

นิพนธ์ต้นฉบับ

# Lower Urinary Tract Symptoms and Quality of life of Women in Trat Province

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## Abstract

**Objective :** To determine the prevalence of lower urinary tract symptoms and the impact on quality of life of women in Trat Province.

**Methods :** From September 2003 to February 2004, a population-based cross-sectional survey was performed. A lower urinary tract symptoms-specific questionnaire and incontinence-specific quality of life questionnaire was administered to 1,500 women in Amphor Muang, Trat Province. Demographic data, obstetric history, medical diseases, and score of quality of life were analysed by using Student t-test and ANOVA.  $P < .05$  was considered as a level of significance.

**Result :** A total of 1,128 women, mean age  $39.08 \pm 13.61$  years (range; 15–95 years), completed the questionnaire. Lower urinary tract symptoms was found in 80.2 percent of women in Trat Province. The prevalence of nocturia, stress incontinence, urgency, frequency, and urge incontinence were 73.0 percent, 33.6 percent, 17.4 percent, 11.9 percent, and 11.0 percent, respectively. The results showed that incontinence-specific quality of life was affected by lower urinary tract symptoms in aspects of avoidance and limiting behavior, psychosocial impacts and social embarrassment.

**Conclusion :** Lower urinary tract symptoms was a common problem among women of all ages in Trat Province and it adversely affected quality of life.

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## Introduction

The definition of lower urinary tract symptoms (LUTS) defined by the Standardisation Sub-committee of the International Continence Society is the subjective indicator of a disease or change in condition as perceived by the patient, carer or partner and may lead him/her to seek help from health care professionals.<sup>1</sup> Lower urinary tract symptoms such as nocturia, urgency, urge and stress incontinence, are one of the most important health problems which not only cause considerable personal suffering for the individual afflicted but it is also of immense economic importance for the health service. Previous studies have demonstrated that approximately 10 – 55 percent of women suffer from LUTS all over the world.<sup>2-5</sup> Since this problem is so common and burdened physically, psychosocially and economically but little is known about the epidemiology and its impact on quality of life in women particularly in a rural area of Thailand. The objective of this study was to determine the prevalence of lower urinary tract symptoms and its impact on quality of life of women in Trat Province.

## Methods

The study was a community-based cross-sectional survey. A lower urinary tract symptoms-specific questionnaire and incontinence-specific quality of life questionnaire was administered to 1,500 female adults living in Amphor Muang, Trat Province who agreed to participate in this study. Written informed consent were obtained before their participation. The first part of the questionnaire included questions on demographics such as age, marital status, occupation, menopausal status,

medical diseases, parity, mode of delivery, their off spring birth weight. The second part of the questionnaire focused on lower urinary tract symptoms; stress urinary incontinence, urge urinary incontinence, urgency, frequency, and nocturia. The third part was a modified self-administered, incontinence-specific quality of life questionnaire, it consisted of 22 items, each with a 4-point response scale. There were also three subscale scores for the avoidance and limiting behavior, psychosocial impacts, and social embarrassment. The individual responses to the 22 items were summed and averaged for a total score and subscale scores. High score indicated better incontinence-specific quality of life. The terminology used in the questionnaire was the language of and understandable for every Thai women. The term “prevalence” in this study indicates the presence of one or more lower urinary tract symptoms during the last 1 month and reported in percentage. Unpaired t-test and ANOVA were used to analyse the data. A P-value of .05 was considered as a level of significance.

## Results

A total of 1,128 women, mean age  $39.08 \pm 13.61$  years (range; 15–95 years), completed the questionnaire. Eighty percent were premenopausal women and 20 percent were postmenopausal women. Among the postmenopausal women, the mean menopausal time was  $13.04 \pm 10.70$  years (range; 1–45 years). The majority of women in this study were married and parous, the mean parity was  $2.22 \pm 1.54$  (range; 1–12). The prevalence of lower urinary tract symptoms in

women was 80.2 percent. The prevalence of nocturia, stress incontinence, urgency, frequency, and urge incontinence were 73.0 percent, 33.6 percent, 17.4 percent, 11.9 percent, and 11.0 percent, respectively.

The results showed that incontinence-specific quality of life was affected by lower urinary tract symptoms in aspects of avoidance and limiting behavior, psychosocial impacts and social embarrassment as shown in Table 1. Women with lower urinary tract symptoms found it to be a disturbing problem and

reported that it had a detrimental effect on their quality of life.

Impairment of quality of life was related as statistically significant to age, marital status and menopausal status as shown in Table 2. Lower urinary tract symptoms was perceived as far more bothersome condition by aging and postmenopausal women than in other groups. Moreover, divorced and widowed women were more embarrassed by their problem than single or married women.

