Systems 4 (2025) 100057

Contents lists available at ScienceDirect

SSM - Health Systems

journal homepage: www.sciencedirect.com/journal/ssm-health-systems

"I am the bridge": Examining intersectoral collaboration among community health workers to address maternal and child health in the Philippines

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ARTICLE INFO

Keywords:
Community health workers
Maternal and child health
Intersectoral collaboration
Health system accountability
Sustainable Development Goals
Southeast Asia

ABSTRACT

Introduction: Community health workers (CHWs) are uniquely positioned to act as a bridge between local maternal and child health needs and the broader health system. However, there is a need to examine the specific strategies CHWs use to facilitate intersectoral collaboration and support community-level maternal and child health service delivery.

Methods: This study was conducted in partnership with a Philippines-based NGO and their CHW program. In total, 64 semi-structured interviews were conducted with CHWs from six locations in Negros Oriental, Philippines. Data collection focused on CHWs' efforts to address maternal and child health and collaborate across sectors to support health service delivery. Qualitative data were analyzed with a hybrid inductive-deductive approach.

Results: CHWs (all females; ages 21–60) leveraged the multiple roles and social networks they held, including with local health system and government actors, to address maternal and child health. CHWs viewed their role as addressing service gaps and providing continuity of care with the public health system (service extenders); liaising between communities and both the NGO and public sector to support service navigation (cultural brokers); and working to address complex social and ecological determinants of health within their communities (social change agents).

Conclusion: This study provides insights into how NGO-public sector collaboration is facilitated by CHWs to support maternal and child health in communities. In addition, this study demonstrates how broader health system governance arrangements and decentralization may impact the experiences and roles of CHWs affiliated with NGO-led programs.

Introduction

Enhancing health equity and achieving the health-related Sustainable Development Goals (SDGs) requires meaningful collaboration, coordination, and action across different sectors. Indeed, SDG 17 underscores how fostering intersectoral partnerships can create an enabling environment to attain the various targets set out within the SDGs (Trowbridge et al., 2022; Hussain et al., 2020), including targets related to improvements in maternal and child health. While these partnerships can operate at or across various scales, it is important to examine how intersectoral collaboration is facilitated and shapes health care delivery and services within community settings. This examination is needed because the effectiveness of the broader health system is dependent on and builds from the quality and accountability of health

List of abbreviations: CHW, Community Health Worker; NGO, Non-Governmental Organization; SDG, Sustainable Development Goals; ICM, International Care Ministries; BHW, *Barangay* Health Worker; BNS, *Barangay* Nutrition Scholar.

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https://doi.org/10.1016/j.ssmhs.2025.100057
Received 10 July 2024; Received in revised form 3 January 2025; Accepted 29 January 2025
Available online 30 January 2025

delivery and services within community settings (Haldane et al., 2021, 2022).

Community health workers (CHWs), defined as lay community members who are involved in and support health delivery and services at a community level, are uniquely positioned within their communities to act as a bridge between local health needs and the broader health system. CHWs are most often involved in extending health services into communities via basic health delivery such as health screenings, provision of basic care, or referrals (i.e., service extenders). In addition, some CHWs occupy a broader role that includes communicating health needs within their communities (i.e., cultural broker) or advocacy surrounding improvements in health services (i.e., social change agent). As argued by Schaaf et al., this continuum of roles (service extender, cultural broker, and social change agent), and the extent to which these roles are performed by CHWs, can be understood within a broader accountability ecosystem that includes the explicit and implicit expectation that CHWs can facilitate health system accountability within communities (Schaaf et al., 2020). Indeed, this accountability ecosystem shapes the capacity of CHWs to improve health outcomes and enhance health equity within community settings.

While many CHWs are affiliated with government programs at either a national or subnational level, some CHWs are affiliated with programs operated by non-governmental organizations (NGOs). For CHWs that are affiliated with NGO-led programs, there is an opportunity to investigate how these individuals navigate their roles in relation to other health system actors. More specifically, further consideration is needed regarding how CHWs operating outside of a government health system may engage with that system to improve health outcomes and enhance health equity among members of their communities. This consideration adds further complexity to the accountability ecosystem noted above, as CHWs affiliated with NGO-run programs are accountable to the NGO program, while also operating and working to enact change within the broader government health system.

