Knowledge, Attitudes, and Skills Among Primary Health Care Workers in Developing Health Promotion Settings in a District of Sri Lanka

Ranga SABHAPATHİGE[1], Kanchana DEERASİNGHE[2]

Corresponding Author

Ranga SABHAPATHİGE

DOI

https://10.48121/jihsam.991227

Received

04.09.2021

Accepted

29.03.2022

Published Online

27.04.2022

Key Words

Health Promotion Setting
Knowledge
Primary Health Care Workers
Attitude
Skills, Sri Lanka

ABSTRACT

The purpose of this study was to determine primary health care workers' knowledge, attitudes, and skills in establishing health promotion settings in the Kalutara district of Sri Lanka.

In this descriptive, cross-sectional study, data were collected from study participants using a structured, pre-tested, and self-administered questionnaire.The data was analysed using statistical tests and Chi-square values. The majority (215 people, or 70.0%) had "poor" knowledge. Knowledge was found to be significantly related to educational level, general certificate of education, advance level or higher (p = 0.012), and ability to read English (p = 0.021). Public health experience of less than five years for public health midwives (PHMs) was significantly associated with knowledge (p = 0.002). The attitude level was favourable (204, 69.4 %). The level of knowledge was found to be significantly related to the level of attitudes (p = 0.004). Only 25.1% (77) of those polled had adequate skills. The presence of health promotion settings in their fields was found to be significantly related to skill level (p = 0.000). The availability of healthy settings in the fields of PHMs with the extent of field areas less than the mean (p = 0.017) was significantly associated.

The current study concluded that primary health care workers had "poor" knowledge and skills in establishing health promotion settings, but "good" attitudes. The most common barriers identified were a lack of time and insufficient training in the field of health promotion.

[1] *Visiting research fellow, Center for health services studies, Universty of Kent, canterbury. rangasabhapathige@mail.com / Orcid Number: https://orcid.org/0000-0001-6056-261X*

[2] *Visiting research fellow, Center for health services studies, Universty of Kent, canterbury.* deerasinghekanchana@mail.com / *Orcid Number: https://orcid.org/0000-0002-2620-4293*

INTRODUCTION

Health promotion is the process of empowering people to take charge of their health and improve it. In 1986, Ottawa hosted the first international conference on health promotion, which resulted in the adoption of the Ottawa Charter for Health Promotion. This crucial conference sparked a series of health promotion conferences. The Ottawa Charter defined health promotion action means as "building healthy public policy, creating a supportive environment, strengthening community action, developing personal skills, and reorienting health services" (World Health Organization,1986).

The healthy setting movement was first described in the 1980 health for all strategy, and it was further defined in the 1986 Ottawa charter for health promotion. Following that, Sundsvall's 1992 statement emphasised the importance of creating a supportive environment with a focus on setting for health. A healthy setting is defined as "a place where people participate in daily events where environmental, organisational, and personal factors interact to affect health and well-being" (World Health Organization, 1998a). A setting is a place where people actively live, use, and exploit the environment, as well as where people create or solve health-related problems. The World Health Organization's Jakarta declaration emphasised the importance of settings for implementing strategies and providing infrastructure for health promotion. All over the world, various types of settings are used to implement health promotion for better health. Health promotion villages, schools, preschools, and workplaces were the most commonly used settings worldwide (World Health Organization, 1997).

Chronic non-communicable diseases (NCD) such as ischemic heart diseases, diabetes, hypertension, stroke, cancer, and respiratory diseases are the leading causes of death in the world, accounting for 60% of global deaths. Of the 41 million people who died from NCDs in 2019, 15 million were between the ages of 30 and 69 years (WHO, 2019). Promoting healthy living, "better diet, enough physical activity, tobacco cessation" and healthy societies, particularly for the poor, are very important to solve these problems (World Health Organization, 2010).

In Sri Lanka, the disease burden has shifted from communicable diseases to lifestyle and environmental-related non-communicable diseases, as well as emerging infectious diseases. Due to the present quickly changing demographic, social, and economic context, as well as the epidemiological pattern of diseases, earlier health programs that were beneficial in the past may not be effective enough anymore. These issues necessitate considerable adjustments in the health system toward "new effective health promotion," which is widely recognised as the most cost-effective way to reduce global disease burden (Ministry of Health Sri Lanka, 2016).

