Quality of Life Perceptions of Middle-Aged Women Living with a Disability in Muang District, Khon Kaen, Thailand: WHOQOL Perspective

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Objectives: *Measure the quality of life of middle-aged women with a disability and examine the association of their quality of life and socio-demographic factors.*
Material and Method: *A cross-sectional study was applied. Thirty-two women with disabilities aged 40-60 years were selected by using stratified random sampling. The WHOQOL-BREF-THAI, Modified Barthel ADL Index (BAI), Chula ADL Index (CAI), and Estrogen hormone deficit syndrome questionnaires were applied. Data were analyzed by using descriptive analysis and Spearman's correlation.*
Results: *The level of their overall quality of life, when measuring all dimensions of WHOQOL, was moderate. Overall, QOL perceptions correlated positively and significantly with BAI (r_s = 0.4848, p = 0.0048), CAI (r_s = 0.5963, p = 0.0005), and their income balance (r_s = 0.4124, p = 0.0150), while other factors such as marital status, educational level, occupation, duration of disability, disability level, health problem, and estrogen hormone deficit syndrome were not statistically significant correlated.*
Conclusion: *The present study results revealed that independency and financial sufficiency are significant factors on quality of life of disabled middle-age women. Promoting independency and financial status may be crucial for enhancing their quality of life.*

Keywords: *Quality of life, Disability, Middle-aged women, WHOQOL*

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Between 1964 and 2002, the proportion of people with disabilities in Thailand increased from 0.7% to 1.7%. Rural areas have nearly two times higher rates than urban areas. Specifically, Northeast region known as Isaan_has the highest prevalence of disability in women when compared with other regions of Thailand[1]. Data from the Thai National Statistic Organization revealed that the number of Thai middle-aged women with a disability has increased from 80.4 per 1,000 persons in 1991, to 92.4 per 1,000 persons in 1996[2,3].

Midlife is the critical period of human life. In this period, women have the responsibility to take care of their grown up children, parents, and other family members. This situation leads to women being identified as a sandwich generation[4]. According to the medical model, Rossier (1978), this period is characterized by a "sense of decline and loss" of previous characteristics and abilities, such as, loss of hair, endurance, and memory abilities. DeLoach & Greer (1981) stated that physical disability occurring during middle-age presents problems that often differ from other developmental periods. Thus, if middle age women have a disability; it may affect their quality of life[5].

The WHO has attempted both to define the concept of quality of life and to develop an appropriate assessment tool. Developers of this tool have sought to incorporate both subjective and objective elements.

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Starting from the view that quality of life is a subjective and broad-ranging concept, the WHO sought to identify and test various facets of quality of life and examine in cross-cultural studies, how these facets relate to the concept. Following focus group, research with participants across a number of cultures, the WHO identified four broad domains as being universally relevant for quality of life, namely physical health, psychological well-being, social relationships, and environment. These four domains have been incorporated into the assessment tools developed because of the research, namely the WHOQOL-100 tool and the short version, WHOQOL-BREF[6]. The World Health Organization's Task Force on Quality of Life defined it as an individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives, and in relation to his/her goals, expectations, standards and concerns[7]. The World Health Organization's Quality of Life Assessment (WHOQOL) group proposed that these perceptions and interpretations were rooted in that person's culture and this may be the first definition of quality of life that has directly and formally incorporated cultural components as integral to its definition rather than acknowledging cultural influence as an extraneous variable[8]. A definition is consistent with an explanation that recognizes quality of life as a multidimensional concept. However, that model of quality of life is based on the life style of people without disabilities and the normal social rhythms and circumstances.

Information on quality of life is needed for both clinical practice and health policy purposes[9]. Good quality of life of various populations, including middle-aged women, is the ultimate goal of the Thai health care system and policy. During 2001-2006, the literature review about the quality of life perception of women with disabilities revealed that almost all 23 studies have been conducted in Western countries. Almost all were quantitative studies. The majority of them focused on quality of life's instrument development for various populations, such as among people with osteoporosis[10-12], and fibromyalgia[13]. Some study results indicated that disability had a negative impact on quality of life perceptions[14-19].

