

Social capital and non communicable disease prevention: experiences from Thailand

SAOWAPA Pornsiripongse
Mahidol University, Thailand

Abstract

Diabetes, a non-communicable disease, is not a new disease but nowadays it is becoming a new global public health problem. Every year about 3.2 million people or six persons per minute die from diabetes. This is higher than AIDS which causes the death of four people per minute. Thailand is also confronted with the increase of this disease. From 1992-1997, the number of people with diabetes (PWD) almost doubled from 2.3% to 4.4% and will be 1,923,000 by 2015.

The objective of this research was to discover the 'Social Capital' necessary to support diabetes health care in order to reduce complications and the number of diabetic cases. One particular village with a large number of PWD in the central part of Thailand was selected to be the study area. The methodologies used were qualitative and participatory action research.

The research found that 'social capital' could be supportive tools for diabetes health care as follows:

1. *Religious Institute.* In the village there are a number of active monks in three temples working together as a social network. Those monks have a role in encouraging PWD to join and participate in the diabetes group.
2. *Relative Community.* About 80% of the villagers are family-related. Very often their extended families can be found in the village and this close family relationship plays an essential role in diabetes care.
3. *Indigenous Medical Knowledge.* In the village there is a folk monk healer who is very famous for non-communicable diseases. A lot of PWD in the village obtain herbal medicine from him and therefore also get less modern medicine from the hospital.
4. *Cooperation of the Local Government.* The Local Administrative Organization (LAO) of the village is aware that diabetes is their major problem.

These 'social capital' elements of the village were taken as a tool to support the diabetes patients health care. After one and a half years, the diabetes patients formed a diabetes group to share their experiences on how to change their habits. The LAO took the project into their action plan and allocated budget for group activities.

Introduction

Diabetes is a silent killer and a large and growing global health problem. Each year about 3.2 million people or six persons every minute die from diabetes-related causes. This is higher than AIDS from which four people die every minute. It is projected that the number of PWD will rise from 171

million people in 2004 to 366 million people in 2030. (WHO, 2004) The disease is spreading more rapidly in Asia than anywhere else. Asia currently has around two-thirds of the world's diabetics. India has the highest number of diabetes, increasing from 32 million people in 2000 to 80 million people in 2030. India and China together account for almost 100 million victims (WHO, 2004). The majority of these have type 2 diabetes which is often associated with being overweight and lack of exercise.

Diabetes is not behaving the way it did in the past. The former notion of a disease that strikes old aunties and the rich or seldom kills, is not true. It attacks indiscriminately. It is becoming as prevalent in slum areas as it is in mansions. Its victims are younger than ever. Diabetes is going to be the biggest epidemic in human history and it is becoming an Asian disease.

Diabetes epidemic in Thailand

Although Thailand is not a leading country for diabetes, the number of PWD is rapidly increasing. It is projected that PWD in Thailand almost doubled from 2.3% in 1992 to 4.4% in 1997 (Ministry of Public Health, Thailand, 2003) The estimated overall prevalence of diabetes is higher in urban as compared with rural areas. Bangkok has the highest prevalence rate of 6.1% with 5.3% in the north and 2.1% in the south of the country. The prevalence rate of diabetes is higher in females than males and greater for older people than the young. WHO forecasted that by 2015 the number of individuals suffering from diabetes in Thailand will be 1,923,000 (Supawan Manosunthon, 1999). Diabetes increases the risk of macro and micro-vascular diseases and is the important determinant of the vascular disease burden for Thailand where coronary heart disease has been the leading cause of death for over a decade. Diabetes is the fifth major cause of death with around 5.3% of total deaths in Thailand.

Diabetes has become a heavy burden on the health budget. Medical care expenses for one diabetes out-patient in one visit, for a governmental hospital, is US\$ 23 and US\$ 120 for an in-patient (Penkae Pornlertwadee, 2002). The average expense for PWD per year is US\$ 350 while 82.26% of this expense is for medical costs. Based on the data of the Ministry of Public Health of Thailand, the number of PWD needing treatment in hospitals has greatly increased to 218.9 cases per 100,000 people per year. Assessing the situation by area, central Thailand is the region with the highest number of cases with 288.9 cases; 206.1 cases for the north and 188.4 cases for the northeast.