This study examined the actions and strategies of CHWs affiliated with a national NGO-led CHW program in the Philippines to improve maternal and child health among households in resource-constrained communities experiencing extreme poverty. In particular, this study investigated how CHWs collaborated across sectors with other health system actors to improve health outcomes and enhance health equity. The objectives of this study were 1) to describe the ways in which CHWs affiliated with this NGO-led program enacted the roles of service extender, cultural broker, and social change agent; and 2) to examine the strategies used by CHWs affiliated with this NGO-led program to collaborate across sectors to improve maternal and child health. In addressing these objectives, this study makes two important contributions. First, this study provides insights into the operations of an NGO-led CHW program in Southeast Asia, which is an area where the operations of CHW programs have been underreported relative to other settings. Second, this study adds complexity to our understanding of the role of CHWs vis-à-vis broader governance arrangements by examining how CHWs affiliated with an NGO-led CHW program interact with other health system actors.

Partnership and health system context of the Philippines

This project was anchored by a partnership with International Care Ministries (ICM), which is a national Philippines-based NGO that supports households experiencing extreme poverty through health and livelihood education initiatives and interventions (Luu et al., 2022). One health intervention that ICM offers is their Flourish program, which is a CHW program across 18 provinces that recruits, trains, and supports volunteer CHWs to address child and maternal health needs in their communities. Key tasks conducted by CHWs affiliated with the Flourish program include health screenings and basic medical support for health concerns observed among populations experiencing poverty. This support includes: screening and treatment of acute malnutrition in children, pregnant, and lactating women; integrated management of childhood illness including management of acute watery diarrhea in children under five years; micronutrient supplementation for pregnant women; and Vitamin A supplementation and deworming for children under five years. In addition to these tasks, CHWs affiliated with the Flourish program also provide health education and referrals within the health system when more complex health concerns are identified.

The health system in the Philippines is characterized by decentralization, with the governance and administration of health services governed by local government units (Cuenca, 2018; Abrigo and Ortiz, 2018). The Department of Health establishes and maintains the national health policy agenda, while *barangays* (i.e., smallest governance unit in the Philippines) are primarily responsible for the administration and delivery of primary and preventive care. Across the Philippines, local government units often support a cadre of *barangay* health workers (BHWs) and *barangay* nutrition scholars (BNSs) to deliver community health interventions and education (Dodd et al., 2021). While BHWs and BNSs provide critical community health supports in areas such as maternal and child health and infectious disease (Yamashita et al., 2015; Matsumoto-Takahashi and Kano, 2016; Sy et al., 2019), concerns have been raised as to how financial and human resource constraints as well as constraints within health services may have negative implications for the effectiveness and quality of care offered by BHWs and BNSs (Dodd et al., 2021; Matsumoto-Takahashi and Kano, 2016; Sy et al., 2019). Further concerns are raised surrounding the potential role of health system decentralization in exacerbating health inequities across communities due to uneven governance capacity and accountability (Dodd et al., 2021; Langran, 2011).

In addition to public health services, other private and non-governmental health actors and entities also operate across the Philippines, including ICM's Flourish program. Thus, in a single community, there may be a combination of public, private, and non-governmental health services offered alongside each other. Indeed, CHWs affiliated with the Flourish program may work in areas where BHWs or BNSs also work. In reality, there can be gaps in health services and resources in rural and remote areas, as well as in informal settlements in urban areas. Recognizing that these gaps exist, ICM received formal approval from and signed a Memorandum of Understanding with the Department of Health in the Philippines to initiate and operate the Flourish program in 2020.

It is within this multi-sectoral, decentralized health system context that this study examined how CHWs affiliated with the Flourish program performed various roles within their communities, as well as how these individuals fostered collaboration with other health system actors.

Methods

This study used a qualitative case study design (Leedy and Ormrod, 2005), which can be characterized by the generation of in-depth qualitative data relevant to a particular program, in order to more deeply understand a broader phenomenon. In our study, ICM's Flourish program provides a rich case for closely examining how intersectoral collaboration is facilitated by community health workers (CHWs) amid the broader context of health system governance arrangements and decentralization.

