ASSESSING THE QUALITY OF LIFE OF PERSONS WITH PHYSICAL DISABILITIES IN RESIDENTIAL INSTITUTIONAL CENTERS, THAILAND

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ABSTRACT:

Background: Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. This study was thus intended to fill this knowledge gap for studies in Thailand and attempt to investigate whether there is an association between the accessibility to health care services and health-related quality of life for person with physical disability in Thailand.

Methods: This study was a cross-sectional study with 200 respondents who had physical disability. The study area is mainly at the Redemptorist Foundation for People with Disabilities-RFPD, Chonburi province, and 7 out of 13 Independent living centers in regions around Thailand. The study was analyzed using descriptive statistics (frequency, percentage, mean, median and standard deviation) and inferential statistics (unpaired t–test, Pearson's correlations and one–way ANOVA).

Results: Each domain of quality of life includes low, moderate and high score levels, among the 200 respondents with physical disability who completed the questionnaire on WHOQOL-BREF, most respondents had a moderate level of quality of life, 92% level in physical health domain, in 98% psychological health domain, 64.5% in social relationships, 79.5% in environment domain and 85% in overall quality of life (QoL) domain.

Conclusions: A moderate level of health related quality of life was observed among the 200 persons with physical disability respondents. Females living with physical disability had similar quality of life than males. When analyzed by one-way ANOVA, gender, age, employment, religion, and degree of physical disability are factors that did not show significant association with Health Related Quality of Life (HRQOL) of the study population. The HRQOL of persons with physical disabilities shown is positively associated with education and financial accessibility characteristics.

Keywords: Quality of life, Physical disability, Thailand

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INTRODUCTION

Many studies show that the problem with disability is that people with disabilities seek more health care than people without disabilities and have greater unmet needs. They also show that health promotion activities seldom target people with disabilities. For example, women with disabilities receive less screening for breast and cervical cancer than women without disabilities [1]. National statistics proves that in Thailand there are a total of 1,871,073 persons with disabilities out of which 780,782 persons are affected with some kind of physical disability. In Thailand, physical disabilities accounts for the highest kind of disability at 56.9%, following, visual disabilities 19.8 %, intellectual/ learning 9.9% and hearing and communication 6.2% [2]. In Thailand, the third highest cause of disability is road traffic accidents (9% of the total causes). By 2020, road traffic accidents will be ranked as the

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third leading cause of disease burden measured in disability-adjusted life years. People are left with Quadriplegia, paraplegia, brain damage, amputation and other behavioral disorders are among the disabilities common among survivors of such severe road accidents. Most at risk in such accidents will be men and women aged 15 to 44 [3].

Residential Institutionalized Centers are "centers where there is a specific need that cannot be managed by the community. The center has a specific set of values, behaviors and cultures (institutions) that are unique and not used in the wider community [4]. Center for Independent Living Centers (CIL) are non-profit organizations that are designed and operated by people with disabilities". CILs are unique in that they operate according to a strict philosophy of consumer control, wherein people with all types of disabilities directly govern and staff the organization. Centers for Independent Living provide peer support, information and referral individual and systems advocacy and Independent Living Skills Training [5]. The 8 institutionalized centers are Chonburi, Nonthaburi, Phuttamonthon, Bangkok, Pathumthani, Nakon Sawan, Khon Kaen and the Redemptorist School in Chonburi has participated in the study.

QoL has both objective and subjective components. Subjective component includes about feeling good and being satisfied with the things in general. Objective component includes fulfilling the societal and cultural demands for material wealth, socioeconomic status, education, housing, neighborhoods, physical functioning and wellbeing [6].

Several sets of QoL instruments have been developed worldwide to assess QoL. There are two types of instruments: disease-specific and generic.

Disease-specific type of instruments is intended to assess patients with particular diseases such as cancer, epilepsy, and so on. Generic type of instruments is intended for general use.

