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# Creation of a Collaborative Model for Community Health Promotion Through Empowerment Among Community Health Workers in Japan: A Descriptive Qualitative Study

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## ABSTRACT

To promote community-based health, it is important to develop a practical model that integrates the perspectives of both public health nurses (PHNs) and community health workers (CHWs). This study explored collaboration and empowerment between PHNs and CHWs and used the findings to construct a collaborative model. Using empowerment and collaboration as the research framework, qualitative interviews were conducted with five PHNs and 24 CHWs from five municipalities in Japan. Individual interviews were held with PHNs, and group interviews (4–6 participants) were conducted with CHWs. An inductive qualitative analysis was performed. The data were organized into 7 themes. PHNs recognized CHWs' roles in supporting residents' lifestyles, building trust, promoting discussion, and collaborating. CHWs formed connections within their communities, communicated within their organizations, and found meaning in their work. These findings informed the creation of a collaborative model. The proposed model can help enhance the practical skills of health professionals involved in community health promotion and support effective collaboration between PHNs and CHWs.

## 1 | Introduction

The global population is rapidly aging. According to the World Health Organization (WHO 2025), by 2030, one in six people worldwide will be aged 60 years or older, increasing from 1 billion in 2020 to 1.4 billion, and reaching 2.1 billion by 2050. Although population aging began in high-income countries, it is now accelerating in low- and middle-income nations.

Japan, one of the fastest-aging countries, already has over 30% of its population aged 60 years or older and is facing a sharp decline in its working-age and total populations (Ministry of Health, Labour and Welfare 2022). Consequently, initiatives are needed to promote symbiotic communities adapted to local conditions and to create opportunities for active seniors

to play meaningful roles in their communities (Ministry of Health, Labour and Welfare 2022). Such local health initiatives are supported by various resident organizations, including committee-type organizations involving Community Health Workers (CHWs) local-based organizations, such as neighborhood associations; life stage-based organizations, such as child-rearing circles; and self-help groups, such as patient associations (Nakamura 2023).

CHWs are community-based healthcare providers who generally receive less formal education and training than professionals such as nurses and doctors (WHO 2020). As shown in Table 1, they play key roles in various health-promotion areas. In Japan, CHWs are trained by Public Health Nurses (PHNs) and commissioned by local governments to

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### Practitioner Points

- To enable CHWs to take initiative, it is important to build trust between PHNs and CHWs, facilitate discussion and collaboration, and provide timely encouragement.
- Collaboration between PHNs and CHWs empowers both CHWs and PHNs.
- By collaborating with each other and building relationships with the community, PHNs and CHWs promote community health.

assist in community health-promotion activities and home visits (Miyazaki et al. 2024). The inclusion of CHWs in health-promotion activities facilitates direct communication between residents and government agencies, improving service delivery (Danbara and Morita 2010). CHW programs empower CHWs by providing medical knowledge, linking them to the formal health system, and offering opportunities for meaningful work (Kane et al. 2016). However, CHWs report powerlessness and frustration when organizational and relational arrangements limit their ability to achieve impact (Kane et al. 2016).

Regarding the local health initiatives discussed above, resident organizations, such as neighborhood associations and self-help groups, can develop activities in line with the transitions of members. However, committee-type organizations involving health promotion officers are considered to be organizations aligned with administrative intentions; therefore, their activities rely on administrative policies. To promote community health development, it is important to leverage the strengths of health promotion officers and ensure that they continue their activities while being “empowered.”

**TABLE 1** | Focus areas and functions of CHWs.

Focus area	CHW function
• Primary health care	<ul style="list-style-type: none"> <li>• Delivering diagnostic, treatment or clinical care</li> <li>• Encouraging uptake of health services</li> <li>• Providing health education and behavior change motivation</li> </ul>
• Child health	<ul style="list-style-type: none"> <li>• Data collection and record-keeping</li> </ul>
• Maternal and child health	<ul style="list-style-type: none"> <li>• Improving relationships between health system</li> </ul>
• Noncommunicable diseases	<ul style="list-style-type: none"> <li>• Functionaries and community members</li> </ul>
• Outreach to specific underserved groups	<ul style="list-style-type: none"> <li>• Providing psychosocial support</li> </ul>

Source: Author, based on WHO (2020).

The PHNs who train CHWs experience problems concerning CHWs' activities, particularly, “how to provide them with the support they need to enhance community-based activities” (Ide et al. 2015). The attitude of PHNs regarding education/training and assistance to enhance CHWs' impact the effectiveness of local-resident-centered activities. Thus, adopting cooperative perspectives is necessary for PHNs to help them foster equal relationships with CHWs (Franklin et al. 2015). Furthermore, utilizing CHWs' strengths and maintaining relationships with them are important for PHNs in promoting empowerment and allow CHWs to build their skills while performing their activities (Laurenzi et al. 2021).

However, many of the work-related tasks performed by PHNs relate to health (e.g., medical examinations); consequently, they have limited opportunities to gain experience in community health promotion (Nakaita 2015). Meanwhile, only a few organizations have developed training and support manuals for CHWs (Taguchi et al. 2019). Therefore, it is important to develop a model that guides PHNs in their community health promotion practices, including how they may collaborate with CHWs to empower CHWs. The development of a practical collaborative model will enhance the competencies of public health nurses and contribute to the improvement of educational programs.

## 2 | Background

Based on the above, a review of existing studies on the empowerment of CHWs and their collaboration with PHNs was conducted to inform the development of a potential model.

