

# Quality of Life Assessment in Thai Postmenopausal Women with an Overactive Bladder

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**Objective:** To compare the quality of life (QoL) among 3 groups of Thai postmenopausal women with an overactive bladder (OAB), diabetes, and without these conditions.

**Material and Method:** A total cross-sectional cohort of 180 postmenopausal women aged 48-60 years (60 had OAB, 60 diabetes and 60 controls) were recruited from the menopause clinic and diabetes clinic of Hatyai regional hospital between June and December 2003. Information on QoL were collected by the SF-36 questionnaire, validated for Thai women.

**Results:** There was no significant difference in the patient's demographic characteristics. All dimensions of QoL score of women with OAB and diabetes were lower than the scores of the controls. When compared with diabetes, OAB had significantly lower scores in the general health, social function and role-function emotional dimensions.

**Conclusion:** QoL was significantly impaired in Thai postmenopausal women with OAB and diabetes compared to those women without these conditions. General health, social function and role-function emotional dimensions were particularly affected.

**Keywords:** Quality of life, Thai postmenopausal women, Overactive bladder, Diabetes

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Overactive bladder (OAB) is characterized by involuntary and unpredictable contractions of the micturition cycle, causing an increased micturition frequency and a strong urge to void. Urinary incontinence occurs when the urge to void cannot be suppressed<sup>(1)</sup>. It is not a life threatening condition but it can affect social, psychological, domestic, occupational, physical and sexual aspects of the patients' lives<sup>(2)</sup>. Social and psychological consequences can be profound, leading to limitations in social activity, anxiety, embarrassment and isolation<sup>(3)</sup>. OAB is as common as diabetes, affecting 13-24% of women aged 40-60 years<sup>(4,5)</sup>. As life expectancy rises in industrialized countries, the importance of OAB will further increase<sup>(6)</sup>.

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Quality of life (QoL) is a multidimensional concept reflecting an individual's experience of physical, emotional and social well being, as well as perceptions of health status<sup>(7)</sup>.

To date, there is no report of QoL assessment in Thai postmenopausal women with OAB and DM. This was the first study to assess QoL in women with OAB by using a Thai version of Short form (SF-36) questionnaire that was valid and reliable for Thai women<sup>(8)</sup>.

## Material and Method

The study sample consisted of a hospital-based, cross-sectional cohort of 180 women aged 48-60 years (60 had OAB, 60 diabetes and 60 without these conditions). The subjects were recruited from the menopausal and diabetics clinics of Hatyai regional hospital from June to December 2003. The women who met the following case definitions were invited to participate in the present study. For every woman, data

on age, educational level, and marital status were collected. All of them answered a Thai version SF-36 questionnaire after the purpose of the present study was explained to them.

### Case definitions

The postmenopausal women were classified statuses as those with OAB if they reported at least one of the following symptoms: frequency (exceeding eight micturitions in a 24-hour period or waking up at least twice each night to urinate); urgency (a sudden feeling of a full bladder and immediate need to urinate to avoid accidental loss of urine); or urge incontinence (accidental loss of urine caused by an uncontrollable and sudden urge to urinate that occurred at least once a month and included more than just a “few drops of urine”<sup>(9)</sup>). They must have had the symptoms for at least 6 months before the study.

Diagnoses of diabetes were considered when the patients had symptoms such as thirst, polyuria, unexplained weight loss and measured the fasting plasma glucose (FPG)  $\geq 126$  mg/dl. None had started the treatment with anti-diabetic drugs before<sup>(10)</sup>. The patients must have had the symptoms for at least 6 months but had never been treated with anti-diabetic drugs before the study.

Controls were non-diabetic Thai women with more than one year of non striation concession and routine gynecological examination revealed no any symptom related to OAB.

### Thai version SF-36 questionnaire

The Thai version of the SF-36 questionnaire

was in the assessment of each patient’s quality of life (QoL). It is a generic instrument that assesses eight QoL dimensions: physical functioning (eg. walking, running, lifting and carrying), role function physical (eg. limitations in such normal daily activities as work, household chores and school due to physical problems), bodily pain (eg. how much pain the person is experiencing), general health (eg. health perceptions), vitality (eg. fatigue and energy level), social functioning (eg. interference in normal social activities such as visiting friends and family), role function emotion (eg. limitations in such normal daily activities as work, household chores and school due to emotional problems) and mental health (eg. happiness and nervousness). Its scores ranged from 0 to 100 for each dimension, with 100 indicating optimal QoL.