Furthermore, health promotion was identified as a priority issue by the Sri Lankan ministry of health, and it was included in the health master plan (Ministry of Health Sri Lanka, 2007b), health promotion policy (Ministry of Health Sri Lanka, 2009a), and Mahinda Chinthana's vision for the future of the policy document (Institute of Policy Studies of Sri Lanka, 2007). Community empowerment and health promotion were also acknowledged as effective instruments in Sri Lanka's national nutritional policy (Ministry of Health Sri Lanka, 2010).

According to the Health Promotion Association of Australia (2009), a successful health promotion programme requires five abilities from health care employees. The World Health Organization's expert group meeting in 2008 advised "doing a competency evaluation among health promotion practitioners in several sectors" (World Health Organization, 2010a). Because public health midwives and public health inspectors (PHIs) are the frontline professionals that work with the community to improve their health in Sri Lanka, their knowledge, attitudes, and skills in building healthy settings are critical. PHMs accept that health promotion is a function applicable to their profession, according to a survey performed to identify essential public health functions of public health staff in Sri Lanka. However, they stated that health promotion principles were difficult to grasp and that their skills were insufficient for executing good health promotion programmes (Fernando et al,2006). According to a study conducted in Sri Lanka's Kandy area, the majority of PHMs (65.4 percent) had a poor understanding of health promotion (Perera, 2012).

Because primary health care workers' knowledge, attitudes, and skills are critical in constructing health promotion settings, it's critical to analyse those criteria among primary health care workers (PHCWs) before developing training programmes. However, relatively little research has been done in this field in Sri Lanka. As a result, the goal of this study was to determine the current gaps in primary health care professionals' abilities in building health promotion settings in Sri Lanka's Kalutara area. The Kalutara district was chosen for this study because it represents all of Sri Lanka's communities, including rural, urban, and estate settings.

Aims

To determine the knowledge, attitudes, and skills of primary health care workers in developing health promotion settings and assess the managerial interventions needed to establish health promotional settings in the Kalutara district.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted in all medical officer of health (MOH) areas of Kalutara district. The study population consisted of public health midwives and public health inspectors who worked in the Kalutara district. Public health midwives and public health inspectors of Kalutara district with a minimum 6-month service period in the public health field were included in the study. The PHMs and PHIs who were on leave for more than one month at the time of data collection were excluded from the study. All the PHMs and PHIs (n = 328) who consented and were eligible were included in the study. Therefore, the study did not need a sampling technique or a sampling size calculation.

The data was collected by using a structured self-administered questionnaire from the study participants. The questionnaire was pre-tested in the Induruwa MOH area of the Galle district.The questionnaire was comprised of six main parts to assess socio-demographics, basic training details, work experience details, language proficiencies, and working conditions. This broad group of factors were assessed for their association with knowledge, attitudes, and skills in developing health promotion settings. Eight questions with a five-point Likert scale were used to assess the attitudes and knowledge of skills were assessed by using open-ended questions. The frequency distribution of these factors was cross-analyzed against whether the PHMs/PHIs have a "good" or "poor" level of knowledge, attitudes, and skills. The chi-squared test was used wherever appropriate to assess their association. A P-value of less than 0.05 was used to determine the significance. Ethical clearance for the study was obtained from the ethical review committee of the Faculty of Medicine, Colombo.

RESULTS

In the study, 307 primary health care workers responded, with a response rate of 93.6% (307/328). According to participants' perceptions of their level of knowledge on health promotion settings, 84.8% (257) said they have "fair," "good," or "very good" knowledge, while only 15.2% (46) said their knowledge is "poor" or "very poor."

As per the scoring system described in the study, a participant who obtained a total of equal or more than 32 was grouped as having "good" knowledge and others as "poor". However, the knowledge among 70% (215) of the study participants was categorised as "poor" and only 30% (92) of the study participants were identified as having "good" knowledge.

The proportion of PHCW with a "good" level of knowledge of health promotion settings was 32.1% when the educational level was general certificate of education advanced level (GCE A/L) or higher, and it was 10% when the highest achieved educational level was GCE O/L (ordinary level). The educational level of GCE A/L or higher was significantly associated with having a good level of knowledge in health promotion settings ($p< 0.05$).