In this study, nature of accessibility to health care services is focused on four concepts of accessibility which are geographical accessibility, financial accessibility, functional accessibility and cultural accessibility. There are international movements toward identifying and eliminating physical, social and cultural barriers experienced by persons with disabilities. Efforts to reduce health care barriers among persons with disabilities are not unique to Thailand. Even though disabilities studies have been done in Thailand, there has been very few studies and understanding on the quality of life. This study is thus intended to fill this knowledge gap for studies in Thailand and attempt to investigate whether there is an association between the accessibility to health care services and health-related quality of life for person with physical disability in Thailand.

MATERIALS AND METHODS

A cross-sectional analytical study to assessing quality of life of persons with physical disabilities in residential institutionalized centers, Thailand was conducted. A total of 200 respondents participated in the study. Respondents were from the Redemptorist Foundation for People with Disabilities-RFPD, Chonburi province and Independent living centers in regions around Thailand. The study population is persons with physical disabilities ≥18 years of age and was collected at the Redemptorist Foundation for People with Disabilities-RFPD, Chonburi province and 7 independent living centers which are Chonburi, Nonthaburi, Phuttamonthon, Bangkok, Pathumthani, Nakon Sawan, Khon Kaen. A total of 8 institutionalized centers. Convenience sampling technique was used - the subjects were selected just because they were easiest to recruit for the study and the researcher did not consider selecting subjects that are representative of the entire population. Before conducting the research, approval from the Ethical Committee of Chulalongkorn University was obtained (certificated code number No.116.1/2015).

A structured questionnaire in Thai was used to collect data from all the respondents. A survey questionnaire was developed based on literature reviews and previous studies which consist of five parts with close-ended questions. To achieve reliability internal consistency coefficient by Cronbach's alpha (α) for the part 1-4 of questionnaire was 0.73. For part 5 the WHOQOL-BREF, reliability from previous research, has been found. To achieve the validity of the questionnaires, three content experts were sought out. The SPSS statistical software version 22 licensed for Chulalongkorn University was used for all analyses. Descriptive statistics of frequency, percentage, mean and standard deviation are calculated for the subject characteristics, i.e. socio-demographic, physical disability, religion and accessibility to health services. Inferential statistics: the relationships between the independent and dependent variable is presented by Pearson's Correlation in the correlations between two continuous variables which reflects the degree

Table 1 Socio-demographic characteristics

Characteristics		N=200	%
Gender	Male	139	69.5
	Female	61	30.5
Age (years)	< 31	72	36.0
	31-40	80	40.0
	41-50	39	19.5
	> 50	9	4.5
Education	No education	17	8.5
	Primary school	70	35.0
	High school	34	17.0
	Diploma	40	20.0
	Bachelor degree	6	3.0
	Master degree	32	16.0
	Doctoral degree	1	0.5
Occupation	Employee	100	100.0

Table 2 Physical disability charateristics

Characteristics		N=200	%
Causes of disabilities	Since birth	35	17.5
	Accident	141	70.5
	Illness	24	12.0
Level of disabilities	Arm/arms disabilities	26	13.0
	Leg/legs disabilities	147	73.5
	Arms and Legs disabilities	27	13.5
Years of disabilities (years)	1- 10	115	57.5
	11 – 20	53	26.5
	21 – 30	11	5.5
	31 – 40	16	8.0
	41 – 50	5	2.5
Underlying illness	Don't have	183	91.5
	Have	17	8.5
Self-dependent (SD)	SD	25	12.5
	SD with tools	157	78.5
	SD with tools and care taker	13	6.5
	Not SD	5	2.5

to which the variables are related and one-way ANOVA for distribution of each group with normal distribution for more or two groups and statistical significant was set as $p<0.05$. The significant level in this study was set up at 0.05.

RESULTS

Descriptive results include socio-demographic characteristics of respondents, degree of physical disability, religion, accessibility to healthcare and health related quality of life. Inferential analyses looks at the associations between independent variables and HRQOL variables among persons with physical disabilities.

Socio-demographic

Most respondents were male (69.5%) and majority were between 31-40 years of age (40.5%). Most respondents completed primary school (70%) and high school at (35%). All respondents were employees working at the IL centers or The Redemptorist Foundation for People with Disabilities-RFPD (Table 1).