### 2.1 | Empowerment and CHWs

Research on CHWs' empowerment has been conducted since the 1990s. CHWs reportedly perform many target activities as part of their development program, which cover HIV infections (Horn and Brysiewicz 2014; Campbell et al. 2009), cancer and diabetes education involving high-risk individuals (Cueva et al. 2018; Castillo et al. 2010), and activities involving minorities (Islam et al. 2017). According to the research conducted by Kane and others (Kane et al. 2021), CHWs resent being treated as just another pair of hands at the beck and call of formal health workers. The experience of being a CHW is evolving, and many are accumulating substantial social capital over time emerging as influential social actors in the communities that they serve. However, the role of CHWs in urban communities in low- and middle-income countries is reportedly restricted to home visits and individual capacity-building; their role does not extend to men, youth, or working women, and they do not support community empowerment or form a link with social services (Ludwick et al. 2020).

In Japan, research has been conducted since 2000 on not only CHWs committee members, but also on residents' organizations, including residents' associations and voluntary groups that develop independent activities according to the intentions of members. Studies focusing on various words similar to empowerment (Fukumoto et al. 2013, Takano 2011, Koyama and Murayama 2011), self-change (Kawano and Yoshida 2007) have been conducted.

## 2.2 | Collaboration and CHWs

Research on teamwork and collaboration between CHWs and healthcare teams (Franklin et al. 2015) highlighted five essential characteristics of good relationships between them: (1) shared understanding of the roles, norms, values, and goals of the team, (2) egalitarianism, (3) collaboration, (4) interdependence, and (5) synergy. Kim et al. (2019) established the first community-based family planning (CBFP) learning site in the Busia district, Uganda, using a quality improvement collaborative (QIC) model. Furthermore, Vallières et al. (2018) developed a robust, 6-item measure of perceived supervision (PSS), considering regular contact, two-way communication, and joint problem-solving elements as critical elements from the perspective of CHWs. However, although many studies have examined the support provided to CHWs and the training of CHWs (Brandford et al. 2019; Toyama et al. 2016), the effects of such support and training on the details and processes of the CHW–PHN collaboration, and on their respective empowerment, have not been identified.

## 2.3 | Objective

This study aimed to create a collaborative model for community health promotion through empowerment among CHWs.

## 2.4 | Research Questions

- How are CHWs empowered through collaboration with PHNs?
- How should PHNs and CHWs collaborate to promote CHWs' empowerment?

## 2.5 | Theoretical Basis and Research Framework

This study uses the theory of collaboration (Gottlieb et al. 2005) and empowerment (Hawks 1992). Empowerment is defined as “improving skills and efficiency in order to attain individual and societal objectives” (Hawks 1992). It is a multidimensional concept describing development within a relationship between two or more people, and development from individuals to organizations and communities (Hawks 1992). Meanwhile, collaboration is defined as people understanding and participating in work to satisfy needs, achieve objectives, and/or attain empowerment (Gottlieb et al. 2005; Henneman et al. 1995; Suzuki 2006). Collaboration facilitates empowerment (Gibson 1991; Rodwell 1996), and empowerment is attained through collaboration (Courtney et al. 1996; Gottlieb et al. 2005). Thus, empowerment and collaboration are strongly interlinked; consequently, the terms were the theoretical bases of this study. To promote community health, it is essential for PHNs to assess and collaborate with CHWs while understanding their level of empowerment. It is also important to capture how empowerment has changed as a result of such collaboration. By applying these two theories—empowerment and collaboration—it becomes possible to illustrate the relationship between collaborative practice and changes in empowerment.

Figure 1 demonstrates the framework of this study, which comprises the following elements: (1) PHNs' Perspectives on Community Health Promotion/Training Policy for CHWs, (2) collaboration between PHNs and CHWs, and (3) empowerment of CHWs. Regarding (1), CHWs are assigned by government agencies to act as residents who collaborate with PHNs. Consequently, CHW activities are influenced by both PHNs' perspectives regarding health promotion and their policies regarding the education/training of CHWs, which are based on the abovementioned perspectives. To investigate (2), the Spiraling Model of Collaborative Partnership (Gottlieb et al. 2005) was used as reference. This model describes four interrelated phases: exploring and getting to know each other, “zeroing in” (i.e., setting objectives), “working out” (i.e., performing activities), and reviewing. Regarding (3), a preliminary step for this study, the factors that comprise the empowerment of CHWs were qualitatively identified and integrated by reviewing 14 papers published in Japan and overseas (Matsui et al. 2018). These actions will advance the promotion of community health.

Briefly, it is important to establish the key terms in which this study is anchored. First: empowerment of CHWs; this expression signifies the process and activities through which CHWs' thought processes, awareness, attitudes, and behaviors are improved and their skills and efficiency are consequently enhanced so that they can better promote the health of individuals, organizations, and communities. Second: collaboration; this term refers to the process by which, through the phases of “exploring,” “zeroing in,” “working out,” and “reviewing,” PHNs and CHWs form and develop their relationship as partners while concurrently working together toward specific objectives and adjusting their activities accordingly.