The knowledge level was not significantly associated with whether the PHCW resided in their field or not, with the respective proportions of 29.6% and 29.9% having good knowledge of health promotion settings ($p = 0.962$).

Of primary health care workers with the ability to read English (can manage, good, and excellent), a higher proportion (34.5%) had a "good" level of knowledge, while those with less ability (not at all or very little) to read English were 19.9%. The self-assessed ability to read English was significantly associated with having 'good' level of knowledge ($p = 0.021$). (Table 1)

Table 1. Distribution of the study participants by knowledge on health promotion settings and selected background characteristics

Characteristic	Knowledge "Poor" N	%	Knowledge "Good" N	%	Significance
Education Level					$x^2 = 6.136$
G.C.E O/L	27	90.0	3	10.0	df = 1
G.C.E A/L or higher	188	67.9	89	32.1	$p = 0.012$
Reside in the Field					$x^2= 0.02$
Yes	57	70.4	24	29.6	df = 1
No	157	70.1	67	29.9	$p = 0.962$
Ability to read English					$x^2 = 5.355$
Not at all, very little	177	80.1	44	19.9	df = 1
Good, excellent and can manage	36	65.5	19	34.5	$p = 0.021$

The distribution of PHMs by knowledge of health promotion settings and selected characteristics in training and public health experience is described in Table 2. The year of graduation from nursing school had no significant relationship with knowledge of health promotion settings (p = 0.535).There was no significant association between the level of knowledge of health promotion settings and whether or not the PHMs got their basic training from the Colombo nurses' training school.

The PHMs who had public health experience of fewer than 5 years had a significantly higher 'good' level of knowledge (53.3%) compared to those who had more than 5 years (25.7%) of public health work experience (p = 0.002).

Table 2. Distribution of public health midwives by knowledge on health promotion settings and selected characteristics in training and public health experience

Characteristic	Knowledge "poor" N	%	Knowledge "good" N	%	Significance
Year of passing out					$x^2 = 3.519$ df = 1 $p = 0.061$
Before 2004	124	75.6	40	24.4	
2004 or after	71	65.1	38	34.9	
NTS / RTC of basic training					$x^2 = 0.022$ df = 1 $p = 0.881$
Colombo	82	70.1	34	29.9	
Other	113	71.5	45	28.5	
Public health working experience					$x^2 = 9.958$ df = 1 $p = 0.002$
Less than 5 years	14	46.7	16	53.3	
5years or more	182	74.3	63	25.7	

Most study participants (204, 69.4%) were categorised as having "good" attitudes in developing health promotional settings according to attitude score. Only 30.6% (90) of the participants were categorised as having "bad" attitudes.

The distribution of study participants by level of attitudes towards health promotion settings and level of knowledge is described in Table 3. There was a statistically significant association between the level of knowledge and the level of attitudes (p = 0.04). The participants with a good level of knowledge had better attitudes.

Table 3. Distribution of study participants by level of attitudes on health promotion settings and level of knowledge

Level of knowledge	Level of attitudes 'Poor' N	%	'Good' N	%	Significance
Poor	73	81.1	17	18.9	$x^2 = 8.392$ df = 1 p = 0.04
Good	131	64.2	73	35.8	

Most study participants (206, 67.5%) declared that they hadn't had health promotional settings in their fields. Only 32.5% (99) of participants developed health promotional settings in their fields.

As per the scoring system described earlier, a study participant who obtained a grand total of equal or more than 30 was grouped as having "good" skills and others as "poor". According to the scoring system, the majority of study participants (230, or 74.9%) were categorised as having poor levels of skills in developing health promotional settings.

The distribution of study participants by the presence of a health promotion setting and their level of skills is shown in Table 04. There was a statistically significant association between the existence of a health promotional setting and the level of skills (p = 0.00).