However, few studies have investigated the quality of life of disabled women in developing countries, such as Thailand. There is only one study report about the quality of life of disabled women in Thailand. It indicated that their quality of life was poor[20]. However, there are seven studies in Thailand that investigated the quality of life of people with disabilities including women. Findings indicated that people's quality of life was reduced following acquiring a disability[21-25]. Women reported that their quality of life was good[22], moderate[24,26] or poor[27]. There is little knowledge about factors affecting their quality of life perceptions. Therefore, this paper will explore this issue. The authors' research hypotheses is "There are correlations between quality of life of disabled women with their demographic factor i.e. marital status, educational level, occupation, income balance, duration of disability, disability level, health problem, estrogen hormone deficit syndrome, BAI, and CAI" that needs to be tested.

Material and Method

The present study is a quantitative part of mixed method research namely the quality of life of middle-aged women with a disability in Isaan, Thailand. A cross-sectional study was applied in this part. The research setting was Muang district, Khon Kaen province, Northeast of Thailand.

Sampling and Participant selection

Stratified random sampling was used to access 32 women with a disability. The authors divided 113 women from the social welfare database to six strata (impairment in terms of sight, ability of hearing or communication, physical and locomotion, mental health or behavior, intellectual ability, and mixed impairment) that are related to the type of disability. In each stratum, the authors used simple random sampling to select women based on their proportion in each stratum. This method helped us to access 32 disabled women with all types of disability. This sample size was determined by a calculation technique for a small population[28]. Descriptive data from the pilot study of WHOQOL-BREF-THAI with 10 disabled women were used for sample size calculation:

$$n = NZ^2_{\alpha/2}\sigma^2 / e^2 (N-1) + Z^2_{\alpha/2}\sigma^2$$

$$n = 113 (1.96)^2 (16.8997)^2 / 5^2 (113-1) + (1.96)^2 (16.8997)^2 = 31.81$$

Data collection

Between October 2004 and May 2005, data collection methods were interviews based on the following instruments: WHOQOL-BREF-THAI, Modified Barthel Activity Daily Living Index, Chula Activity Daily Living Index and Estrogen Hormone Deficit Syndrome questionnaire as explained below. Demographic information was also assessed. These instruments were selected because of being culturally sensitive of

measurement tools; their feasibility was established conducted during field work.

***WHOQOL-BREF-THAI*:** It is a shortened version (26 items) of the WHOQOL-100, developed by the WHOQOL Group. In addition to the total score, it consists of four domains each of which can be scored. These are physical, psychological, social relationships, and environmental domains. The WHOQOL-BREF rating had a possible range of 26 to 130. A high score indicates a better quality of life (96-130 = good, 61-95 = fair, 26-60 = poor). Participants completed the WHOQQL based on a questionnaire, which took about 10 minutes to complete. Some disabled women who were unable to complete the WHOQOL questionnaire, completed it as part of an interview. The internal consistency of the WHOQOL-BREF-THAI was evaluated through Cronbach reliability coefficient. The Cronbach's alpha of the entire WHOQOL-BREF-THAI was 0.95, confirming good internal consistency of the instrument in the present study.

A Modified Barthel Activity Daily Living Index (BAI) assessed the physical health functions: physical ability and mobility and self-reported chronic conditions. The activity of daily living (ADL) index reflects physical ability and mobility (Basic ADLs). It consisted of 10 activities: feeding, bathing, grooming, dressing, bowel movement, urination, toilet use, transfers (bed to chair and back), mobility (on level surfaces), and being able to climb stairs. In the present study, the Cronbach's alpha of the entire Modified Barthel ADL Index was 0.95, confirming good internal consistency of the instrument.

***Chula Activity Daily Living Index (CAI)*:** Jitapunkul, Kamolratanakul & Ebrahim (1994) developed the Chula Activity Daily Living Index to evaluate Extended ADLs of people living in a community. It consisted of five activities: walking outdoors, cooking, using public transport, using money, and doing heavy housework. Each item recorded the usual ability of the person. A person's total score was obtained by simply summing the item scores depending on the level of ability[29]. The Cronbach's alpha of the entire Chula Activity Daily Living Index was 0.77, confirming on good internal consistency of the instrument in the present study.

Estrogen hormone deficit syndrome questionnaire was developed by the Ministry of Public Health, Thailand. It is normally used to evaluate physical and psychological changes in menopausal women in a menopausal clinic in Thailand. It consists of 20 items related to menopausal symptoms. In the present study, the Cronbach's alpha of the entire Estrogen hormone deficit syndrome questionnaire was 0.85, confirming good internal consistency of the instrument.