## 3 | Materials and Methods

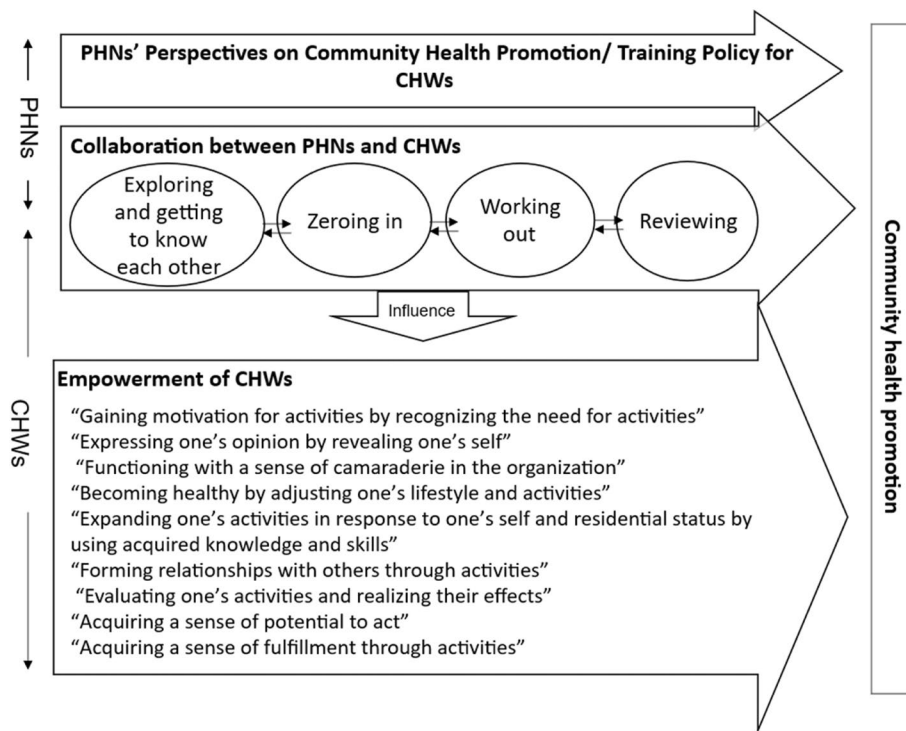
### 3.1 | Design

To comprehensively understand CHWs' and PHNs' perspectives of their partnership, this study adopted a qualitative descriptive design, as explained by Sandelowski (2000, 2010). This approach affords the presentation of relevant events and experiences chronologically. Based on the theory of empowerment and collaboration, a research framework was developed to guide the interview design and data analysis.

### 3.2 | Data Collection

#### 3.2.1 | Sample

The subjects comprised five PHNs and 24 CHWs. Five municipalities in Japan were targeted, with one PHN recruited from each; these PHNs had 15–24 years of experience as PHNs; they also had the experience of collaborating with CHWs and being in charge of their training. The CHWs were also recruited from these five municipalities, with 4–6 selected from each. Experienced PHNs could supervise district activities, provide guidance and generalization of district activities in their duties, negotiate and coordinate with local representatives, and engage in collaborative activities (Murashima 2016). Usually, one public health nurse is responsible for one area. Therefore, abundant data could be obtained from one



**FIGURE 1** | The study framework. The study framework comprises the following elements: (1) PHNs' policies for educating/training CHWs regarding the implementation of health-promotion activities in local communities, (2) collaboration between PHNs and CHWs, (3) empowerment of CHWs, and (4) community health promotion. Regarding (1), CHWs are assigned by government agencies to act as residents who collaborate with PHNs. Consequently, CHW activities are influenced by both PHNs' perspectives regarding health promotion in local communities and their policies regarding the education/training of CHWs, which are based on the abovementioned perspectives. To investigate (2), the Spiraling Model of Collaborative Partnership (Gottlieb et al. 2005) was used as reference. This model describes four interrelated phases: Exploring and getting to know each other, "zeroing in" (i.e., setting objectives), "working out" (i.e., performing activities), and reviewing. Regarding (3), a preliminary step for this study, the factors that comprise the empowerment of CHWs were qualitatively identified and integrated by reviewing 14 papers published in Japan and overseas (Matsui et al. 2018). These actions will advance the promotion of community health.

PHN. Meanwhile, CHWs usually work within organizations; thus, group interviews were conducted to uncover not only the individual experiences of CHWs, but also their experiences with collaboration and organizational empowerment.

Both sides were interviewed. Individual interviews were conducted with public health nurses, and group interviews with collaborating CHWs. Five local governments were selected so that both sides could read the cases carefully. More specifically, one PHN was selected in each city, and four CHWs and six CHWs were selected from the first and second types, respectively, of municipalities delineated below.

The activities of CHWs can be categorized into the following two types based on the nature of collaboration between PHNs and CHWs. To avoid bias in the data collected, participants were selected from both types.

1. Municipalities in which PHNs and CHWs collaborated on only health-related tasks and activities such as home visits and in which government agencies tended to take leadership roles in such activities.
2. Municipalities in which CHWs performed leadership roles in activities such as parenting classes and in which they were considered the equals of government agencies

A request letter was sent to the CHW Training Department of Prefecture A, and an oral explanation of the study's purpose was provided to request an introduction to potential candidate municipalities, including those that had received activity awards. Additionally, the department was asked to contact the chief PHNs of the candidate municipalities to inquire about their willingness to cooperate with the study and to encourage them to consider participating. Selections outside Prefecture A were made from municipalities that had publicly released reports of their activities or made public presentations of their results. In these cases, a research request letter was sent to the candidate municipalities and the purpose of the study was explained to the chief PHN by phone or in person, asking for the chief PHN to select a PHN in charge of training CHWs. The staff requested the chairman to select people as targets. The chairman was also a target candidate.

### 3.2.2 | Measures

Individual semi-structured interviews (60–90 min) were conducted with each PHN who consented to participate. Using an interview guide based on the perspective of the research framework, information was collected on perspectives regarding Community Health Promotion/Training Policy for CHWs, as well as on the processes and details of the collaborative activities

in which the participants had been involved, from the perspectives of each PHN. Regarding the empowerment of CHWs, examples of related activities and the processes utilized in those activities were also collected.

CHWs who consented to participate underwent a single group interview (60–90 min). Five group interviews were conducted, one in each municipality. Using an interview guide, based on the perspective of the research framework, details of the CHWs' collaborative activities with PHNs and their empowerment were collected.

The interview locations were consultation rooms in the facilities with which the subjects were affiliated (e.g., health centers) or rooms in facilities used by CHWs for their activities (e.g., community centers). These locations were selected to ensure privacy. The survey period was from December 2017 to March 2018.

### 3.2.3 | Ethics

This study was conducted after receiving approval from the institutional review board of the facility with which the researchers are affiliated (approval no. 29–38). Permission to conduct interviews with the study subjects from persons in charge and a full disclosure of the study's objectives, methods, and contents was made. Informed consent was obtained and assurances that participants' confidentiality will be respected and that their participation is free and can be withdrawn at any time without consequence. The authorities gave the same assurances.