Physical disabilities

The most common cause of physycal disability is accident, accounting for (70%) of the respondent and (17.5%) was disabled since birth. The level of physical disability were mainly leg disability (73.5%) followed by arm and leg disability (13.5%). From data, the number of years of disability (57.5%) were between 1-10 years. (91.5%) of respondents did not have other underlying illness. Most respondent (78.5%) were self dependent on equipments to help with daily actvities (Table 2).

Accessibility to health care services

Geographical accessibility - among the 200 respondents, 143 of them (71.5%) goes to hospital and (20%) goes to clinics. About 97 respondents or

Table 3 Accessibility to health care services characteristics

Characteristics		N=200	%
Health care facility	Government hospital	143	71.5
	Clinic	40	20.0
	Pharmacy	17	8.5
Distance to health care facility (kms)	< 5	81	40.5
	5 – 10	97	48.5
	> 10	19	9.5
	Other	3	1.5
Time taken to reach health care facility (mins)	< 10	81	40.5
	10 – 30	97	48.5
	> 30	19	9.5
	Other	3	1.5
Convenience to reach health care facility	Easy access	23	11.5
	Not easy	177	88.5
Health care facilities for disabled	No	157	78.5
	Yes	43	21.5
Quality of health care service satisfaction	Very satisfied	10	5.0
	Satisfied	48	24.0
	Dissatisfied	123	61.5
	Very dissatisfied	19	9.5
Disability card	Yes	53	26.5
	No	147	73.5
Other expenses	Yes	48	24.0
	No	152	76.0
Privacy of physical examination	No	4	2.0
	Yes	196	98.0

Table 4 Health related quality of life characteristic

Characteristics		N=200	%
Physical health domain	Low	15	7.5
	Moderate	185	92.5
	Min = 15 Max = 22 Mean ± SD =18.76 ± 1.508 Median = 19.00		
Psychological health domain	Low	3	1.5
	Moderate	196	98.0
	High	1	0.5
	Min = 14 Max = 23 Mean ± SD = 17.58 ± 1.735 Median = 17.00		
Social relationships domain	Low	71	35.5
	Moderate	129	64.5
	Min = 3 Max = 11 Mean ± SD = 7.95 ± 1.514 Median = 8		
Environment domain	Low	41	20.5
	Moderate	159	79.5
	Min = 13 Max = 26 Mean ± SD = 20.28 ± 2.389 Median = 13		
Level of overall QoL	Low	24	12.0
	Moderate	171	85.5
	High	5	2.5
	Min = 3 Max = 8 Mean ± SD = 5.96 ± 1.109 Median= 6.00		

(48.5%) travel a distance of approximately 5-10 kms to receive their healthcare, (48.5%) responded that it takes them duration of 10-30 minutes to reach their health care facility; for the others (40.5%) responded it takes less than10 minutes. **Functional accessibility**-due to physical disability (88.5%) of respondent finds it difficult to get to their healthcare centers. A large number of respondents (78.5%) find that facilities are not easily accessible for person with disability, (61.5%) are dissatisfied with the services provided. **Financial accessibility**-most respondent (73.5%) uses the social security card scheme (SSS) and the other (26.5%) uses the disability right card (under the UCS). Most

Table 5 Age and health related quality of life

QoL domains	Pearson correlation Sig. (2-tailed)	t-table
Physical health	0.155	0.028
Physiological	0.105	0.137
Social health	0.062	0.385
Environmental	0.006	0.993
Overall QoL	-0.0014	0.843

Correlation is significant at the *p-value* 0.05
Correlation is significant at the *p-value* 0.01