Data collection

In April 2023, we conducted 64 semi-structured interviews with community health workers affiliated with the Flourish program across six different geographic settings in the province of Negros Oriental, Philippines. These settings were selected by the researchers, in partnership with ICM staff, for their diverse geographic size and terrain (i.e., larger towns as well as remote, mountainous villages) and, therefore, the potential for diverse experiences of intersectoral collaboration among CHWs. Study settings were also selected for convenience, given their

close geographic proximity to one another and to the specific ICM headquarters where the researchers were based. Within each study setting, ICM staff (i.e., CHW coordinators) supported recruitment by contacting all CHWs affiliated with the Flourish program in their respective geographic settings and inviting them to participate. No additional inclusion or exclusion criteria were applied for recruitment. From an ethical perspective, interviews were conducted with all interested CHWs in each geographic setting, past the point of data saturation, to ensure all CHWs were provided equal opportunity and voice within the research.

Interview questions focused on efforts among CHWs to address maternal and child health, in addition to strategies undertaken by these individuals to collaborate across sectors and with other health system actors to address maternal and child health concerns at the community level. The interview format facilitated in-depth exploration of these content areas, with participants able to share about their own experiences outside of a group setting. Interviews were conducted by a research team of six individuals, including three Canadian researchers from the University of Waterloo, and three Filipina researchers contracted by ICM to support this study. Most interviews were conducted in the local language of Bisaya with real-time interpretation into English provided by Filipina research team members. Several interviews were conducted in English or Tagalog (then interpreted to English) based on the preferences of participants. Interviews ranged in duration from 19.3 to 87.5 min (average duration = 44.4 min) and were all conducted in-person. Interviews were audio-recorded with permission and transcribed.

All participants provided informed oral consent to participate in the study. Ethics approval for this study was provided through the University of Waterloo Research Ethics Board (Certificate #: 44828).

Data analysis

Transcripts were thematically analyzed using an iterative hybrid inductive-deductive approach (Fereday and Muir-Cochrane, 2006; Braun and Clarke, 2019). First, we familiarized ourselves with the data and conducted initial open coding using an inductive approach. Then, we mapped key findings against Schaaf et al.'s typology of CHW roles (service extender, cultural broker, and social change agent). *NVivo Release 14* qualitative analysis software was used for organization and retrieval of codes and coded excerpts. Collaboration among Canadian and Filipino team members and triangulation of findings within and across data sources (e.g., interviews) contributed to the validity and rigour of the analyses (Creswell and Miller, 2000). Given the positionality of the three Canadian members of the research team, critical reflexivity as well as close collaboration with Filipino team members and ICM staff were also necessary to ensure data were interpreted appropriately within this study's cultural and health system contexts.

Results

All CHW interview participants (n = 64) were female, with ages between 21 and 60 years old (mean age: 36 years). Many CHWs held additional occupations beyond their CHW role and varied with respect to their level of education achieved and the number of years they had been a CHW with the Flourish program (Table 1).

Overall, findings mapped closely to Schaaf et al.'s typology of CHW roles, including how CHWs affiliated with the Flourish program acted as service extenders, cultural brokers, and social change agents. Importantly, collaboration between these NGO-affiliated CHWs and other health system and local government actors was identified as a cross-cutting theme. ICM formalized this collaboration through signed agreement with local government units and public health care facilities that enabled the Flourish program to operate in each community. Supported by their CHW Coordinator, CHWs are required to present information about Flourish to their local *barangay* health centre and receive signatures on a Memorandum of Understanding from the *barangay* captain and another local health system actor (e.g., midwife) at the primary health facility level (i.e., rural health unit or city health office). Due to the decentralization of the health system, these agreements with local political leaders and primary health facilities at the local level are needed in addition to the broader Memorandum of Understanding with the Department of Health in the Philippines. Beyond these efforts to formally collaborate with the local and national governments, many CHWs discussed informal channels of collaboration, as well as leveraging pre-existing relationships with health system and local government actors, to address maternal and child health concerns within their community.

Connected to the importance of collaboration in shaping the experiences and role of CHWs affiliated with the Flourish program, the positionality and social networks held by CHWs within their communities was another cross-cutting theme. Indeed, CHWs' positionalities (including the multiple roles they held) and varied relational networks shaped the degree and quality of intersectoral collaboration to enhance maternal and child health delivery and were also leveraged to facilitate their CHW role (Table 2).

Table 1
Sociodemographic characteristics of interview participants (n = 64).