## 3.3 | Data Analysis

Individual analyses (each municipality): the following perspectives related to the study framework were extracted from the PHNs' statements: (1) PHNs' Perspectives on Community Health Promotion/Training Policy for CHWs, (2) collaboration between PHNs and CHWs, and (3) empowerment of CHWs. These data were extracted and encoded. From the statements made by the CHWs, data related to (2) and (3) were also extracted and coded. The coding was conducted by Ma. All analyses were conducted by three researchers: Ma, I, and Mi (†). The PHNs' and CHWs' respective descriptions of the collaborative process were compared using the codes assigned to the data, and consequently, a narrative was fashioned. Using this narrative, the codes were applied to the study framework; this was performed by considering the descriptions of the activities and by applying a chronological sequence. If a code was unclear, the participants' original statements were reviewed for confirmation, and the code was revised as necessary. To carefully capture the relationships among various elements, such as the collaborative process and the impact on empowerment, individual analyses were conducted.

Overall analysis (integration of the analyses of five individual cases of local governments): The codes determined through the individual analyses for (1), (2), and (3) were categorized based on similarities in meaning, using the content analysis method by Graneheim and Lundman (2004). This approach allows for

the comprehensive representation of concepts by inductively deriving themes in qualitative research. The above analyses were used to develop the overall structure of our proposed model. Based on the placement of individual cases, the relationship of each element was examined, and the overall structure was shown as a model plan. The analyses were conducted iteratively, through which the overall structure of our proposed model was refined.

To ensure rigor and trustworthiness, supervision was provided by two researchers with expertise in public health nursing and qualitative research at multiple stages: during the research planning phase, after the completion of the individual analyses, after the completion of the overall analysis, and during the manuscript preparation stage.

## 4 | Results

### 4.1 | Participants

The full information for the participants is presented in Table 2. Briefly: this study included five PHNs, one from each of the five target municipalities (with populations between 50000 and 488000; mean: 240000), and 24 CHWs, 4–6 from each municipality. The investigation of each municipality's CHW system indicated 81–568 CHWs per municipality (mean: 249 CHWs), with an employment/re-employment term of two (four municipalities) or 3 years (one municipality). The decade the CHWs began their activities ranged from the 1960s to the 1980s, and they were commissioned on the local community (ward) head's recommendation. Their activities mainly comprised attending regularly held meetings, visiting homes with newborns/nursing infants, helping at municipal medical examination sites and classrooms, and performing community health-promotion activities. The mean years of experience for PHNs was 19.6. The CHWs were in their 40s–70s (mean age: 58 years), and their years of experience as CHWs ranged between 2 and 27 (mean: 10 years).

### 4.2 | Individual Case

Using City D as an example, seven codes related to the CHWs' development policy based on the health promotion goals of PHNs, 31 codes related to collaboration, and 21 codes related to CHWs were extracted from 122 data units. These codes are denoted as (P) and (C), representing those obtained from PHNs and CHWs, respectively.

For PHNs, health promotion in the district comprised the following: “to be satisfied with the current activity and go to the next activity (P),” “when promoters decide on the local health promotion theme, waiting (P),” and “tailoring activities to the district status and residents by thinking collaboratively with a PHN (P, C).” Additionally, visiting a child-rearing family involved “role play to get an image of the visit (P, C)” based on the PHN who wants to gather information about mothers, children, and the environment around the house (P).

After the visit, CHWs collaborated with the PHN to “receive information on the visiting status, such as accepting mothers and

TABLE 2 | Participant information.

Municipality	A	B	C	D	E
Population	50,000	375,000	77,000	210,000	488,000
Number of districts	3	22	17	15	27
Number of births	350	3,000	500	1,800	3,200
Number of CHWs	81	568	76	323	199
Term of office	2 years	2 years	2 years	2 years	3 years
Reappointment	○	○	○	○	×
Appointment	Neighborhood president recommendation				
Installation guidelines	○	○	○	○	○
Start of activities	1968	1984	1980	1997 (restart)	1972
Activities (request)	<ul style="list-style-type: none"> <li>• Meeting</li> <li>• Home visits to notify infant health checkups</li> <li>• Assistance with infant health checkups</li> <li>• Making snacks</li> <li>• Assistance with cancer screening</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting</li> <li>• Home visits to all households with infants</li> <li>• Assistance with infant health checkups</li> <li>• Childcare for baby food classes</li> <li>• Assistance with cancer screening</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop</li> <li>• Home visits to notify infant health checkups</li> <li>• Assistance with infant health checkups</li> <li>• Childcare for baby food classes</li> <li>• Inspection training, exchange meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting</li> <li>• Home visits to all households with infants</li> <li>• Childcare for baby food classes</li> <li>• Event awareness and participation</li> </ul>	<ul style="list-style-type: none"> <li>• Meeting</li> <li>• Workshop</li> <li>• Home visits to all households with infants</li> <li>• Home visits to all households with infants</li> <li>• Home visits to all households with infants</li> <li>• Event awareness and participation</li> </ul>
Activities (proactive)	Participating in nursery school events	Parenting Salon Management	OB's meeting	• district cultural festival	• health support
PHN	A	B	C	D	E
Experience	15 years	19 years	20 years	23 years	21 years
Collaboration with CHWs	8 years	11 years	5 years	23 years	21 years
CHWs	a (4 people)	b (4 people)	c (5 people)	d (6 people)	e (5 people)

(Continues)

TABLE 2 | (Continued)

Municipality	A	B	C	D	E
Age	60s:1 70s:3	60s:3 70s:1	50s:1 60s:3 70s:1	40s:1 50s:1 60s:3 70s:1	40s:2 50s:2 60s:1
Experience	13–19 years	4–27 years	6–12 years	2–9 years	3 years

their concerns, which were passed on to the PHN (P, C).” These activities helped them gain empowerment, e.g., “you will realize the joy of activities (C)” and “the position and activity of health promoters will be positioned in the region.”