### Statistical analysis

Descriptive statistics such as mean, standard deviation were used in describing the summary measures. Comparisons among patient groups were conducted by using for 2 groups or ANOVA for more than 2 groups and chi-square test respectively for continuous and categorical data. For all analyses,  $p < 0.05$  was considered as statistically significance.

### Results

A total of 180 postmenopausal women completed all the questions, 60 with OAB (OAB group), 60 with diabetes, and 60 (DM group) without such conditions (control group). The demographic characteristics of the three groups are described in Table 1. Mean (SD) ages of the OAB, DM, and control groups

**Table 1.** Demographic characteristics

Characteristics	Group			Statistical significance
	OAB (n = 60)	Diabetes (n = 60)	Control (n = 60)	
Age (yrs) Mean (SD)	52.6 (5.6)	51.8 (3.2)	54.1 (4.7)	NS
	n (%)			
Education				} NS
Primary school	9 (15.0%)	12 (20.0%)	12 (20.0%)	
Secondary school	12 (20.0%)	18 (30.0%)	15 (25.0%)	
Vocational	14 (23.3%)	11 (18.3%)	12 (20.0%)	
Graduate degree	25 (41.7%)	19 (31.7%)	21 (35.0%)	
Marital status				} NS
Married	38 (63.4%)	35 (58.3%)	32 (53.4%)	
Separate/ divorced	8 (13.3%)	6 (10.0%)	8 (13.3%)	
Widowed	5 (8.3%)	7 (11.7%)	8 (13.3%)	
Single	9 (15.0%)	12 (20.0%)	12 (20.0%)	

NS: Non statistical difference, OAB: Overactive bladder

**Table 2.** Comparison of Mean (SD) of Short Form-36 QoL questionnaire (SF-36) scores Among OAB, diabetes and control groups

Group	Physical function	Role-function physical	Bodily pain	General health	Vitality	Social function	Role-function emotion	Mental health
Control	74.3(18.8) <sup>a,b</sup>	84.2(25.6) <sup>a,b</sup>	66.9(20.7) <sup>a,b</sup>	60.5(20.7) <sup>a,b</sup>	64.1(20.2) <sup>a,b</sup>	83.3(17.5) <sup>a</sup>	71.6(37.8) <sup>a</sup>	72.2(16.9) <sup>a</sup>
OAB	66.3(26.5) <sup>a</sup>	50.0(37.9) <sup>a</sup>	53.3(26.3) <sup>a</sup>	39.6(20.4) <sup>a,c</sup>	49.7(18.3) <sup>a</sup>	68.5(28.4) <sup>a,c</sup>	48.7(42.2) <sup>a,c</sup>	59.7(20.3) <sup>a</sup>
Diabetes	64.7(7.4) <sup>b</sup>	55.8(4.9) <sup>b</sup>	57.5(25.3) <sup>b</sup>	49.4(18.1) <sup>b,c</sup>	54.3(19.1) <sup>b</sup>	80.4(17.1) <sup>c</sup>	64.7(27.4) <sup>c</sup>	66.1(22.3)

<sup>(a)</sup>= statistically significant difference between Control and OAB (p value < 0.05)

<sup>(b)</sup>= statistically significant difference between Control and Diabetes (p value < 0.05)

<sup>(c)</sup>= statistically significant difference between OAB and Diabetes (p value < 0.05)

were 52.6(5.6), 51.8(3.2), and 54.1(4.7) years respectively. There was no significant difference in age, education, and marital status among these 3 groups (p > 0.05).

The QoL scores for the 3 groups are shown in Table 2, lower SF scores reflected poorer quality of life. The OAB and DM groups each had significantly lower scores than the control in almost all dimensions (p < 0.05) except for social function, role-function emotional and mental health dimensions of the DM group. When comparing the OAB and DM groups, the OAB groups had significantly lower scores than the DM group in general health, social function and role-function emotional scores (p < 0.05).

## Discussion

Quality of life has become a topic of great interest in any evaluation of the impact of a disease, particularly for benign conditions. Several psychiatric research have employed SF-36 as a parameter for outcome measurement. The Thai version SF-36 was translated from the original SF-36 with some adaptations and successfully constructed with an acceptable level for validity and reliability<sup>(8)</sup>. Up to now, this is the only QoL questionnaire that was translated into Thai and used as a generic measurement of health-related quality of life in various medical conditions.