Characteristic	Number (proportion, %)
Area of Residence	
Guihulngan	15 (23.4)
Lalibertad	12 (18.8)
Ayungon	12 (18.8)
Dumaguete	11 (17.2)
Manjuyod	10 (15.6)
Pamplona	4 (6.3)
Additional Occupation[a]	
Market vendor, sales, small business	16 (25.0)
Work within the *barangay*[b]	10 (15.6)
Religious worker (e.g., *pastora*)	6 (9.4)
Other[c]	4 (6.3)
None beyond community health worker role	26 (40.6)
No response	8 (11.4)
Education Level	
Elementary school (did not graduate)	6 (10.3)
Elementary school graduate	5 (7.4)
High school (did not graduate)	11 (17.2)
High school graduate	23 (33.8)
College (did not graduate)	5 (7.4)
College graduate	8 (11.8)
Alternative learning system[d]	4 (6.3)
Vocational course	1 (1.4)
No response	1 (1.4)
Year Started as a CHW	
2020	17 (26.6)
2021	30 (51.7)
2022	8 (13.8)
2023	3 (5.2)
No response	6 (10.3)

[a] Several participants held multiple occupations beyond their community health worker role within the Flourish program. Thus, the number of responses does not sum to n = 64.
[b] Includes the roles of *barangay* health worker, secretary, *tanod* (local peacekeeper).
[c] Includes the roles of family care giver, factory supervisor, and debt collector.
[d] Alternate learning system provides out-of-school youth and adults with the opportunity to access and complete basic education.

CHWs as service extenders: "[we] are the ones going there"

Community health workers (CHWs) shared a range of strategies they used to facilitate collaboration between communities, NGOs, and the local public health system. These strategies included direct collaboration with public health care workers to identify individuals in need of support and to ensure necessary medicines and medical care were

Table 2
Synthesis of main themes and key findings within each theme.

Theme	Key findings
CHWs as service extenders	• Identifying individuals in need of maternal-child health support • Avoiding duplication of efforts with the local public health care system • Distributing medication not available in the public health care system • Directly collaborating with public health care workers to provide health care together, in some instances • Providing continuity of care and filling gaps in public health care
CHWs as cultural brokers	• Negotiating trust with community members and building credibility (of the organization/program, medicines, and CHWs themselves) • Communicating health needs to the NGO and public health care system through referrals to formal health care services • Managing community expectations of the program and liaising between the community and both the NGO and public health care system • Supporting community health service navigation for individuals • Educating other health system actors on community needs, attitudes, and perceptions of health services access and use
CHWs as social change agents	• Understanding community social and ecological determinants of ill health • Going beyond prescribed CHW roles to care for individuals • Desiring to 'do more' to support individuals, beyond their CHW role • Perceiving themselves as making a difference in their communities
Cross-cutting themes: • NGO-affiliated CHWs collaborated with other health system and local government actors, formally (i.e., via signed Memoranda of Understanding) and informally (i.e., in an *ad hoc* manner through pre-existing relationships with other local actors) • CHWs leverage relational networks and their positionalities, including multiple roles held beyond the CHW role, to facilitate their work	

provided to these individuals. This collaboration facilitated a continuity of care, with CHWs viewing their role as addressing gaps within the public health system.

Many CHWs approached their local, public *barangay* health centre to identify individuals in need of support, most often pregnant women or malnourished children (P9, P17, P25, P26, P27, P34, P37, P53, P56, P57). As one CHW explained:

> [The *barangay* health workers (BHWs) know] who the sick children are in the community, who is malnourished and who is pregnant. We have to ask them because they have records…from there, I'll know whom I need to visit and then they also know the addresses of the people in the community (P36).

Through collaborating with other health system actors, CHWs also described being able to meet individuals at a public health care facility for prenatal screening. This was noted as being convenient and efficient (P41, P50, P61), as in most cases, *"the pregnant woman is there for [a] check-up, then I'll grab the chance to screen them there"* (P42). Collaboration with public health care workers also reportedly avoided duplication of efforts, as CHWs could ask which specific patients had not yet received medicines or medical care from the public system and could instead fill gaps in support (P31, P44, P45, P50). Some CHWs described instances of public health care workers initiating collaboration with them to support tasks such as screening or weighing patients (P39, P52).

CHWs frequently described how they also drew upon their existing social networks – with friends, family, and acquaintances outside of the CHW program – to identify individuals to support (P33, P36). Those with pre-existing relationships to public health care workers more readily described being able to collaborate. For example, a CHW noted that relationships with a midwife and BHW meant they would inform the CHW when they encountered a pregnant woman locally (P39); similarly, a CHW noted their friendship with a BHW was helpful, *"because we are friends…because we are living in the same community… they'll just inform me that there's malnourished children in that household and they'll also inform me if someone has [a] fever"* (P60). Those CHWs with pre-existing relationships with BHWs or midwives also described close collaboration when directly providing care, going together to homes of individuals needing support (P22, P28, P58).

