

RESEARCH COMMUNICATION

Evaluation of Health Education in the Multi-professional Intervention and Training for Ongoing Volunteer-based Community Health Programme in the North-East of Thailand

Supanee Promthet^{1*}, Surapon Wiangnon², Wiporn Senarak³, Kesinee Saranrittichai³, Patravoot Vatanasapt², Supot Kamsa-ard², Prasert Wongphuthorn⁵, Chananya Kasinpila¹, Malcolm Anthony Moore⁵

Abstract

This was a survey research conducted in Northeastern Thailand during 2009-2010 and designed to evaluate the success of a health education program by comparing levels of health knowledge in the community before and after the launching of a Multi-professional Intervention and Training for Ongoing Volunteer-based Community Health Programme. The survey questionnaire included items about demographic characteristics and health knowledge. The participants were 1,015 members of various communities, who were randomly selected to be included in the survey before launching the intervention, and 1,030 members of the same communities randomly selected to be included in the survey after the intervention was completed. The demographic characteristics of both groups were similar. Overall knowledge and knowledge of all the diseases, except lung and cervical cancer, were significantly higher after the intervention. In conclusion, a Volunteer-based Community Health Programme has advantages for areas where the numbers of health personnel are limited. The use of trained community health volunteers may be one of the best sustainable alternative means for the transfer of health knowledge.

Keywords: Health education - volunteer programme - intervention - North-East Thailand

Asian Pacific J Cancer Prev, 13, 1753-1755

Introduction

Use of lay health workers (LHWs) in a Community-Based Chronic Disease Control Program is one of the efficient methods for disease prevention and control (Wiangnon et al., 2007). Chronic diseases such as diabetes, cancer and hypertension are major problems for Thai people. One reason may be that, as a result of globalization, people around the world now have similar patterns of food consumption and daily life behavior and are therefore all frequently exposed to the many possible risk factors for these diseases. A recent study in Khon Kaen, a province in Northeastern Thailand, confirmed that many people were suffering from chronic diseases (Promthet et al., 2011). Risky behaviours such as smoking, alcohol drinking, and low levels of exercise or activity were also frequently reported. These problems can be solved if people receive health education, which effectively increases their knowledge and awareness of risk factors.

A Multi-professional Intervention and Training for Ongoing Volunteer-based Community Health Programme has been launched in Khon Kaen Province (Wiangnon et al., 2007), and the aim of this study was to evaluate the success of the health education program by comparing the health knowledge of people before and after the program was established.

Materials and Methods

The target population for this community-based questionnaire survey of health knowledge was about 5,000 people aged 18 years and above from urbanized, semi-urbanized and remote areas in Khon Kaen Province. A sample of 1015 participants was randomly selected from the target population and completed the survey questionnaire prior to start of the health education intervention programme. Another sample of 1030 participants was randomly selected for completing the same questionnaire after the intervention.

Intervention and Training

A group of 52 community volunteers was trained by the multi-profession research team in the period June 2008 to May 2009. The volunteers then conveyed their knowledge to the people in their area of responsibility over the period June 2009 to May 2010. During this time, the volunteers delivered health education about oral cavity cancer, lung cancer, liver and bile duct cancer, cervical cancer, breast cancer, diabetes mellitus and hypertension, and they also acted as leaders for physical activity programs such as aerobic exercises and elastic stretching.

Data collection

The survey questionnaire was designed to obtain

¹Faculty of Public Health, ²Cancer Unit, Faculty of Medicine, ³Faculty of Nursing, Khon Kaen University, Khon Kaen, Thailand, ⁴Union Against Cancer (UICC) Asia Regional Office for Cancer Control *For correspondence: supanee@kku.ac.th

Table 1. Comparison of Health Knowledge Scores Before and After the Intervention.