Table 04. Distribution of study participants by existence of health promotion settings and level of skills

Level of skills	Existence of health promotion settings				Significance
	Yes		No		
	N (N = 306)	%	N	%	
Bad	47	20.5	182	79.5	$x^2 = 56.18$
Good	52	67.5	25	32.5	df = 1
Total	99		207		P = 0.00

The distribution of public health midwives by the existence of health promotional settings in the field and working conditions is described in Table 5. The population of less than the norm was not significantly associated with the existence of health promotional settings in their field (P = 0.975). A significantly higher proportion of PHMs (35.7%) working in areas less than the mean size had health promotional settings in their field compared to those who worked in areas with larger surface areas (P = 0.019). There was no significant association between the presence of health promotional settings and performing cover-up duties (p = 0.549).

Table 5. Distribution of public health midwives by existence of heath promotional settings in the field and working conditions

Working conditions	**Existence of health promotional setting**				**Significance**
	"Yes"		**"No"**		
	N	**%**	**N**	**%**	
Population of the field[1]					$x^2 = 0.01$
Less than 3000	39	29.5	93	70.5	df = 1
3000 or more	42	29.4	101	70.6	*p* = 0.975
Size of the field area[2]					$x^2 = 5.51$
Less than 6.5 km^2	50	35.7	90	64.3	df = 1
6.5 km^2 or more	30	22.7	102	77.3	*p* = 0.019
Doing cover up duties in another field					$x^2 = 0.359$
Yes	14	33.3	28	66.7	df = 1
No	67	28.8	166	71.2	*p* = 0.549

The managerial interventions depend on the identification of barriers and gaps in developing health promotional settings. Most study participants (181, 59%) declared that 'Not enough time' was a barrier in developing healthy settings. One hundred and thirty-nine (45.3%) PHCW perceived "not enough training" as a barrier. The other most common barriers for any grass-roots level health care worker in developing health promotional settings were "insufficient support from other sectors" and "lack of interest from the community."

DISCUSSION

The purpose of this study was to assess primary health care workers' knowledge, attitudes, and skills in health promotion settings, as well as to determine the managerial interventions required in health promotion settings in the Kalutara area.

According to the scoring system, 70 percent (215) of the study participants' knowledge was classified as "bad," while only 30 percent (92) of the study participants' knowledge was classified as "good." 87.8% (257) of primary health care providers said they had "good" knowledge of healthy settings, according to their self–assessed level of expertise. The disparity between the self-assessed and calculated levels of knowledge implies that most primary health care providers are unable to appropriately judge their degree of actual understanding of health promotion settings. Because of this erroneous view, they may be unable to participate in training programmes. According to a survey of PHMs in Kandy district, 65.4 percent of them had "poor" knowledge of health promotion (Perera, 2012).

The highest achieved educational level (p = 0.012) and the ability to read English (p = 0.021) were the background characteristics that were significantly associated with knowledge of health promotion settings. The basic qualification to enter PHMs training changed from GCE O/L to GCE A/L during the last decade. The significant association may be due to recently graduated PHMs receiving health promotion training as part of their basic training, which can have a confounding effect on their level of knowledge on health promotion.There were no books on health promotion written in either Sinhala or Tamil languages. Therefore, the ability to read English might have helped the primary health care workers improve their knowledge. Whether or not they reside in their field (p = 0.962) was not significantly associated with knowledge of health promotion settings. Perera (2012) found in his study conducted in the Kandy district that the highest achieved educational level, ability to access the internet, and ability to read English were significantly associated with knowledge of health promotion.

The year of qualifying as a PHM, the year 2004 or after, was not significantly associated with knowledge of health promotion settings (p = 0.061) or whether they obtained basic PHM training from Colombo Nursers training school or other centres was not significantly associated with knowledge of health promotion settings (p = 0.881). This finding indicated that the PHMs who were trained on health promotion had a similar level of knowledge and that the quality of training on health promotion was not differing to a greater extent between training centers. The PHMs who had public health work experience of less than five years had a good level of knowledge compared to those who had public health experience of more than five years (p = 0.002). These results may be due to the confounding effect of recently passed out PHMs being trained in health promotion during their basic training. According to Perera (2012), the qualifying year as a PHM, 2004, or earlier, was significantly associated with knowledge of health promotion.

Health promotion knowledge was not acceptable a decade after it was introduced to the curriculum of primary health care professionals in Sri Lanka and a bigger number of training sessions were conducted. This fact raises concerns regarding the quality of health promotion training, which should be taken into consideration.