Most frequently, CHWs acted as 'service extenders' through distributing medication that was not offered or 'out of stock' at public health care facilities (e.g., *barangay* health centres or rural health units) (P4, P15, P16, P19, P21, P22, P25, P26, P29, P36, P38, P45, P48, P52, P56, P57, P58, P64). Relatedly, CHWs discussed how medication they offered was perceived by households to be of higher quality and more effective than medication distributed through public health care facilities. Issues surrounding the availability and quality of medication within public health care facilities appeared to be dependent on the prioritization of health resources by local government units. Indeed, as argued by one participant who also held a role as an administrator within her community's *barangay* office (P40), local politics and management issues contributed to variations in health resources across communities.

CHWs also viewed their role as addressing gaps within the public health system as they had slightly different 'target' ages for screening and medicines than BHWs (P32), as well as different frequency of monitoring (e.g., CHWs followed up with and monitored malnourished children one week after providing supplementation, while BHWs reportedly monitor once per month) (P59). Furthermore, CHWs noted that many households they support live remotely and lack finances to pay for transportation to a public health care facility (P55). They saw their role as more frequently going *to* households directly to provide continuity of care with the public system (P6, P7, P9, P28, P34, P46, P47). As a CHW explained, *"sometimes when there's someone in the mountain and the medical personnel or the BHW can't go there, [the CHWs] are the ones going there"* (P18). When required, CHWs also collaborate through referral of individuals to public health care facilities and provide a transportation subsidy to facilitate the referral in cases where individuals are unable to afford transportation.

CHWs as cultural brokers: "they were hesitant to go to the health centres"

CHWs described many instances of being 'cultural brokers' insofar as their role often involved negotiating trust with community members they supported. Particularly in situations of visiting a household for the first time without pre-existing relationships, CHWs reported that at times individuals were hesitant or did not trust the legitimacy of the Flourish program and the medicines being offered (P1, P7, P12, P13, P15, P42, P51, P58, P60). The onus to explain the program fell to CHWs in their initial interactions (P11, P22, P31, P40, P64), as for example, CHWs shared, *"if we tell them why we are here, that we want to help, they will understand"* (P5) and *"as time goes by, explaining, counselling, then they'll understand about the program"* (P8).

Additionally, CHWs reported that some individuals did not initially trust them or afford them credibility, as they are not professionally-trained health care workers (P6, P43). As a CHW shared, *"People say, 'you're just a volunteer…you didn't study anything…do you have a diploma?"* (P6) In these circumstances, CHWs needed to describe the training they received through the NGO. In the words of another CHW:

> The challenge that I've encountered with pregnant women is because they don't want to believe my capacity because I'm not a nurse, I'm not working in the hospital. So it's hard for them to believe if I'm really reliable…sometimes they don't trust the [prenatal vitamins] that we give…That's a challenge, that you have to explain yourself (P3).

In this way, CHWs held a liaison or bridging role on behalf of their NGO: managing situations of mistrust and building the program's credibility, through persistent visits and communication with households, in order to deliver services. Of note, CHWs often mentioned that explaining the formal agreement between ICM and the *barangay* helped to mediate individuals' initial mistrust or hesitation with accepting medicines (P21, P44), as *"the [CHW] brings the legal papers so that every time someone asks for medicine for fever, then we can just directly show the legal papers that were signed and then they would believe that the commodities are safe"* (P16). Again, CHWs' positionalities and social capital as fellow community members was also reported to support the building of trust between the NGO – vis-à-vis CHWs – and communities (P25, P33, P38, P45). As one CHW explained, *"I am highly respected in the* barangay *because I have other jobs aside from a CHW, so I'm already known and I've had no issues when it comes to doing the screening…I [have] already gained trust from the people"* (P52).