Data analysis

Descriptive statistics was employed. For assessing the correlation between socio-demographic factors, functional status, estrogen hormone deficit syndrome, and overall quality of life perception, we used the Spearman's coefficients. For all analyses, $p < 0.05$ was considered as statistically significant.

Ethical considerations

Both written and oral information about the aims of the study were given to the women invited to participate in the present study. The participants were informed that their inclusion in the study was voluntary and were given a guarantee of anonymity. They were informed that they were free to withdraw from the study at any time. The Ethics Committee of the Khon Kaen University, Thailand, approved the present study.

Results

Almost all the women had an acquired disability (78.10%), and reported having a physical disability (53.10%), which they acquired during their midlife (84.40%). The mean of duration of living with a disability was 28.81 years (SD = 18.00). The majority of the women were married (62.50%), Buddhist (100%), and had primary education (81.25%). Women's mean age was 49.19 (SD = 6.31) and family income was 3401.56 baht per month (SD = 2569.13).

The level of their overall quality of life, when measuring all dimensions of WHOQOL was moderate, as show in Table 1.

Data from Table 2 show that overall QOL perception correlated positively and significantly with BAI ($r_s = 0.4848$), CAI ($r_s = 0.5963$), and their income balance ($r_s = 0.4124$), while other factors such as marital status, educational level, occupation, duration of disability, disability level, health problem, and estrogen hormone deficit syndrome were not statistically significantly correlated.

Discussion

The present study shows that the level of women's quality of life was moderate. This finding is congruent with similar research[24,26]. In contrast, it is

Table 1. Women's quality of life perception are presented by WHOQOL-BREF-THAI (n = 32, data missing for 3 disabled women)

Domains	Possible range	Mean	SD	95% CI for mean	Level
Health	7-35	23.2857	3.3799	21.7975-24.7739	moderate
Psychological	6-30	19.6426	4.2619	17.9903-21.2955	moderate
Social relationship	3-15	9.1786	1.8669	8.4546-9.9025	moderate
Environment	8-40	25.6786	4.5546	23.9125-27.4447	moderate
Overall	26-130	83.9643	14.1277	78.4861-89.4424	moderate

Table 2. Correlation between demographic factors, functional status, estrogen hormone deficit syndrome and overall quality of life perceptions (n= 32, data missing for 3 disabled women)

Variables	Correlations (Spearman's rho)	p-value	95%CI for rho
Income balance	0.4124*	0.0150	0.0465-0.6807
BAI	0.4848*	0.0048	0.1364-0.7264
CAI	0.5963**	0.0005	0.2871-0.7929

* $p < 0.05$

not congruent with other findings and indicates that women's quality of life was good[22] and poor[27].

The association between quality of life and functional status is supported by the existing knowledge about the correlation between quality of life perceptions and health/functional status[30-35], and income[22,23,25]. The present results did not demonstrate that there is a statistically significant correlation between quality of life and occupation[18,32,35-37], health problems[23,38,39], duration of disability[40], menopause[41], and couple support[23].

The different results can be affected by the unique culture and belief in the study site that is called Isaan. Isaan traditions regarding the disabled are affected by Buddhism, and the beliefs in ghosts and supernatural beings[42]. This belief is affected by the Buddhist teaching that life is a chain of rebirths where there is a continuous rebirth in a human or animal form, in either gender, depending on deeds or karma of the previous life: 'What we are now is the result of what we were and have been before' and 'Do good, receive good; do evil, receive evil'[43,44]. The law of karma assists an individual to understand her own disability correlates with bad karma in the past. If someone has a disability, it will not be cured until the karmic debt is repaid. Buddhism teaches people with a disability and their families to be patient and accept their own bad karma including their quality of life perception.

In Isaan tradition, community has strong relationships. If someone in the community gets sick or is in trouble, others will visit them, show sympathy for their illness or troubles, and try to help them. Kin and neighbors are a significant source of support for disabled women. Some disabled women report having menopausal symptoms such as hot flashes and sweat, but they did not perceive that as suffering. This phenomenon is related to the belief about menopause in Isaan culture, that menopausal symptoms are a normal change in women's life rather than an illness[45]. This belief helps them cope with the menopausal symptoms. Disabled women perceived menopause as a normal change in their life that everyone will go through.