### 4.3 | Collaboration and Empowerment Between PHNs and CHWs

As a result of the overall analysis, 313 codes, 124 sub-categories, 44 minor categories, 18 major categories, and 7 themes were identified. Examples of categorization are shown in Table 3, and the results of the overall analysis are presented in Table 4.

Regarding the perspective of Education/Training Policies Based on PHNs’ Goals for Community Health Promotion, we extracted two major categories: [a. Consider the role of CHWs based on residents’ lifestyles] [b. Reconsider the training policy and the role of PHNs based on the local situation captured through collaboration]. From these categories, the theme “Exploring the Role of CHWs through Collaboration” was generated.

For Collaboration between PHNs and CHWs, the following categories and themes were identified: [c. PHNs provide training and activity proposals that are incorporated by CHWs]. From this category, the theme “Led by PHNs” was generated. [d. Build trust by respecting and acknowledging each other], [e. Set goals and challenges and discuss ways to improve], [f. Work together while sharing roles], [g. Work in a timely manner while monitoring their motivation and ability], These categories together formed the theme “Relationships are enhanced through collaborative activities accompanied by mutual dialog.” [h. CHWs act as the main body and PHNs provide support], and [i. Establish mutual connections with the local community and strengthen the activity base]. From these categories, the theme “CHWs take the initiative in reinforcing community-based collaborative efforts” was derived.

For Empowerment, three themes were generated: “CHWs Empowerment as Expressed through Self-Transformation”, comprising: [j. Gain motivation for activities by recognizing the need for activities], [k. Get healthy by adjusting one’s lifestyle and activities], [l. Acquire a sense of potential to act], [m. Acquire a sense of fulfillment through activities]. “CHWs Empowerment Directed toward Social Transformation”, comprising: [n. Function with a sense of camaraderie], [o. Expand one’s activities in response to one’s self and residential status by using acquired knowledge and skill], [p. Form relationships with others through activities], [q. Evaluate one’s activities and realize their effects]. “Empowerment of PHNs”, comprising: [r. District activity capacity is improved by learning from CHWs].

### 4.4 | Creating the Proposed Collaborative Model

Based on the theme and major categories, a proposed collaborative model for promoting health in local communities through the empowerment of CHWs was created (Figure 2). In this

**TABLE 3** | Examples of codes, sub-categories, categories and themes from content analysis of narratives about collaboration.

Theme	Major-categories	Minor-categories	sub-categories	Codes		
Exploring the role of CHWs through Collaboration	a. Consider the role of CHWs based on residents' lifestyles	PHNs examine the need for certain activities based on an understanding of the daily lives of local residents	PHNs ascertain the living circumstances of local residents and examine the need for certain activities	A-1 B-7 B-8		
			PHNs expect CHWs to provide families and local community residents with information about health and services	A-5 B-3 D-7		
			PHNs expect CHWs to watch over community members to ensure that they can live safely and securely	B-2 C-1		
			PHNs expect CHWs to be able to gather information regarding residents' household and surrounding environments	D-6		
			PHNs encourage CHWs to become interested in CHW activities and personal health	A-4 B-1 E-1		
			PHNs encourage CHWs to utilize personal experiences when performing activities in the local community	A-3		
			PHNs improve CHWs' skills and help them become active leaders in their communities	C-3		
			PHNs examine the term of CHWs with consideration for continuity and autonomy in community health promotion	E-5		
			PHNs recognize the need to cooperate in a manner that ensures that the information that CHWs obtain can be utilized in community activities	A-7 C-2		
		PHNs compartmentalize the roles expected of CHWs and the roles played by PHNs	B-4 D-5			
		PHNs value community-collaborative programs, such as CHWs' activities	D-1 E-4			
		PHNs become aware of the need to maintain a balance between the activities requested by government agencies and independent activities	B-6			
		PHNs provide support that affords the implementation of activities that feature aspects noted by CHWs and CHWs' own ideas	A-6 D-2 D-4 E-3			
		Reaffirming the importance of community connections and the necessity of CHWs through observing CHWs' roles, among six sub-categories	B-13 among 12 codes			
		b. Reconsider the training policy and the role of PHNs based on the local situation captured through collaboration	PHNs re-examine education/training policies while collaborating with CHWs among three Minor-categories			

Abbreviations: CHW, Community health workers; PHNs, public health nurses.

model, PHNs [a. Consider the role of CHWs based on residents' lifestyles] before collaborating. Then, through collaboration between PHNs and CHWs, the CHWs become empowered as they adopt the responsibility of promoting health in local

communities. Additionally, PHNs [b. Reconsider the training policy and the role of PHNs based on the local situation captured through collaboration] and are influenced by collaborating with and empowering CHWs, thereby empowering themselves.

**TABLE 4** | Collaboration and empowerment between PHNs and CHWs.

Themes	Major-categories
Exploring the role of CHWs through Collaboration	a. Consider the role of CHWs based on residents' lifestyles
Led by PHNs	b. Reconsider the training policy and the role of PHNs based on the local situation captured through collaboration
Relationships are enhanced through collaborative activities accompanied by mutual dialog.	c. PHNs provide training and activity proposals that are incorporated by CHWs
CHWs take the initiative in reinforcing community-based collaborative efforts	d. Build trust by respecting and acknowledging each other
CHWs empowerment as expressed through self-transformation	e. Set goals and challenges and discuss ways to improve
CHWs Empowerment directed toward social transformation	f. Work together while sharing roles
Empowerment of PHNs	g. Work in a timely manner while monitoring their motivation and ability
	h. CHWs act as the main body and PHNs provide support
	i. Establish mutual connections with the local community and strengthen the activity base
	j. Gain motivation for activities by recognizing the need for activities
	k. Get healthy by adjusting one's lifestyle and activities
	l. Acquire a sense of potential to act
	m. Acquire a sense of fulfillment through activities
	n. Function with a sense of camaraderie
	o. Expand one's activities in response to one's self and residential status by using acquired knowledge and skill
	p. Form relationships with others through activities
	q. Evaluate one's activities and realizing their effects
	r. District activity capacity is improved by learning from the CHWs

Abbreviations: CHWs, Community health workers; PHNs, public health nurses.