CHWs also embodied Schaaf et al.'s 'cultural broker' role through explicitly communicating community needs and concerns to the NGO and implicitly to the health system through collaboration with public health care workers to screen for health issues and refer to formal services. CHWs demonstrated a deep awareness of community needs and named how they would like the program to expand in its reach and scope. For example, many CHWs advocated in interviews for offering medicines to demographic groups beyond the current criteria of pregnant women and children under five years (P4, P5, P23, P24, P36, P39), procuring medicines to treat chronic health conditions such as type 2 diabetes (P16, P25, P31), and obtaining portable blood pressure machines for household monitoring purposes (P1, P15, P27, P30, P32, P41, P42, P50). This advocacy was based on direct requests from the communities they serve. Indeed, CHWs frequently described being perceived by community members as individuals holding health knowledge and available resources and were often called or visited with health-related requests.

Further, CHWs shared how this 'brokering' role involved managing community expectations. For example, in the context of describing the community's requests for additional supports, CHWs explained their role in communicating the program's scope on behalf of the NGO: *"We just explain to them that we only screen children"* (P7) and *"I tell them that I don't have things…I can only weigh children and measure their height. We also explain that this is from an NGO unit"* (P37). This role of program liaison reportedly went both ways, to then communicate health needs back to ICM, as articulated by one CHW: *"I tell the mother [asking for additional support] that, 'I will share your concerns with ICM'"* (P13). Community health needs were also liaised back to the public system through formal referral pathways, embedded into the design and structure of the Flourish program.

CHWs also shared how they supported the navigation of community health services among individuals who were either unfamiliar or uncertain about accessing these services. To support community members experiencing more complex health concerns that required referrals to local health care facilities, several CHWs discussed different strategies they used to encourage health service access and use. As one participant shared, "*At first, because they were hesitant to go to the health centres, I offered to go with them to the centre… So I would walk an hour from my house to the centre and they would walk from their house to the centre, and we would meet there*" (P44). In this way, many CHWs demonstrated a deep commitment to ensuring that community members they supported could access and use community health services.

Across participants, there was broad recognition of the intersecting barriers impacting community health service navigation among community members, as well as a shared desire expressed to address these barriers. In addition to supporting individuals in navigating community health services, some CHWs also played a role in educating other health system actors on the needs, attitudes, and perceptions of community members toward health service access and use. One participant explained, "*So before [the Flourish] program came into our community, the people in our community were afraid to go to any health centre. Afraid to be scolded…my job would be to explain to the midwife their situation and the reason for why they don't want to visit the health centre*" (P44). For this CHW and others, it was important to share insights surrounding potential barriers to community health service access and use with other health system actors in an effort to improve overall health service navigation.

CHWs as social change agents: "I know this is my calling"

Finally, CHWs enacted Schaaf et al.'s role of 'social change agents'. In part, this function is implicitly built into the CHW role. Recognizing the inextricable links between poverty and health, the Flourish program initially focused on supporting households with extreme resource constraints who were part of savings groups. While the program has since expanded to the community at-large, the socio-economic context within households being supported remains the same. Indeed, CHWs demonstrated a deep understanding of the social and ecological determinants of ill health in their communities, many from their own lived experiences of poverty. They described the complexities of health care access and decision-making in their communities, including issues of affordability of treatment and transportation to facilities (P2, P6, P8, P38). They also traced frequent health issues like diarrhea, fever, malnutrition, and common colds to broader social and ecological determinants of health such as water, sanitation, and hygiene (WASH) challenges in the context of the intersecting impacts of poverty, food insecurity, and changing climatic conditions (P8, P18, P53, P55, P57).

Recognizing these social and ecological complexities, many CHWs reported going beyond their prescribed roles to care for individuals in their communities. Some CHWs provided their own money to cover transportation to public health care facilities or medicines (P7, P22, P32, P34), directly accompanied pregnant women or children to the local health centre rather than only providing a referral (P2, P46, P60), or bought their own over-the-counter medications to offer as a supplement to what they could provide as a CHW (P16, P45, P55, P58). Many CHWs engaged their role whenever called upon by individuals, as community members would telephone or visit their homes outside of normal working hours (P9, P12, P18, P22, P55). Those with pre-existing relationships to households sometimes mentioned providing additional emotional and social support to community members such as support with navigating relationship challenges within an individual's family (P23, P27, P33, P36).

