Quality of Life and Health Promoting Behaviors among Disabled People in Two Provinces of Thailand

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Objective: *To examine health behaviors and quality of life among disabled people in two provinces of Thailand.*
Material and Method: *A cross-sectional study was conducted in 5,352 disabled people selected by multistage cluster sampling from Chiang Mai and Nakhon Ratchasima provinces during April to June 2008. The WHOQOL-BREF-THAI and health promoting behavior scales were used to measure QOL and health behavior.*
Results: *Among the health promoting behaviors, exercise and health responsibility of the disabled people were mostly at the 'need to improve' level (46.6 and 52.8%), while their nutritional behavior and stress management level were mostly at the 'good' level (80.8 and 43.8%). Overall quality of life was mostly at the 'moderate' level (79.3%). Exercise and stress management were found to have a significant positive relationship with the quality of life at low level ($r = 0.18$, $r = 0.12$) at $p < 0.01$.*
Conclusion: *The results indicated that person who had health promoting behaviors by exercise and appropriate stress management had a good QOL. Encouraging of family and health authority support in exercise and stress management may help them having a good QOL.*

Keywords: *Quality of life, Health promoting behavior, Disabled people*

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According to the World Health Organization's International Classification of Functioning[1], a disability is any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being. Approximately 426 million disabled people live below the poverty line and often represent the 15-20% most vulnerable and marginalized poor in their countries. There is also evidence that the labor force participation of disabled people is significantly lower than those without disabilities[2]. Furthermore, people living with disabilities may have a lower standard of living than people without disabilities who have the same income, because the disabled people have their special need for services, such as transportation, heating, or medical services and adaptive devices. Even if an increase in the standard of living is expected due to the increasing of income, the entire family will not experience the benefits of such an increase because of the special needs of one of its members[3].

Figures from National Statistics Office 2007 Survey showed that nearly two million women and men in Thailand, or approximately 3% of the population, had a disability[4]. The majority of disabled people in Thailand lived in rural areas. Sixty-five percent of persons with disabilities over 15 years of age were unemployed. Among those employed, a small percentage worked in professional occupations while a majority (over 50%) worked in agriculture and fishery. Moreover, men with disabilities are more likely to have jobs than women with disabilities. Forty-three percent of men with disabilities are employed while only 28% of women are currently employed.

Quality of life is related but not equivalent to other constructs used in other research, such as psychological well-being, self-esteem, aspects of social adjustment, and happiness. Previous studies in the disability literature when addressing mental and social adjustment have shown that disabled people are

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at greater risk of psychosocial maladjustment than people without disabilities[5].

Several studies demonstrated that undertaking a health-promoting lifestyle may maintain and promote a disabled people independence, health status and quality of life. A health-promoting lifestyle can improve the quality of life of disabled people[6,7]. The present study was a part of the project "Holistic Health and Quality of Life of Handicap: Situation, Network, Development Model, Body of Knowledge, Application, Evaluation and Knowledge Management" that was conducted to develop the appropriate model for promoting health behavior and improving QOL of the disabled people in Thailand. Nakhon Ratchasima province in the northeastern part and Chiang Mai provinces in the north were the parts of Thailand with the highest prevalence of disabled people[4]. Both provinces have the potential and facilities to develop and set up model for improving the QOL of the disabled people in Thailand. The purposes of the present study were to describe the health behaviors and quality of life among disabled people and explore the relationship between health behaviors and quality of life.

Material and Method

Multistage cluster samplings were conducted during April to June, 2008 on 5,352 disabled people as part of the community-based project. 1,333 of the subjects were from Chiang Mai, Northern Thailand and the remaining 4,019 subjects were from Nakhon Ratchasima in the North-East of Thailand.

A cross-sectional research design study was carried out with approval from the Ethics Committee for Human Research, Faculty of Public Health, Mahidol University (Ref. No. MUPH 2007-281). All subjects were more than 15 years of age with any types of disabilities. They have been resided in the studied area for at least 1 year, not having any severe illness and could be able to response to the interviews. The subjects were informed about the purposes of the study and the time required for the participation. Those who voluntarily participated in the study were asked to sign a consent form. Data were collected by using the interviewing instrument which is based on the WHOQOL-BREF-THAI and the Health Promoting Behavior scale. Demographic information was also assessed. Data were analyzed and presented as percentage, categorical variables and mean $\pm$ standard deviation (SD) for continuous variables. Multiple comparisons of means were performed using the Pearson's product moment correlation coefficient test. A p-value less than 0.05 was considered as statistically significant difference.

WHOQOL-BREF-THAI

This is a shortened version (26 items) of the WHOQOL-100, developed by the WHOQOL Group[8]. In addition to the total score, it consists of four domains including the physical, psychological, social relationships, and environmental domains each of which can be scored. The WHOQOL-BREF score scale ranged from 26 to 130. The quality of life was categorized according to the score level into "good" (96-130), "moderate" (61-95) and "need to improve" (26-60). The Cronbach's Alpha Coefficient of The WHOQOL-BREF-THAI was 0.82.