The attitudes of primary health care providers in developing health promotion settings were positive (69.4%, 204), which is consistent with other worldwide studies. Peltzer (2001) reported that 63.3 percent of South African primary care nurses and midwives had positive attitudes. In another study, most of them expressed positive attitudes about health promotion as a core aspect of primary care (Douglas et al., 2006). According to the study conducted by Geense et al. (2013), the attitudes of primary care nurses on health promotion were rated as good.

Most study respondents (251, 81.6%) expressed positive attitudes about the importance of health promotion settings. In this study, there was a significant relationship between primary health care workers' knowledge of health promotion settings and their level of attitudes (p = 0.004). Better knowledge of health promotion was associated with more positive attitudes towards health promotion. This finding was on par with the study conducted in South Africa (Peltzer, 2001).

Although primary health care workers had a high level of attitudes towards health promotional settings, there were no health promotional settings in their fields of majority. Only 32.5% (99) of participants developed health promotional settings in their fields.

The level of skills in developing health promotional settings was also poor among study participants. Only 25.1% (77) of study participants possessed good skills. There was a statistically significant association between the existence of a healthy setting and the level of skills among primary health care workers (p = 0.000). The existence of a healthy setting among participants with 'good' level of skills was significantly higher than those with 'poor' skills.

The existence of a healthy setting was significantly associated with the size of the field area (p = 0.019). The existence of a healthy setting among PHMs who had been working in field areas less than 6.5 km2 was significantly higher than those who worked in areas larger than that. PHMs who worked in larger field areas had to travel more and had less time to engage in activities such as health promotion.The population size was less than the norm or performing cover-up duties was not significantly associated with the existence of a healthy setting.

Identification of barriers, gaps, and facilitators was important to deciding the managerial interventions. The main areas identified as barriers in this study are consistent with the results of other studies. Time limitation, lack of training, and lack of community interest were identified as the commonest barriers by the participants of this study. Perera (2012) in his study identified lack of training, unavailability of resources at the MOH level, and no recognition for health promotion in the current performance appraisal system as the commonest barriers. Douglas et al (2006) identified lack of time as the commonest barrier to health promotion. The study conducted by Jacobsen et al (2005) found a lack of confidence in primary health care workers as a common barrier.

Lack of interest in the community and inadequate support from other sectors were identified as barriers outside the health sector by the larger number of study participants. This may be due to the lack of skills of primary health care workers to advocate and mediate with the other sectors to make a health impact. This fact

suggests that both inadequacies in knowledge of health promotion as well as a lack of skills needed for effective application of health promotion should be addressed in future training programmes.

CONCLUSIONS

A majority (215, 70.0%) of primary health care workers in the Kalutara District had poor knowledge of developing health promotion settings.

The knowledge of health promotional settings was significantly associated with educational level and the ability to read English. Those who obtained GCE A/L or a higher educational level had better knowledge of health promotional settings than others. Similarly, primary health care workers with the ability to read English demonstrated a better level of knowledge than others. The other factor that was significantly associated with knowledge of health promotion settings was the public health experience of PHMs. The recently passed out PHMs with public health experience of fewer than five years had higher knowledge when compared to others.

The level of attitudes among primary health care workers in the Kalutara District was good. Of them, 69.4% (204) of the participants had good attitudes toward developing health promotional settings. Most of them had positive attitudes about the importance of health promotional settings. The level of knowledge about health promotional settings was significantly associated with the level of attitudes of participants. The participants with higher levels of knowledge had better attitudes when compared to the other groups.

A majority (206, 67.5%) of study participants declared that they hadn't had health promotional settings in their field. Only 25.1% (77) of primary health care workers had adequate skills in developing health promotional settings. The level of skills was significantly associated with the existence of health promotional settings in their fields. Those who had healthy settings in their fields possessed a higher level of skills than others. There was a statistically significant association between the availability of healthy settings in the fields of PHMs and the extent of field areas. The PHMs with smaller PHM areas than the mean (6.5 km^2) had a higher percentage of healthy settings than others.

Most of the participants stated that limited time, inadequate training, lack of community interest, poor support from other sectors, the inadequacy of monetary allocation, and lack of guidance from supervisors were barriers that needed quick managerial interventions.