For many not able to provide additional information or material supports, beyond the CHW role, they expressed a desire to do more to support their community's health. For example, one CHW shared that *"I want to conduct a community meeting about health to provide counselling for mothers"* (P6). This CHW and many others actively saw themselves as contributing to the wellbeing of their communities and as having social agency and impact (P15, P18, P64). They often shared this with emotion – for instance, CHWs stated that, "*I know this is my calling…even if it isn't through money, but by helping others. It's my passion"* (P6) and *"I am way more motivated at the moment because it is my way to help people suffering poverty"* (P62). In reflecting on financial incentives and compensation for their work, some CHWs' responses further illustrated how they perceived their role as providing important social support for their communities: *"I [am] emotional because even with less pay, I love to do the job, especially if I'm able to help other people"* (P11).

In the varied and extensive material, emotional, and social supports CHWs offered to individuals – and how they perceived of themselves as making a difference in their communities – CHWs embodied the role of 'social change agents'. In the words of one CHW, *"Yes, I would continue even if there was no incentive because I can help others. Even if it's hard I will still continue. I am thankful that ICM can help others too…that I am the bridge"* (P14).

Across these findings, CHWs' positionalities and social networks shaped the quality and degree of collaboration with the public health

system. As service extenders, CHWs collaborated with the public sector to identify individuals in need of support, deliver medicines and medical care, and provide a continuity of care with the public health system. CHWs held a 'cultural broker' role, negotiating trust with community members to communicate health needs to both the NGO and public sector and to support health service navigation. Finally, CHWs embodied the role of social change agents as they provided material, social, and emotional support beyond their prescribed roles to community members and saw themselves as making a tangible difference in their communities.

Discussion

Findings from this study highlight how CHWs affiliated with an NGO-led CHW program navigated their roles and collaborated with other health system actors in their communities to address maternal and child health concerns. Indeed, previous research in India (Scott et al., 2018), Ethiopia (Mamo et al., 2019), South Africa (Brooke-Sumner et al., 2016), and Zimbabwe (Mazzeo and Makonese, 2009) examined how challenges and opportunities stemming from collaboration among health system actors in different sectors can influence community-level service delivery and health outcomes. In Southeast Asia, recent research at the national level in Cambodia has pointed to an openness and ambition among health system actors representing different sectors to collaborate to improve child health in the context of the SDGs (Helldén et al., 2023). However, an examination of how this intersectoral collaboration may unfold in practice at the community level is limited in Southeast Asia. This study builds on previous research that examines the role and operations of government-affiliated CHWs in the Philippines (Dodd et al., 2021; Mallari et al., 2020; Matsumoto-Takahashi and Kano, 2016; Yamaguchi et al., 2023; Yamashita et al., 2015; Yu et al., 2023) to consider how CHWs affiliated with an NGO-led CHW program operate alongside and work with other community-based health system actors.

Findings from this study also highlight how CHWs affiliated with an NGO-led CHW program navigate and operate within a decentralized health system where the quality and effectiveness of health services may vary across communities. A recent review examined challenges surrounding NGO-public sector collaboration to deliver health services and demonstrated how key challenges may constrain this collaboration (Yamaguchi et al., 2023). Challenges discussed included the navigation of differing goals, priorities, roles, and responsibilities among stakeholders, concerns expressed by NGO actors in navigating bureaucracy within the public sector, broader trust and communication issues between stakeholders, and the greater level of power and authority of the public sector in contrast to NGOs (Rajabi et al., 2021). Amid these challenges, there is limited examination of how health system governance arrangements may shape NGO-public sector collaboration to deliver health services at the community level (Wamai, 2008). Across settings, consideration of the broader health system governance context is critical, as these governance arrangements fundamentally shape health service delivery as well as the degree to which NGOs can engage and collaborate with the public sector (Mugisha et al., 2005; Gómez-Jauregui, 2004; Schneider, 2019).