Formerly, taking care of diabetes patients was usually the duty of health providers who had expertise in caring and treatment without support from families and the community. Diabetes is a chronic and behavioral disease that cannot be conquered by medical treatment and medical experts alone. Individuals with diabetes need mental support, sympathy, and understanding from family members, relatives, friends, and community members. One must realize the fact that nobody wants to get sick since he would have to stop doing

everything and also face the loss of income. So if he becomes sick, he must do his best to get well. Based on this assumption, the research tried to bring in social capital to help and support the PWD to change their lifestyle, adjust their diet and their physical behavior in order to reduce the risk of serious complications. These activities can be implemented in parallel with medical treatment.

Objective

The objective of this study is to discover the ‘Social Capital’ and apply it in support of PWD health care in order to reduce risks of complications and the number of diabetic cases.

Research design and methods

The criteria for selecting the study area is the number of PWD, social capital, and the willingness of village health providers and PWD to join the program. One particular village, Sumpratuan, with a large number of diabetic patients in the central part of Thailand (the highest diabetic region where patients get treatment in the hospital) was selected to be the study area.

This study uses a qualitative and participatory action approach. Observation and in-depth interviews are used to discover social capital. Formal and informal village leaders, monks, village health officers, some PWD and the head of the Village Senior Club were all interviewed in-depth. Participatory action is a method of further applying and integrating social capital into PWD activities.

The research has three phases, searching social capital (for six months), developing Community based Health Care and evaluation (for one year).

Definition

Social capital is a network of quality social relations which are characterized by norms of trust and reciprocity and which lead to outcomes of mutual benefit (Stone and Hughes, 2002). It can be likened to the glue that holds communities together (Winter, 2000). For individuals, it means the access to reciprocal, trusting social connections that help the process of advancement. For communities, it reflects the ability of community members to participate, cooperate, organize and interact (Cavaye, 2001). The quality of social capital affects the capacity of people to come together to collectively resolve problems they face in common (Stewart-Weeks and Richardson, 1998).

Sumpratuan community's context

Sampratuan is a sub-district in Nakornpathom province, in central Thailand. It is about 70 kilometers from Bangkok. This fertile area, located on the banks of the Tha Chin River, was formerly an important rice growing region of the central area. Since 1969, in accordance with the second national plan for economic and social development, the Thai government has developed the suburban areas of Bangkok into industrial areas and Nakornpathom was one of the targets. This area became the site of many projects such as multiple dams to generate electricity for industry and to provide flood control as well as land and water transportation networks. Land along the river bank was transferred to business interests for building factories. At present, about 7,000 factories have been established in Nakornpathom province (Ministry of Industry, 2005).

These factories require a lot of unskilled labor so many villagers left their land to be laborers. Work in the rice field is vastly different from that in the factory. In the fields, they worked hard and tended to expend a lot of calories. With no retirement period they were able to work as long as they wanted. But income was not stable and depended on the weather, harvest, and the market. They could survive well on local vegetables from their fields, fish and shrimp from the river. As laborers, their income is stable but the retirement age is 50 years for unskilled and 55 years for workers. So after retirement, their daily activities decrease. Generally, the men stay at home while the women do domestic work such as washing clothes, cooking, cleaning house and rearing grandchildren. In comparison to women, retired men do nothing.

Their simple but generous way of life has changed, becoming more competitive and *self-serving*. Their diet, from self-cooked food with local vegetables and protein has shifted to ready-cooked food with high-fat, high-calories that was never a major part of their traditional diet. This diet was easily bought from market stalls in the village and brought back home. The changing life style has led to an increasing number of chronic disease among villagers such as hypertension, vascular disease, and diabetes. Unfortunately they don't realize the danger of these silent killers. Almost all PWD found in the village are older than 50 year. (69.66%).