Table 6 Education and health related quality of life

Characteristic	Sum of squares	df	Mean square	f	Sig.
Physical health					
Between group	.002	1	.002	.001	0.975
Within group	452.478	198	2.285		
Total	452.480	199			
Psychological					
Between group	.002	1	.002	.001	0.980
Within group	598.718	198	3.024		
Total	598.720	199			
Social health					
Between group	16.579	1	16.579	7.464	0.007
Within group	439.816	198	2.221		
Total	456.395	199			
Environmental					
Between group	32.010	1	32.010	5.742	0.017
Within group	1103.856	198	5.575		
Total	1135.875	199			
Overall QoL					
Between group	135.019	1	135.019	7.671	0.006
Within group	3484.865	198	17.600		
Total	3619.875	199			

respondents (76.4%) do not have to pay any other expenses, which is covered under the universal coverage. **Cultural accessibility-**almost all the respondents (98%) believe that cultural accessibility is available, meaning healthcare centers takes care of respondents privacy (i.e. have curtains or separate consultation rooms), Table 3.

Health related quality of life – WHOBREF

Each domain of quality of life includes low, moderate and high scores. Most respondents had a moderate level of quality of life, 92% level in physical health domain, 98% in psychological heath domain, 64.5% in social relationships, 79.5% in environment domain and 85% in overall QOL domain (Table 4).

Relationship between WHOBREF and age

There is significant weak inverse relationship between age and the HRQOL domains, found in overall QOL. Psychological, and Social Health, Environmental domains found positive weak statistical significant relationship between age and HRQOL. Pearson Correlation was used to analyze the following (Table 5).

Relationship between WHOQOL-BREF and education characteristics analyzed by one-way ANOVA

The relationship between health related quality of life and education, the study finds strong statistical significance in environmental (0.017) social (p=0.007) and overall QoL domain (0.006), Table 6.

DISCUSSION

Each domain of quality of life includes low, moderate and high score levels, among the 200 respondents with physical disability who completed the questionnaire on WHOQOL-BREF, most respondents had a moderate level of quality of life,

92% level in physical health domain, in 98% psychological health domain, 64.5% in social relationships, 79.5% in environment domain and 85% in overall QOL domain. This was similar to the result in China that Persons with physical disabilities (PWPD) experience more restrictions on participation in social activities than people without physical disability, which is associated with lower level of well-being, including their relative poorer quality of life QoL. While QoL is influenced by numerous factors, most studies have focused on demographic factors (e.g. age, gender, education, etc.) which do not account for a large proportion of variance in QoL.

In this research the percentage of male and female respondent was (69.5%) and (30.5%) respectively. The study is similar to the study on "Health Related Quality of Life among the Thai People with Unilateral Lower Limb Amputation, that shows that 82% of the respondents were male [7]. There were no association between gender and health related quality of life. Most respondent is aged between 31-40 years of age (40.5%) and (36%) were lesser than 31 years old. Negative statistics significant relationship found in physical health domain and overall QOL and in psychological, social health, environmental domains found positive statistics significant relationships. This means that as the respondents gets older; their quality of life is mainly affected by their physical health, which means, their mobility is weaker. Most respondents were primary school graduates at (70%) and high school at (35%), similar to the study in China on 'The role of quality of care and attitude towards disability in the relationship between severity of disability and quality of life which explains that (33.7%) were primary school graduate and (52%) were middle school graduate [8]. The relationship between health related quality of life and education, the study finds statistical significance in environmental (0.017) social (p=0.07) and overall QoL (0.06).

All respondents were employed under Independent Living Centers or the Redemptorist School. This might be unlike other studies because most studies have shown a low employment rate for PWD. The most common cause of physical disability is accident accounting for (70%) of the respondent and (17.5%) was disabled since birth. In Thailand, physical disabilities accounts for the highest kind of disability at 56.9 %. The level or the severity of physical disability were mainly leg disability (73.5%) followed by arm and leg disability (13.5%). This result explains that the lesser or more physical disability an individual has, it does not affect their health related quality of life. No statistical significance between health related quality of life and level of physical disability was found. (91.5%) of respondents did not have other underlying illness. There was also no relationship between health related quality of life and underlying illness, the study finds no statistical significance between the two variables. This study is similar to the study in Northeast Thailand which claims that majority of person with physical disability did not have any underlining disease or illness (54.33%). The top three underlining diseases were hypertension (23.59%), DM (18.62%), and cardiovascular disease (7.36%) [9]. Data shows, the number of years of disability (57.5%) was between 1-10 years. The relationship between health related quality of life and years of disability, the study finds no statistical significance between the two variables. Meaning if the respondent was newly disable or disabled for many years, it did not have any impact on their health related quality of life.