Topic of health knowledge	Group	n	Mean	SD	P-value	Mean Difference	95% CI	
							Lower	Upper
Oral cavity cancer 2 items	Before	1015	1.0	0.8	< 0.001	0.24	0.17	0.31
	After	1030	1.2	0.8				
Lung cancer 3 items	Before	1015	2.7	0.7	0.59	-0.02	-0.08	0.04
	After	1030	2.7	0.7				
Liver cancer and CHCA 3 items	Before	1015	1.7	0.7	< 0.001	0.11	0.05	0.17
	After	1030	1.8	0.6				
Cervical cancer 4 items	Before	1015	2.1	1.2	0.69	0.02	-0.08	0.13
	After	1030	2.1	1.2				
Breast cancer 5 items	Before	1015	2.4	1.5	< 0.001	0.23	0.09	0.36
	After	1030	2.7	1.6				
Diabetes mellitus 5 items	Before	1015	3.9	1.2	< 0.001	0.27	0.17	0.37
	After	1028	4.2	1.1				
Hypertension 5 items	Before	1015	4.0	1.3	0.02	0.12	0.02	0.23
	After	1029	4.1	1.2				
Overall knowledge (27 items)	Before	1015	17.9	4.8	< 0.001	0.97	0.54	1.41
	After	1027	18.8	5.2				

information about the respondents' demographic characteristics such as gender, marital status, age-group, education background, income level, and occupation, and it included 27 health knowledge items. The questionnaires were checked for validity by experts and tested for reliability. Cronbachs' alpha coefficient was 0.70.

Data analysis

In addition to the usual descriptive statistics, independent sample t-tests and 95% confidence intervals were used to evaluate differences in various indices of health knowledge before and after the health education intervention program. Statistical significance was set at $p < 0.05$.

Results

The characteristics of the pre- and post-interventions groups were similar in terms of gender balance, marital status, age-grouping, education, income, and occupation. Total knowledge scores and specific knowledge about oral cavity cancer, liver cancer and bile duct cancer, breast cancer, diabetes mellitus and hypertension were significantly higher in the post-intervention group than in the pre-intervention group, but there were no significant differences between the two groups in knowledge of either lung or cervical cancer (Table 1).

Discussion

The findings of this study showed that the use of LHW volunteers can be an effective means of delivering a community health education program and improving knowledge about a number of important health issues. The intervention did not, however, increase knowledge about lung or cervical cancer. This may have occurred because these diseases had already been a priority for prevention and control, and information had previously been provided due to national campaigns and through the routine health education activities of local health personnel.

The use of LHWs or community health workers

(CHWs) has become increasingly popular as an effective means of secondary prevention in hard-to-reach, underserved populations. In the USA, trained Vietnamese lay health workers significantly increased Vietnamese women's recognition, receipt, and maintenance of breast and cervical cancer screening tests (Bird et al., 1998). Similarly, combined LHW outreach and media education motivated more Vietnamese American women in California to obtain their first Pap tests and to become up-to-date than did media education alone (Mock et al., 2007). In Mexican Americans, culturally specific intervention consisting of participative group education, telephone contact and follow-up using inspirational faith-based health behavior change postcards significantly increased diabetes knowledge (Lujan et al., 2007).

However, published evaluations of CHW/LHW training programs are rare (Han et al., 2007). In 1994, Brazil had developed a primary care system based on multidisciplinary teams which include 4-6 lay community health workers as well as a physician and a nurse, but waited over 10 years before conducting a population-based cross-sectional study of primary care in the municipality (Harzheim et al., 2006). In one training program for hypertension and diabetes management for Korean-American seniors expectations were met (average 9.3 on a 10-point scale) and success was achieved in empowering the participants to assume roles as 'health initiator', 'health advertising agents' or 'health role models' (Han et al., 2007).

Once trained, respondents appear to become engaged in a wide range of activities, well beyond simple health care. In South Africa, by engaging community stakeholders, it was possible to develop a research framework, which incorporated the community's concerns and priorities, and highlighted the intersecting roles of poverty, violence and other cultural forces in shaping the health and wellbeing of the community (Mosavel et al., 2005). A cardiovascular disease prevention program for women was similarly designed to build on the strengths of the Alaska Native culture as a way to support and encourage positive lifestyle behaviors with the focus

on healthy eating, active living, stress management, and tobacco cessation (Stefanich et al 2005). In Taiwan, community health development (CHD) has been initiated; this is a new approach to national community health care with a shift from 'traditional' research to 'participatory action' research (Huang and Wang, 2005). The history of participatory action research in Asia is relatively short, but one recent study in Thailand showed that this approach with farmers could create a real, sustainable model to promote their health and prevent occupational health hazards (Buranatrevedh and Sweatsriskul, 2005).