The total population of Sumpratuan is about 3,700 (Local Administrative Organization, 2006). Based on the data survey in 2005 by this researcher and the Village Health Office, the number of individuals with diabetes diagnosed by a doctor was 100 with a further 11 people away from village during the survey. The details are in table 1.

Table 1. Characteristics of the PWD in Sumpratuan Sub-district.

Factors	Total (89 cases)	%
Sex		
• Male	30	33.7
• Female	59	66.3
Age		
• 40- 49 years	10	11.2
• 50-59 years	27	30.3
• 60-69 years	35	39.3
• older than 70 years	14	19.1
Marriage status		
• single	4	4.5
• married	58	65.2
• widow/widower	21	23.6
• divorced	6	6.7
Education		
• illiterate	12	13.5
• Primary school	67	75.2
• Secondary school	10	11.2
No of diabetic patients who stay with sons or daughter		
• Not Stay	16	19.82
• Stay	69	80.18
Total	85 (Single 4)	
Occupation		
• Work	36	40.5
- employee	- 18	
- sale goods	- 13	
- officer	- 2	
• Unemployed	53	59.5
Duration of diabetes		
• less than one year	7	7.9
• 1-5 years	48	53.9
• 6-10 years	23	25.8
• 11-15 years	4	4.5
• 16 years up	7	7.9

There were 89 individuals with diabetes in the village during the survey which included 66.3% female and 33.7% male. The largest group (39.3%) were aged between 60-69 years and 30.3% for the 50-59 years group. Most of them were married (95.5%) and 65.2% lived with their spouses. 23.6% were widow or widower and 6.7% divorced. About 80% stayed with a son or daughter. 86.6% were literate and around 60% retired.

According to the table 1, the characteristics of PWD is the strong point that can support the project, community based health care. First, 80% of PWD lived with a son or daughter and were surrounded by relatives. Second, 53.9%

were newly diagnosed, the duration of diabetes being between 1-5 years. Finally, many PWD could be a role model for glucose level control to their family members.

Results

Social capital of Sumpratuan community

The social capital of Sumpratuan that could provide supportive tools for diabetes health care is as follows:

Religious Institute. In the village a number of active monks in three temples work together as a network not only in the village but also the village neighbourhood. They see health as an equilibrium state of physical, mind, social and spiritual being. If they worked and focused only on mind and spiritual issues alone, they could not overcome the suffering, so they arrange numerous social and moral activities for the community. During the year, on Buddhist Days and royal birthdays, etc, each temple takes turns to host 2 nights and 3 days of dharma training for interested Buddhists, free of charge. About 120 people have attended the course with 80% over 50 years old and 95% female. As part of the training, the monks invited doctors, nutritionists, physical educators to talk to the participants. They do not only focus on adults, however, as in the summer the monks cooperate with schools in the village and arrange a Student Moral Camp. Each temple has a 3 day annual festival to which people from both inside and outside of the village come to make merit and give donations. During the festival, food is served all day, free of charge. The cooks are old women and men in the village who join together to help the temple. Most of the villagers respect and listen to the monks. This is 'social capital', based upon a strong and good quality network of social relationships that can support community based health care for diabetes.

Relative Community. About 60% of the villagers are a Thai-Lao ethnic group that migrated from Vientiane, Laos, 200 years ago. They are also relatives by affinity, interdependent and always share health experiences and medicinal herbs with each other. About 70% of the working age group are employed in the factories in the village and near by. The situation here differs from the northeast where the working age group has migrated to work in Bangkok and other parts of the country, leaving children to stay behind with the grandparents in the village. By contrast, very often three generations of one family can be found in Sumpratuan and this close family relationship is essential and very useful in order to easily encourage family members to avoid risks, to increase diabetes awareness and to take care of PWD. People who have a social network are less likely to get sick than those without one. Even when they do get sick, they will get well faster (Mullika Muttiko et al. 1999).