Findings from this study offer insights into the ways in which health system governance arrangements may influence the role of CHWs affiliated with an NGO-led CHW program in supporting and delivering community-level health services in the context of broader NGO-public sector collaboration (Lewin et al., 2021). First, and as observed in this study, broader governance arrangements shape the extent to which CHWs affiliated with an NGO-led CHW program may embody and enact 'service extender' and 'cultural broker' roles. For the service extender role, prioritization of health services and resources among local government units can shape the perceived need and urgency for CHWs affiliated with NGO-led CHW programs to address existing gaps within community health services. For the cultural broker role, variation in the complexity of community health systems may shape the degree to which CHWs affiliated with NGO-led CHW programs are called upon to support health service navigation among fellow community members. These findings may be relevant not only in the Philippines, but also in other settings where NGO-led CHW programs operate across communities and jurisdictions in countries with decentralized health systems. Second, this study demonstrated how the positionality of CHWs influenced the ability of these individuals to navigate collaboration with other health system and local government actors. More specifically, CHWs who held pre-existing relationships and trust with other health system and local government actors were better able to leverage these relationships to meet the health needs of fellow community members (Gebremeskel et al., 2022; Rafiq et al., 2019; Mishra, 2014). Importantly, the role of positionality in shaping the ability of CHWs to collaborate with other health system and local government actors may influence the extent to which these CHWs may be able to enact a 'social change agent' role. If pre-existing relationships and trust held by CHWs affiliated with an NGO-led CHW program provide a foundation for subsequent NGO-public sector collaboration at a community level, advocating for change or transformation within local health system governance may create tension within these relationships. Further research is needed in the Philippines and across other country contexts to examine whether CHWs affiliated with an NGO-led CHW program experience these tensions, and whether these tensions hinder or facilitate advocacy efforts for broader structural changes to improve the health and wellbeing of community members (Kane et al., 2021; LeBan et al., 2021).

This study has several limitations. First, although participant confidentiality was assured and the research team was explicitly positioned as 'external' to ICM operations, CHW participants may still have perceived of the research partnership as one of 'working for' ICM as researchers. This perception may have shaped responses by participants by them highlighting more favourable aspects of their work or overstating their role or impact in relation to the communities they serve. Second, although ICM's Flourish program operates in 18 provinces, CHWs interviewed for this study were from one province in the Philippines. Further research could expand this study to other areas of the Philippines to account for the potential influence of different regional health offices in shaping community health services as well as the quality and effectiveness of NGO-public sector collaboration for community-level health service delivery. Finally, public health system actors (e.g., health care workers, health administrators, local government unit officials) were not formally recruited and interviewed for this study. Future research could examine how these actors experience working alongside CHWs affiliated with an NGO-led CHW program as well as NGO-public sector collaboration in health service delivery. Importantly, this subsequent research should consider how health system governance arrangements may be experienced by these health system actors and their perceptions surrounding how these arrangements may impact intersectoral collaboration.

Conclusion

Meeting the child and maternal health-related SDGs and enhancing health equity across resource-constrained settings demands collaboration across sectors and between health system actors. In this study, we examined the roles and experiences of CHWs affiliated with an NGO-led CHW program in the Philippines as they collaborated with other health system actors. Through these efforts, CHWs embodied and enacted a 'service extender', a 'cultural broker', and a 'social change agent' role through their efforts to address child and maternal health concerns in their communities. The ability of CHWs to enact these various roles was shaped by their positionality including their pre-existing trust and relationships with other health system and local government actors. In addition, health system governance and decentralization influenced the roles and experiences of CHWs in this study, as these governance arrangements contributed to variations in community health services and the extent of collaboration between CHWs and other health system

actors. Overall, this study provides insights into the strategies used by CHWs to collaborate with other health system actors to improve maternal and child health. This study also contributes further understanding of how health system governance and decentralization may impact the experiences and roles of CHWs affiliated with an NGO-led CHW program as well as NGO-public sector collaboration to deliver health services at the community level.

CRediT authorship contribution statement

Monica Bustos: Writing – review & editing, Methodology, Investigation. **Laura Jane Brubacher:** Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Krisha Lim-Mar:** Writing – review & editing, Methodology, Conceptualization. **Melinda Kelly Mijares:** Writing – review & editing, Methodology, Conceptualization. **Lincoln Lau:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization. **Matthew Little:** Writing – review & editing. **Warren Dodd:** Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization.

Declaration of Competing Interest

Authors MKM, KL-M, and LL receive remuneration from International Care Ministries (ICM). The authors have been provided academic freedom by ICM to publish both negative and positive results. Authors WD, LJB, MB, and ML have no competing interests to declare.

Acknowledgements

Thank you to the community health workers who participated in this study and shared their insights and experiences with our research team. Thank you to Ashleigh Domingo, Ruth Laagan, Alona Pestanas, and Jes Hernani, as well as ICM staff in Dumaguete, who supported data collection through interviewing, translation, and administration.

This work was supported by the New Frontiers in Research Fund (# NFRFR-2021-00227) and the Social Sciences and Humanities Research Council of Canada (# 892-2023-0038). These funding sources had no involvement in the study design; collection, analysis, or interpretation of data; writing of the report; or decision to submit the article for publication.

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