A guide was developed for PHNs and health CHWs to help them apply the model in their practice. Specifically, the guide presented the model as a structural diagram and included checklists for (1), (2), and (3) using themes, categories, and subcategories for PHNs and health CHWs to check for themselves. Explanations on how to use the guide were also added (see Figure 3).

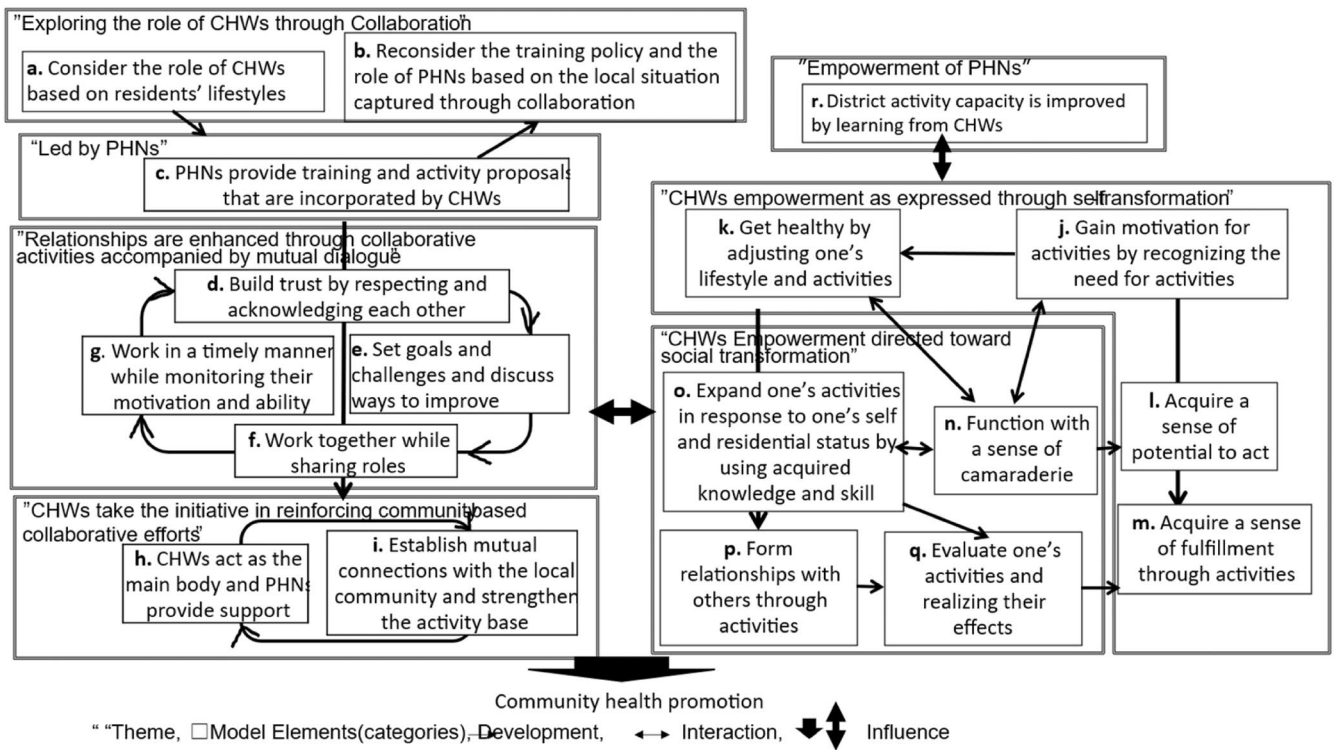
## 5 | Discussion

### 5.1 | Features of Collaboration as a Process

CHWs are commissioned by government agencies and consequently become members of committee-type organizations (Nakamura 2023). In the early stages of CHWs' leadership, "Led by PHNs" through collaboration, this stage is believed to develop into another where "CHWs take the initiative in reinforcing community-based collaborative efforts". Vareilles et al. (2017) identified broad intervention approaches in 23 reviewed papers: providing skill-based and ongoing training, incentives, supervision, and logistical support for task distribution and implementation. Mechanisms for improving CHWs' performance emphasized strengthening recruitment, training, and retention strategies, as well as enhancing CHWs' motivation (Musoke et al. 2021). The basic elements

of a collaborative partnership include sharing power, being open-minded and respectful, and accepting without value judgments (Gottlieb et al. 2005). For CHWs to reach a stage where they can act autonomously, four factors must recur in a spiral: "Relationships are enhanced through collaborative activities accompanied by mutual dialog."

Examination of independently implemented CHW health-promotion activities in City D showed that "[representatives of] districts/wards where no such activities were being performed asked [the CHWs] whether these could be extended to areas." "In response, the CHWs began implementing the activities in these districts/wards, promising to 'propose that the activities be conducted in areas.'" In such cases, PHNs maintained that, even if a district ultimately decided not to implement the activities, they would "do best to provide support [until the final decision], as the activities themselves would positively impact the district." This example from City D illustrates "determining appropriate timing and maximizing health-promotion activities." When "CHWs state that they are unsure whether their activities are significant enough to report at general meetings," both parties discuss the details; for example, "PHNs explain the importance of reflection," and "CHWs discuss the need to gain renewed awareness by reporting their activities to CHWs." Such discussions can make activity reports part of general meetings, leading to "an increase in



**FIGURE 2** | Collaborative model for promoting empowerment among community health workers. “ ” indicates the themes, while □ denotes the elements of the model. → is Development, ↔ is Interaction, ↕ is Influence. In this model, PHNs [a. Consider the role of CHWs based on residents' lifestyles] before collaborating. Then, through collaboration between PHNs and CHWs, the CHWs become empowered as they adopt the responsibility of promoting health in local communities. Additionally, PHNs [b. Reconsider the training policy and the role of PHNs based on the local situation captured through collaboration] and are influenced by collaborating with and empowering CHWs, thereby empowering themselves.

proactive statements by CHWs.” Consequently, PHNs recognize “the importance of showing empathy when others speak about their activities, no matter how small.”