The Health Promoting Behavior scale was developed from reviewing the literature on the concepts of health behavior, health promotion behavior and in-depth interview with disabled Thai people. It consisted of 16 items and four dimensions: exercise, health responsibility, nutritional behavior and stress management. These items and dimensions were then validated by five experts. Following their recommendations, the instruments were revised and then tested on 30 disabled people to evaluate the clarity of each item and to estimate their reliability. The Cronbach's Alpha Coefficient of The Health Promotion Behaviors was 0.75.

Results

The majority of the subjects (58.10%) were 25-59 years old. Eighty-two percent of subjects were registered with the disabled database. The disabled people were characterized as physical impairments (44.2%), intellectual impairments (16.3 %), visual impairments (13.4%), hearing impairments (12.5%), and others (13.6%). Most of them had a primary school level of education (61.50%). In terms of occupation, more than half of the subjects were unemployed (57.10%). Their family's incomes were mostly less than 5,000 baht per month (78.7%). About half of them (53.6%) lived with their families and 10.3% lived alone. Only 44.1% were a member of a club or organization specifically for people living with disabilities.

In regards to questions about their priority needs, it was found that most of them expected or needed to have good medical services, such as any physical support or medical treatment for their disabilities as well as easy to access to rehabilitative services. Their second highest priority was fundamental rights for disabled people, and this was followed by

the supporting for their occupation, school and education and appropriate environmental needs.

The result of the health promoting behavior of disabled people shown in Table 1 revealed that only 34.8 and 29.7% of these disabled people had good behavior for exercise and health responsibility, while most of them had 'need to improve' level (46.6 and 52.8%) for these two out of four dimension for health promoting behavior. For the nutritional behavior dimension, most of them were at the 'good' level of 80.8%. In the fourth dimension of the health promoting behavior, stress management, mostly 43.8% were at the 'good' while 36.1% were at the 'need to improve' level.

Table 2 shows the quality of life among the disabled people in both provinces. The quality of life in each domain was mostly at the 'moderate' level and the total quality of life was mostly at the 'moderate' level (79.3%). Testing of the relationship between the studied factors of each dimension of the health promoting behaviors, and the quality of life by Pearson's Product Moment Correlation Coefficient (Table 3) found that exercise and stress management were positively related to the quality of life of these disabled people ($r = 0.18$, $r = 0.12$, $p < .001$).

Discussion

The study found that 18% of the disabled people were not registered with the disabled database. When registered, they can easily access health care services, and can get the physical support or medical treatment and rehabilitative services for their disabilities. Such access will facilitate their health care needs and gain optimal health. Some of the disabled people needed occupational support from the government's social welfare system or from their local policies[10]. This means that most of them do not want to be the totally-dependent and they need to have their own carrier. This point should be considered as a significant strength and must be encouraged.

The present study showed that the overall quality of life of these disabled people was at a 'moderate' level. This finding is congruent with similar research[6,7]. The association between quality of life and health promoting behavior was supported by the existing knowledge of the correlation between quality of life perceptions and health promoting behavior[6,9,11]. Health promotion programs for exercise and stress management should be encouraged. These will provide the information, suggestions or even interventions for the disabled people making them realize and understand their needs, problems and learn how to get the good quality of life.

In order to successfully promote a better quality of life for the disabled people, those whose work directly or indirectly involves the disabled people, *e.g.* the staffs of the Ministry of Social Development

Table 1. Health promoting behaviors of disabled people in Chiang Mai and Nakhon Ratchasima

Health promoting behavior	Chiang Mai (n = 1,333)		Nakhon Ratchasima (n = 4,019)		Total (n = 5,352)	
	Number	%	Number	%	Number	%
Exercise						
Need to improve	579	43.4	1,914	47.6	2,493	46.6
Moderate	230	17.3	765	19.0	995	18.6
Good	524	39.3	1,340	33.4	1,864	34.8
Health responsibility						
Need to improve	652	48.9	2,172	54.0	2,824	52.8
Moderate	296	22.2	644	16.1	940	17.5
Good	385	28.9	1,203	29.9	1,588	29.7
Nutritional behavior						
Need to improve	209	15.7	541	13.5	750	14.0
Moderate	127	9.5	151	3.7	278	5.2
Good	997	74.8	3,327	82.8	4,324	80.8
Stress management						
Need to improve	606	45.4	1,327	33.0	1,933	36.1
Moderate	214	16.1	863	21.5	1,077	20.1
Good	513	38.5	1,829	45.5	2,342	43.8

Table 2. Quality of life of disabled people in Chiang Mai and Nakhon Ratchasima

Quality of life	Chiang Mai (n = 1,333)		Nakhon Ratchasima (n = 4,019)		Total (n = 5,352)	
	Number	%	Number	%	Number	%
Physical						
Need to improve	135	10.1	197	4.9	332	6.2
Moderate	1,053	79.0	3,510	87.3	4,563	85.3
Good	145	10.9	312	7.8	457	8.5
Mental						
Need to improve	198	14.9	346	8.6	544	10.2
Moderate	898	67.4	2,758	68.6	3,656	68.3
Good	237	17.8	915	22.8	1,152	21.5
Social relationship						
Need to improve	200	15.0	408	10.2	608	11.4
Moderate	819	61.4	2,588	64.4	3,407	63.7
Good	314	23.6	1,023	25.5	1,337	25.0
Environment						
Need to improve	109	8.2	234	5.8	343	6.4
Moderate	1,032	77.4	3,234	80.5	4,266	79.7
Good	192	14.4	551	13.7	743	13.9
Total QOL						
Need to improve	118	8.9	210	5.2	328	6.1
Moderate	1,049	78.7	3,193	79.4	4,242	79.3
Good	166	12.5	616	15.3	782	14.6