The Thai Ministry of Public Health has developed and implemented a public health policy with the introduction of health promotion programs nationwide. Although particular health promotion programs, such as family planning or immunization services, have been successful, others such as those for traffic accident prevention, smoking cessation or campaigns against liver cancer not been proved to be effective or sustainable (Lyttleton, 1996). In general, health promotion programs are only effective when health practitioners have to follow policy decisions or when they are financed by both government and non-government organizations (Wibulpolprasert, 2000). Some programs are also short term in practice because responsible health personnel have to turn their attention to new policies. In terms of health promotion for middle-aged women, the focus has been on reproductive health, such as menopausal clinic and cervical screening programs, which have been established in both the government and private health sectors. These programs have not, however, been totally consistent with the local women's way of life and/or their perception of health (Chirawatkul, 2002; Senarak et al., 2006).

In conclusion, a Volunteer-based Community Health Programme has advantages for areas where the numbers of health personnel are limited. The use of trained community health volunteers may be one of the best sustainable alternative means for the transfer of health knowledge.

Acknowledgements

This study is a part of the study 'The multi-professional volunteer dedicating to the community-based health program in the northeastern Thailand (MITVNET)' which was funded by BUPA, United Kingdom. The study was approved by the research ethics committee of the Faculty of Medicine, Khon Kaen University, Reference No. HE510309 and HE 521276

References

- Bird JA, McPhee SJ, Ha NT, et al (1998). Opening pathways to cancer screening for Vietnamese-American women: lay health workers hold a key. *Prev Med*, **27**, 821-9.
- Buranatrevedh S, Sweatsriskul P (2005). Model development for health promotion and control of agricultural occupational health hazards and accidents in Pathumthani, Thailand. *Ind Health*, **43**, 669-76.
- Chirawatkul S (2002). Perception about menopause and health practices among women in northeast Thailand. *Nurs*

HealthSci, **4**, 113-21.

- Han HR, Kim KB, Kim MT (2007). Evaluation of the training of Korean community health workers for chronic disease management. *Health Educ Res*, **22**, 513-21.
- Harzheim E, Duncan BB, Stein AT, et al (2006). Quality and effectiveness of different approaches to primary care delivery in Brazil. *BMC Health Serv Res*, **6**, 156.
- Huang CL, Wang HH (2005). Community health development: what is it? *Int Nurs Rev*, **52**, 13-7.
- Lujan J, Ostwald SK, Ortiz M (2007) Promotora diabetes intervention for Mexican Americans. *Diabetes Educ*, **33**, 660-70.
- Lyttleton C (1996). Health and development: knowledge systems and local practice in rural Thailand. *Health Trans Review*, **6**, 25-48.
- Mock J, McPhee SJ, Nguyen T, et al (2007). Effective lay health worker outreach and media-based education for promoting cervical cancer screening among Vietnamese American Women. *Am J Public Health*, **97**, 1693-700.
- Mosavel M, Simon C, Van Stade D, Buchbinder M (2005). Community-based participatory research (CBPR) in South Africa: engaging multiple constituents to shape the research question. *Soc Sci Med*, **61**, 2577-87.
- Promthet S, Saranrittichai K, Kamsa-ard S, et al (2011). Situation analysis of risk factors related to non-communicable diseases in Khon Kaen Province, Thailand. *Asian Pac J Cancer Prev*, **12**, 1337-40.
- Senarak W, Chirawatkul S, Markovic M (2006). Health promotion for middle-aged Isan women, Thailand: A participatory approach. *Asian Pac J Cancer Prev*, **7**, 55-9.
- Stefanich CA, Witmer JM, Young BD, et al (2005). Development, adaptation, and implementation of a cardiovascular health program for Alaska native women. *Health Promot Pract*, **6**, 472-81.
- Wiangnon S, Sriamporn S, Senarach W, et al (2007). Use of lay health workers in a community-based chronic disease control program. *Asian Pac J Cancer Prev*, **8**, 457-61.
- Wibulpolprasert S (2002). Thailand Health Profile 1999-2000. Bureau of Policy and Strategy, Ministry of Public Health.