In Japan, the problem lies in the lack of shared purpose among members and the stagnation of activity content and methods (Taguchi et al. 2019). However, through the collaborative process described above, while sharing the purpose of activities, both groups share activity goals, gain awareness of difficulties, and find ways to resolve them.

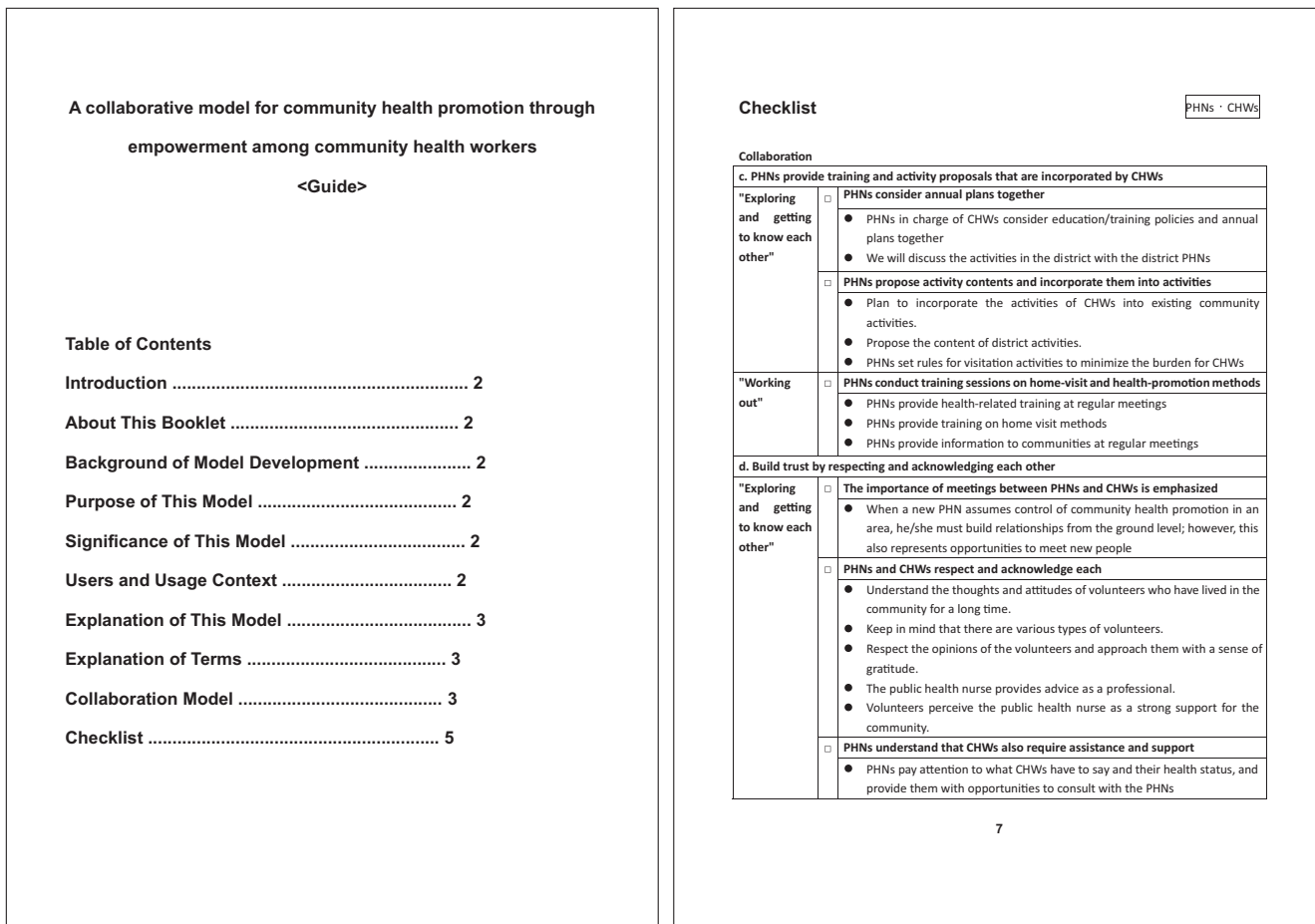
As the final stage of collaboration, it was felt that [i to strengthen the base of activities, creating mutual ties with the local community is essential.] Positive connections between community members and CHWs are said to produce positive outcomes (Vareilles et al. 2017). Furthermore, CHW experience is evolving, and many accumulate substantial social capital over time—emerging as influential actors in communities (Kane et al. 2021). These results suggest that community empowerment can be achieved through collaboration between PHNs and promoters, who together understand and promote the health of local residents.

## 5.2 | Features of Empowerment Through Collaboration

The empowerment of CHWs starts with [j. Gain motivation for activities by recognizing the need for activities]; through

collaboration [c. PHNs provide training and activity proposals that are incorporated by CHWs]. Collaboration leads to the empowerment of attitudes and behaviors through [k. Get healthy by adjusting one's lifestyle and activities], while concurrently [o. Expand one's activities in response to one's self and residential status by using acquired knowledge and skill]. This, in turn, develops into [n. Form relationships with others through activities]. It also leads to [q. Evaluate one's activities and realizing their effects] and [m. Acquire a sense of fulfillment through activities]. In terms of the empowerment of ideas and perceptions, which are related to the empowerment of attitudes and behaviors, there may be a development from [j. Gain motivation for activities by recognizing the need for activities] to [l. Acquire a sense of potential to act] and [m. Acquire a sense of fulfillment through activities]. Individual empowerment relates to self-transformation, while organizational and community empowerment tends toward societal transformation (Kageyama 2003). Furthermore, “self-transformation” and “societal transformation” are interrelated, as suggested by the findings, and their development encourages people to promote health. To achieve this, [n. Function with a sense of camaraderie] is important.