CONCLUSIONS

This study was a cross section study to look at the association between socio-demographic factors, religion, physical disabilities, accessibility to healthcare and health related quality of life in persons with physical disability in residential institutionalized center. It was done with the expectation to provide general understanding on the health related quality of life using WHOQOL-BREF as part of the questionnaire among persons with physical disability. A moderate level of health related quality of life was shown among the 200 persons with physical disability respondents. The result showed that females living with physical disability had higher quality of life than males. When analyzed by one-way ANOVA, with statistical significance at the level of $p>0.05$, gender, age, employment, religion, degree of physical disability are factors that did not show significant association with QoL of the study population. Education and financial accessibility showed an association between health related quality of life. To sum up, after the analysis the following conclusions could be made: the HRQOL of people with physical disabilities is associated mostly with education and financial accessibility.

Respondents in this study have relatively high

QOL which is contrary to most studies related to health related quality of life; the reason could be that this study was done in residential institutionalized region rather than community. Also, there was 100% employment in this study. It is recommended to conduct additional studies and recruiting greater number of participants in different region and different institutionalized centers. The level of income is usually associated with quality of life as explained in few studies in Thailand where respondents were unemployed. In this study income was not investigated because during piloting the researcher was advised that question was too sensitive for this kind of population. This subject would be better investigated through a qualitative research method or an in-depth interview. The study started with using WHODAS as a questionnaire part 5 for finding the quality of life for persons with physical disabilities but the questionnaire was too long and confusing, so WHOQOL-BREF was used instead.

RECOMMENDATION

The study has shown that it is feasible to use the WHOQOL-BREF questionnaire at residential regions. The instrument provides useful information on the physical, psychological, social, environment and quality of life domain for persons with disability. More studies regarding quality of life should be researched to understand the factors that affect PWDs. This study only focused on few residential regions in Thailand; studies on community could also help better understand PWD. Other variables such as living conditions, income, attitude, could be looked at, to better understand the quality of persons with disabilities.

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REFERENCES

1. World Health Organization [WHO]. Disabilities. [cited 2014 Dec]. Available from: http://www.who.int/topics/disabilities/en/
2. National Empowerment of Persons with Disabilities [NEP]. Disabilities rights and benefits [in Thai]. [cited 2014 Dec]. Available from: http://nep.go.th/en
3. World Health Organization [WHO]. Disabilities. [cited 2014 Dec]. Available from: http://www.who.int/violence_injury_prevention/publications/road_traffic/world_report/summary_en_rev.pdf
4. Anderson P. Our community: community, disability and disability services. [cited 2014 Dec]. Available from: http://www.psawa.com
5. Rapley M. Quality of life research: a critical introduction. London: Sage; 2003.
6. National Council Independent Living [NCIL]. About independent living: What is independent living? [cited 2015 June]. Available from: http://www.ncil.org/about/aboutil/
7. Dajpratham P, Tantiniramai S, Lukkanapichonchut P. Health related quality of life among the Thai people with unilateral lower limb amputation. J Med Assoc Thai. 2011 Feb; 94(2): 250-5.
8. Zheng QL, Tian Q, Hao C, Gu J, Lucas-Carrasco R, Tao JT, et al. The role of quality of care and attitude towards disability in the relationship between severity of disability and quality of life: findings from a cross-sectional survey among people with physical disability in China. Health Qual Life Outcomes. 2014; 12: 25. doi: 10.1186/1477-7525-12-25
9. Wongkongdech A, Laohasiriwong W. Movement disability: situations and factors influencing access to health services in the northeast of Thailand. Kathmandu Univ Med J (KUMJ). 2014 Jul-Sep; 12(47): 168-74.