Disabled women were challenged by the unpredictability of their symptoms. All disabled women selected the professional health care system as a major health service and chose the folk health care system for complementary treatments. Thailand developed the Universal health coverage scheme in 2001. The 30-baht scheme is the most popular, allowing patients to gain benefit from a health care service[46]. Disabled people who are registered with the disabled database have privileges. If disabled women can access their desired health care service, it will help them meet their health care needs and gain optimal health. Some disabled women receive financial support from the government through the social welfare system or local policy.

In addition, failure to detect an association between them may have been influenced by a small sample and their demographic characteristics, i.e. all participants being mid-life women. In addition, there is insufficient variation in their educational level and economic status in contrast to other reports.

Limitations

The present study was based on a small sample size with women who live in Muang district,

Khon Kaen, Thailand. Generalizations are not possible and study involving a larger sample is required. However, the present study result can contribute to knowledge about the factors affecting their quality of life perceptions that are significant for a design care system to promote their optimal quality of life.

Clinical implication

In addition to functional status, and income balance affects women with disabilities quality of life perception. When designing a care system to promote their quality of life, their functional status, and income balance all need to be equally taken into account. To archives this, a multidisciplinary team is required.

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การรับรู้คุณภาพชีวิตของผู้หญิงพิการวัยกลางคนชาวอีสานในเขตอำเภอเมือง จังหวัดขอนแก่น ประเทศไทย: มุมมองจากแนวคิดคุณภาพชีวิตขององค์การอนามัยโลก

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วัตถุประสงค์: *เพื่อประเมินคุณภาพชีวิตผู้หญิงพิการวัยกลางคน และทดสอบความสัมพันธ์ระหว่างคุณภาพชีวิตกับปัจจัยพื้นฐานทางสังคม*

วัสดุและวิธีการ: *การศึกษานี้เป็นการศึกษาแบบภาคตัดขวาง ดำเนินการศึกษาในผู้หญิงพิการวัยกลางคน อายุระหว่าง 40-60 ปี จำนวน 32 คน ที่ได้มาจากการสุ่มกลุ่มตัวอย่างแบบแบ่งชั้น เก็บข้อมูลด้วย แบบวัดคุณภาพชีวิตฉบับย่อขององค์การอนามัยโลกฉบับภาษาไทย ดัชนีบาร์เทลเอดีแอลฉบับดัดแปลง ดัชนีจุฬาเอดีแอล และแบบประเมินอาการขาดฮอร์โมนเอสโตรเจน วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา และสถิติสเปียร์แมน*

ผลการศึกษา: *คะแนนการรับรู้คุณภาพชีวิตโดยรวมประเมินจากแบบวัดคุณภาพชีวิตฉบับย่อขององค์การอนามัยโลกฉบับภาษาไทยอยู่ในระดับปานกลาง มิติอาการทางกาย จิตใจ สังคม และสิ่งแวดล้อมอยู่ในระดับปานกลาง การรับรู้คุณภาพชีวิตโดยรวมมีความสัมพันธ์ทางบวกกับความสามารถในการปฏิบัติกิจวัตรประจำวันพื้นฐาน (r_s = 0.4848, p = 0.0048) ความสามารถในการปฏิบัติกิจวัตรประจำวันต่อเนื่อง (r_s = 0.5963, p = 0.0005) และความสมดุลของรายได้ (r_s = 0.4124, p = 0.0150) ส่วนสถานภาพสมรส ระดับการศึกษา อาชีพ ระยะเวลาที่พิการ ระดับความพิการ ปัญหาสุขภาพ และอาการขาดฮอร์โมนเอสโตรเจนไม่มีความสัมพันธ์กันอย่างมีนัยสำคัญทางสถิติ*

สรุป: *ผลการศึกษาได้ชี้ให้เห็นว่าการมีชีวิตอยู่ได้อย่างอิสระ และความเพียงพอทางการเงินเป็นปัจจัยสำคัญของคุณภาพชีวิตผู้หญิงพิการวัยกลางคน การส่งเสริมการดำรงชีวิตอย่างอิสระและสถานะทางการเงินอาจเป็นสิ่งสำคัญต่อการสร้างเสริมคุณภาพชีวิตของบุคคลเหล่านี้*