Table 3. Pearson's product moment correlation coefficient between health behaviors and quality of life of the samples (n = 5,352)

Variables	1	2	3	4	5
Exercise	1.00				
Health responsibility	0.03	1.00			
Nutritional behavior	0.02	0.01	1.00		
Stress management	0.07	0.03	0.02	1.00	
QOL	0.18*	0.05	0.02	0.12*	1.00

*p < 0.01

and Human Security and Health Care Departments, need to take a leading and pro-active role in reaching out to the disabled people and their communities. An appropriate referral system or health care networks for the continuing care in disabled people is necessary. This should be conducted as a priority among health care system policies. Furthermore, family support and self-care seem to be important factors that can help to improve the quality of life of disabled people.

However, limitations of the present study were due to some questions in the questionnaires requiring recalled memory of the respondent which might not be totally recalled. Some response from the subjects reflected more on their beliefs and emotion. Moreover, because the present study took place in two provinces with high prevalence of disabled people and these two provinces are the provinces with higher potential and facilities in many aspects as compare to other parts of Thailand, so that this study might not represent all the disabled people in Thailand. However, the study suggests that family and health authority support should take an active role in promoting health behavior of the disabled people, especially exercising and appropriate stress management. It is also appropriate for health care personnel to encourage the support from the family in those aspects to improve the QOL of the disabled people.

In conclusion, quality of life has been established as an important component of disability care. Efforts to empower and include disabled people in school, family, and community activities as well as working on ways to develop more peer support for disabled people are practical avenues of action that would make a positive difference to the lives of the disabled. Productive and decent work enables disabled

people not only to realize their aspirations but also improves their living conditions as they become more active participants in society.

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คุณภาพชีวิตและพฤติกรรมการส่งเสริมสุขภาพของผู้พิการในสองจังหวัดของประเทศไทย

พิมพ์สุรางค์ เตชะบุญเสริมศักดิ์, ศุภชัย ปิติกุลตัง, โชคชัย หมั่นแสวงทรัพย์, พิทยา จารุพูนผล

วัตถุประสงค์*: เพื่อศึกษาพฤติกรรมส่งเสริมสุขภาพและคุณภาพชีวิตของผู้พิการ ในพื้นที่ 2 จังหวัด ของประเทศไทย*

วัสดุและวิธีการ*: การศึกษาเชิงสำรวจแบบภาคตัดขวาง โดยการสุ่มตัวอย่างแบบแบ่งกลุ่มอย่างมีขั้นตอนในกลุ่มผู้พิการจำนวน 5,352 คน ที่อาศัยในเขตจังหวัดเชียงใหม่และนครราชสีมา ระหว่างเดือน เมษายน – พฤษภาคม พ.ศ. 2551 โดยใช้แบบประเมินคุณภาพชีวิตที่แปลเป็นภาษาไทยฉบับย่อ และแบบวัดพฤติกรรมการส่งเสริมสุขภาพ*

ผลการศึกษา*: พฤติกรรมการส่งเสริมสุขภาพของผู้พิการในด้านการออกกำลังกายและความรับผิดชอบต่อสุขภาพอยู่ในระดับควรปรับปรุงคิดเป็นร้อยละ 46.6 และ 52.8 ตามลำดับสำหรับพฤติกรรมด้านการรับประทานอาหาร และการจัดการความเครียดของผู้พิการอยู่ในระดับดี (ร้อยละ 80.8 และ 43.8) และคุณภาพชีวิตโดยรวมทุกด้านอยู่ในระดับปานกลาง (ร้อยละ 79.3) ซึ่งพบว่าพฤติกรรมส่งเสริมสุขภาพที่มีผลต่อคุณภาพชีวิตของผู้พิการอย่างมีนัยสำคัญ ($p < 0.01$) คือ พฤติกรรมด้านการออกกำลังกายและพฤติกรรมด้านการจัดการความเครียด ($r = 0.18$, $r = 0.12$)*

สรุป*: ผลการศึกษาแสดงให้เห็นว่าผู้พิการที่มีพฤติกรรมส่งเสริมสุขภาพโดยการออกกำลังกาย และมีการจัดการความเครียดอย่างเหมาะสมจะมีคุณภาพชีวิตในระดับดี การส่งเสริมให้คนในครอบครัวและผู้ที่มีส่วนเกี่ยวข้องการส่งเสริมสุขภาพให้มีการสนับสนุนการออกกำลังกาย และการจัดการความเครียดอย่างเหมาะสมในผู้พิการจะช่วยให้ผู้พิการมีคุณภาพชีวิตที่ดี*