Women with OAB use a variety of behavioral modification and coping skills to reduce the impact of their symptoms. These include toilet-seeking, restriction of fluid intake, dietary restrictions and limitation of physical activities. A pervasive cycle of anxiety and distress regarding possible urine loss and embarrassment, and worsening urgency due to the internalized distress, frequently leads to a great psychological burden and various degrees of social isolation. Therefore, it may have a considerable impact on the patient's quality of life<sup>(11,12)</sup>.

The present findings were interesting in that the authors compared the quality of life in two chronic diseases with a well recognized QoL questionnaire, the SF-36. The results from the present study indicated that the symptoms of frequency and urgency, even without incontinence, can be clinically significant symptoms, causing an impairment in the quality of life. Women with OAB also had reduced scores on the bodily pain scale, a finding supported by prior reports<sup>(13,14)</sup>. Although actual pain is unknown in the clinical assessment of OAB, it is acknowledged that some patients reported the discomfort accompanying unpredictable bladder contractions as pain<sup>(1)</sup>.

As a consequence of diabetes exposure, diverse functional and morphologic alterations develop that lead to severe complications affecting the eyes, kidneys, and heart. Several reports have found a link between diabetes and depression<sup>(15)</sup>. Therefore, diabetes may deteriorate the patient's quality of life.

The present study confirms, as measured by SF-36, that women with OAB are more affected in their quality of life than women with DM.

Due to the limitations of the hospital based study, future studies should also be conducted in population based trial with a larger sample size to explore more fully the impacts among various subgroups.

## Conclusion

The present study showed that the QoL was more significantly impaired in Thai postmenopausal women with OAB and diabetes than in those without such conditions. The general health, social function and role-function emotional dimensions were more impaired in women with OAB than in those with DM.

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## การประเมินคุณภาพชีวิตในสตรีไทยวัยหมดประจำเดือนที่มีภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวาน

สุวิทย์ บุญยะเวชชีวิน, สมนึก วีระนรพานิช

**วัตถุประสงค์:** เพื่อประเมินคุณภาพชีวิตในสตรีไทยวัยหมดประจำเดือนที่มีภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวาน และผู้ป่วยสตรีที่เป็นโรคเบาหวานเปรียบเทียบกับสตรีที่ไม่มีภาวะทั้งสอง

**วัสดุและวิธีการ:** เป็นการศึกษาแบบ cross-sectional ของสตรีไทยวัยหมดประจำเดือน จำนวน 180 รายที่มีอายุในช่วง 48-60 ปี ( 60 รายมีภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวาน, 60 รายเป็นโรคเบาหวาน, 60 รายปกติ) ที่มาคลินิกสตรีวัยทองและคลินิกเบาหวาน โรงพยาบาลศูนย์หาดใหญ่ ระหว่างเดือนมิถุนายน 2546 เดือนธันวาคม 2546 ข้อมูลการประเมินคุณภาพชีวิตใช้แบบสอบถาม SF-36 ฉบับภาษาไทย

**ผลการศึกษา:** ข้อมูลลักษณะทางประชากรศาสตร์ในแต่ละกลุ่มไม่มีความแตกต่างอย่างมีนัยสำคัญทางสถิติ สตรีที่มีภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวานและในกลุ่มที่เป็นเบาหวานพบว่าคะแนนในทุกหัวข้อต่ำกว่าสตรีปกติ เมื่อเปรียบเทียบเฉพาะในกลุ่มที่เป็นโรคกระดูกพรุนและผู้ป่วยโรคเบาหวานและในกลุ่มที่เป็นเบาหวานพบว่าในสตรีที่เป็นโรคภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวานมีคะแนนในส่วน of general health, social function และ role-function emotional ต่ำกว่ากลุ่มที่เป็นเบาหวานอย่างมีนัยสำคัญทางสถิติ

**สรุป:** คุณภาพชีวิตในสตรีไทยวัยหมดประจำเดือนที่มีภาวะกระดูกพรุนและผู้ป่วยโรคเบาหวานและกลุ่มเป็นโรคเบาหวานต่ำกว่ากลุ่มสตรีปกติอย่างชัดเจน ในเรื่อง general health, social function และ role-function emotional

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