Acknowledgments:

The authors acknowledged the administrative support extended by the regional director of health, Kalutara.

Conflict of Interest:

The authors declared that they have no conflict of interest on this study.

Ethical Approval (Must be answered):

Ethical approval for the study was obtained from ethical review committee of faculty of medicine, University of Colombo, Sri Lanka.

Funding:
This was a self funded study.

REFERENCES

Douglas, F., Torrance, N., van Teijlingen, E. *et al*. (2006) Primary care staff's views and experiences related to routinely advising patients about physical activity. A questionnaire surveys. *BMC Public Health* **6,** 138. https://doi.org/10.1186/1471-2458-6-138

Fernando, D., Gunawardena, N., & Weerasinghe, C. (2006). Essential public health functions. *Journal of the College of Community Physicians of Sri Lanka*, *11*(2), 24. https://doi.org/10.4038/jccpsl.v11i2.8255

Geense, W.W., van de Glind, I.M., Visscher, T.L. *et a l* (2013). Barriers, facilitators, and attitudes influencing health promotion activities in general practice: an explorative pilot study. *BMC Fam Pract* **14,** 20. https://doi.org/10.1186/1471-2296-14-20

Health promotion association, Australia (2009) *Core competencies for health promotion practitioners*. Available at: http://healthpromotion.org.au/aboutus.html

Institute of Policy Studies of Sri Lanka, (2007). *A Commentary on Policy Options. Mahinda Chinthana*: p.96 ; (Working Paper Series ; No 11). Mahindachinthana (2007).pdf (ips.lk)

Jacobsen, E.T., Rasmussen. S.R., Christensen, M., Engberg, M., Lauritzen,T (2005),Perspectives on lifestyle intervention: the views of general practitioners who have taken part in a health promotion study". *Scandinavian Journal of Public Health*. 2005, 33(1):4–10. https://doi.org/10.1080/14034940410028181

Ministry of Health. Sri Lanka. (2007) *Health master plan of Sri Lanka – healthy and shining island in the 21st century*. Colombo. Ministry of Health, Sri Lanka.

Ministry of Health. Sri Lanka. (2009) *National health promotion policy*. Colombo. Ministry of Health, Sri Lanka. http://whosrilankahealthrepository.org/ .

Ministry of Health Sri Lanka. (2010). *National nutrition policy of Sri Lanka*. Ministry of health Sri Lanka. https://leap.unep.org/.../national-nutrition-policy-sri-lanka-2010

Ministry of Health Sri Lanka. (2016) *National Strategic Framework For Development of Health Services 2016 – 2025*. https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/sri_lanka/national_strategic_framework_.pdf

Peltzer K. (2001). *Knowledge and attitudes of primary care nurses and midwives towards health promotion in rural South Africa*. Curationis, *24*(4), 46–51. https://doi.org/10.4102/curationis.v24i4.887

Perera, K.M.N. (2012) *Knowledge and Perceive Barriers for Application of Health Promotion Approach among Public Health Midwives in Kandy District*. (Master's thesis. Postgraduate Institute of Medicine, University of Colombo). PGIM library.librepository.pgim.cmb.ac.lk/handle/1/1384

World Health Organization. (1986) *Ottawa Charter for Health Promotion* Available at: http://www.who.int/hr/NPH/docs/Ottawa_ charter_ hp_ pdf

World Health Organization. (1997) *Jakarta Declaration on Leading Health Promotion in to 21st century.* Available at: http://www.who.int/hpr/NPH/docs/Jakartha declaration_en.pdf

World Health Organization. (1998a) *World Health Assembly Resolution on Health Promotion.* Available at : http://www.who.int/healthpromotion/wha51-12/en /.

World Health Organization. (2010) *Chronic Disease and Health Promotion*. Available at: http://www.who.int/chp/en.

World Health Organization. (2010a) *Developing Health Promotion Competencies and Standards for Countries in South East Asian Region: Report of a Meeting of Experts.* WHO/SEARO, New Delhi. 18-20 June 2008. Available at: http://2003.90.70.117/PDS-DOCS/B4465.pdf

WHO. (2019). *Noncommunicable diseases: Mortality*. https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/ncd-mortality