The research framework initially indicated that only CHWs would experience empowerment; however, the interview findings demonstrated that PHNs also felt empowered. Collaboration has been described as “a fluid process in which all partners move forward based on proactive participation and agreement” (Gottlieb et al. 2005). As collaboration represents two or more



**FIGURE 3** | Guide excerpt. A guide was developed to make it usable by PHNs and health CHWs in practice. Specifically, the model was presented as a structural diagram, and checklists were created for (1), (2), and (3) using themes, categories and subcategories for PHNs and health CHWs to check for themselves. Explanations on how to use the guide were also added. In addition, an explanation of how to use the guide was added. The figure is an excerpt from the guide. On the left is the table of contents of the guide, and on the right is a part of the checklist.

parties participating equally in an activity, resulting in an interaction between them, we believe that PHNs are empowered in collaboration with CHWs. This suggests that the policies for educating CHWs could be re-examined, considering the influence on PHNs.

Finally, collaboration and empowerment lead to [i. Establish mutual connections with the local community and strengthening the activity base] and [p. Form relationships with others through activities], which lead to the promotion of health in local communities.

### 5.3 | Academic Novelty

Previous studies on this topic include those of Shigematsu et al. (2015), who developed a scale for assessing partnership development among PHNs in Japan, and Shrestha (2003), who developed an empowerment model for CHWs in Nepal. However, no studies have identified the detailed contents and processes of collaboration between PHNs and CHWs or the effect such collaboration has on empowerment. Additionally, although the significance of CHWs' role impacts the types of activities they perform after their term of office finishes, to

the best of our knowledge, no studies have identified PHNs' policies regarding the education/training of CHWs or issues regarding their collaborative efforts. Thus, the novelty of this study lies in the creation of a practical model for addressing these issues.

### 5.4 | Social and Nursing Significance

This model emphasizes the perspectives of PHNs and CHWs. As PHNs have limited opportunities to gain experience in local community health promotion when working with CHWs (Nakaita 2015), the model can help PHNs understand the importance of community health promotion. Thus, the use of this model is likely to foster improvements in PHNs' practical skills.

When the model is used to clarify the significance of CHWs' roles, it will facilitate the creation of positive relationships with PHNs working at government agencies. The findings suggest that for CHWs, performing health-promotion activities while improving one's ability to manage personal health and related skills leads to reductions in health-related anxieties among residents and increases awareness of health-related

issues. This can promote mutual assistance among residents (including CHWs) and encourage community-resident-led health promotion in local communities.

The sustainability of programs for CHWs requires institutionalization, sustainable funding, economic empowerment of CHWs, local ownership, and a strengthened research agenda (Musoke et al. 2021). In Japan, PHNs who belong to the government train CHWs so that they can be continuously involved in promoter activities. However, as the research framework demonstrated, it is necessary for PHNs to carefully consider training policies and clarify the position of CHWs.

## 5.5 | Applicability to Other Communities

Most previous studies have dealt with the activities of CHWs in low- and middle-income countries, whereas this study was conducted in a high-income country. Vareilles et al. (2017) stated that positioning CHWs within the community and establishing a clear role are important. Furthermore, working together based on the development policy of members is important; therefore, developing activities according to the situation of the community and the guidelines of activities is necessary. This model is considered applicable for the development of activities in any region and activity system.

## 5.6 | Strength and Limitations of the Work

There are some limitations to this study. First, our ability to demonstrate the effect of collaboration on the empowerment of CHWs and to identify the details of the relationship between these factors was limited. Understanding how PHNs empower CHWs and the changes that occur in CHWs after empowerment is necessary. Furthermore, investigating the validity, efficacy, and practicality of our model is crucial to refining it to ensure that it can serve a practical role in facilitating collaborations between PHNs and CHWs.

## 6 | Conclusions

This study aimed to create a collaborative model for promoting community health through the empowerment of CHWs based on empowerment and collaboration theories. Individual interviews were conducted with PHNs responsible for training CHWs in five cities, and group interviews were conducted with 4–6 CHWs from each city. The data was qualitatively analyzed. The analysis generated 7 themes and revealed that by considering the role of CHWs based on residents' lifestyles and by building mutual trust, discussing, and working together, PHNs developed training and activity contents that were subsequently incorporated by CHWs. Furthermore, through collaboration, CHWs developed a sense of camaraderie and functioned within their organization while forming relationships with the surrounding community and achieving a sense of satisfaction. The model proposed in this study, which reflects PHNs' approach to training CHWs, demonstrates the nature of collaboration, the content and processes involved, and its impact on empowerment.

## Author Contributions

**Rie Matsui:** conceptualization, investigation, funding acquisition, writing – original draft, methodology, validation, visualization, writing – review and editing, formal analysis, project administration. **Mina Ishimaru:** conceptualization, formal analysis, methodology, supervision, project administration, writing – review and editing.

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## Ethics Statement

This study was conducted after receiving approval from the institutional review board of Chiba University Graduate School of Nursing (approval no. 29–38).

## Consent

Each research participant was provided with both written and verbal explanations of the study based on an information sheet. Written informed consent was obtained from all participants by having them sign two copies of the consent form—one kept by the participant and the other by the researcher.

## Conflicts of Interest

The authors declare no conflicts of interest.

## Data Availability Statement

The authors have nothing to report.

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