Indigenous Medical Knowledge. In the village there is a monk who is very famous as a folk healer not only among the villagers but is known to outsiders all over the country for treating non-communicable diseases. The

indigenous medical knowledge was passed on to him from a previous abbot who was also very well known. So this temple is accepted as a folk healer temple and everyday about 80-100 patients from all over the country come to consult and take herbal medicine. Many PWD in the village obtain herbal medicine from the monk and also get modern medicine from the hospital as well. Moreover, many PWD take local medicinal plants recommended by neighbors to control their glucose levels.

Cooperation of the Local Government. According to the 1997 Thailand Constitution, the Ministry of Public Health must decentralize public health care to the Local Administrative Organization (LAO). LAO has to take responsibility for public health in the near future and diabetes is their major problem so they were willing to join the project (Community Based Health Care for Diabetic Patients) in order to learn to manage health problems.

Development process for community-based health care

After finding characteristics of PWD and social capital that could be used to develop the model for Community-based Health Care for PWD, the result was tabled, the feasibility discussed and the process planned among the stake holders which are representatives of PWD, local health officers, Head of the Village Senior Citizens Club, interested monks, village headmen, teachers and LAO officers. The objectives, the process, and evaluation of the plan were subjected to brain-storming by many of the participants.

The next step was to follow the plan as follows:

- To invite interested PWD and risk groups to join the project. (Risk group is defined here as persons who have one or more of these risk factors: family history of diabetes, excess weight, over 45 years of age, and sedentary life style). Use was made of the campaign words “If you have diabetes, you are not alone” and “ if you are in a high risk group, how you can avoid getting diabetes” (The International Diabetes Federation, 2003)
- To invite the stakeholders, especially the monks, to join the group activities.
- Using group processes to encourage them to take responsibility for their health, to learn and share their health experiences as to how to change their eating habits, suitable exercises for the old (almost all of the patients and risk group were older than 50 years), and to develop knowledge of diabetes. “Joining support groups may be beneficial” is the campaign slogan used (The International Diabetes Federation, 2003).
- To record diabetes tacit knowledge management from the participating PWD and share this with others.
- Sometimes doctors, folk healers, nutritionists, pharmaceutical botanists, and PWD with best practice from outside were invited to share experiences.

- Blood pressure and glucose level for each person in the group was recorded every month when the group met. Usually, all PWD visit the doctor once every one or two months, so this data was already recorded on the patient's appointment card.
- Visit other PWD in the village who could not join the project with the village health provider team.

Evaluation process

The successful criteria decided together by the participants, stake holders, and researcher are as follows: (1) The number of PWD attending the group should not be less than 20% of the total PWD in the village. The number of PWD attending indicates that they and their family have an awareness of the danger of diabetes. (2) The LAO accept this project as part of their action plan and supporting budget. (3) PWD gains knowledge on diabetes indicated by their ability to control blood pressure and glucose levels. The result, work processes and problems were evaluated every 2 months by participants and stake holders.

Conclusion

These 'social capital' elements of the village can be taken as a tool to support PWD health care. After one and a half years, PWD formed a diabetic group consisting of 40 members of both PWD and diabetic risk persons. Some PWD come with their daughters and their high risk relatives. Formerly, PWD perceived that diabetes was their own responsibility but after participating in the group they were able to share their suffering with other PWD. They enjoyed the meetings. The group usually had a meeting one Sunday of every month at the Child Community Center with the aim of sharing their experiences on how to change their eating habits, get exercise and generally discussing any relevant topics they wanted. They were happy to join and looked forward to the regular meetings as the events enabled them to take a break from their normal domestic work routine. The LAO officers, village health officers, village health volunteers, interested monks and health education teachers from schools in the village also joined in every meeting. The researcher acted as a facilitator to offer support concerning knowledge of diabetes and as a link to other health networks. However, only half of the PWD who have had diabetes for less than five years, can control their blood pressure and glucose levels.

Suggestions

Focus should be on the 1-5 years PWD group because it will be easier to change their habits and life styles. And the Ministry of Public Health should encourage the use of social capital as an integral part of health policy to the benefit of PWD.

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Institute of Language and Culture
for Rural Development, Mahidol University,
Salaya, Nakhon Pathom 73170
THAILAND
<lcsps@mahidol.ac.th>