**Table 1** Lower urinary tract symptoms and quality of life

Subscale	Score	
	LUTS group Mean $\pm$ SD (N = 905)	Non-LUTS group Mean $\pm$ SD (N = 223)
Avoidance and limiting behavior	28.76 $\pm$ 2.52	29.54 $\pm$ 1.80
Psychosocial impacts	52.12 $\pm$ 5.16	53.94 $\pm$ 3.21
Social embarrassment	23.79 $\pm$ 2.67	24.52 $\pm$ 1.54
<b>Total</b>	<b>104.96 <math>\pm</math> 9.68</b>	<b>108.10 <math>\pm</math> 6.18</b>

P < .05

**Table 2** Factors associated with incontinence-specific quality of life

Factors	Scores (Mean $\pm$ SD)			
	Avoidance and limiting behavior	Psychosocial impacts	Social embarrassment	Total
<b>Age group</b>				
15–40	29.24 $\pm$ 2.21	52.64 $\pm$ 4.68	24.02 $\pm$ 2.28	106.17 $\pm$ 8.53
41–50*	28.78 $\pm$ 2.65	52.25 $\pm$ 5.36	23.83 $\pm$ 2.78	105.11 $\pm$ 10.32
51–60*	28.53 $\pm$ 2.53	51.96 $\pm$ 5.85	23.38 $\pm$ 3.19	104.16 $\pm$ 10.99
> 60*	27.76 $\pm$ 3.25	50.74 $\pm$ 7.18	23.05 $\pm$ 3.64	102.40 $\pm$ 13.04
<b>Marital status</b>				
Single	29.19 $\pm$ 2.26	52.62 $\pm$ 4.67	24.07 $\pm$ 2.24	105.99 $\pm$ 8.78
Married	28.97 $\pm$ 2.24	52.72 $\pm$ 4.35	24.07 $\pm$ 2.18	106.02 $\pm$ 8.11
Divorced/widowed*	28.06 $\pm$ 3.15	51.07 $\pm$ 7.09	23.04 $\pm$ 3.85	102.77 $\pm$ 13.31
<b>Occupation</b>				
Civil servant	29.08 $\pm$ 2.33	52.51 $\pm$ 4.73	23.99 $\pm$ 2.39	105.72 $\pm$ 9.01
Employee	28.89 $\pm$ 2.35	52.26 $\pm$ 5.22	23.96 $\pm$ 2.38	105.37 $\pm$ 9.34
Businesswomen	28.80 $\pm$ 2.64	52.84 $\pm$ 4.73	23.81 $\pm$ 2.71	105.77 $\pm$ 9.52
Housewife	28.74 $\pm$ 2.39	52.33 $\pm$ 5.10	23.93 $\pm$ 2.63	105.36 $\pm$ 9.26
<b>Menopausal status</b>				
Premenopause	29.09 $\pm$ 2.23	52.73 $\pm$ 4.43	24.08 $\pm$ 2.24	106.62 $\pm$ 8.36
Postmenopause*	28.28 $\pm$ 2.90	51.54 $\pm$ 6.35	23.33 $\pm$ 3.31	103.62 $\pm$ 11.78

\* P &lt; .05

## Discussion

This study showed that the prevalence of lower urinary tract symptoms among women in a rural area was high and nocturia was found to be the most prevalent symptom. Stress urinary incontinence was the most common leaking problem among women in this community-based study. These findings were similar to the

results of previous studies that were conducted on white, black and Asian women all over the world.<sup>2–10</sup> Moreover, this study showed similar results of lower urinary tract symptoms among women from rural and urban areas in Thailand.<sup>11</sup> Although lower urinary tract symptoms including urinary incontinence is a common problem among older people, it is also common in

reproductive age as reported by this study and other authors.<sup>9,10</sup> Gynecologists, family physicians and health care providers should raise the issue of lower urinary tract symptoms as a part of the routine general health check-up in their everyday practice.

Quality of life means a combination of patient-assessed measured of health, including physical function and social function, emotional or mental state, burden of symptoms and sense of well-being. In this study, women with lower urinary tract symptoms had significantly lower scores on all three aspects; the avoidance and limiting behavior, the psychological impacts, and the social embarrassment. This finding was similar to previous studies which found that many aspects of a sufferer's life are impaired, including psychological well-being, social interactions and activities, and sexual and interpersonal relationships.<sup>11–14</sup>

Since estrogen receptors are consistently demonstrated in the squamous epithelium of the proximal and distal urethra and the trigone of the bladder. It has been suggested that estrogen has an important physiologic effect on the female lower urinary tract and its deficiency is often an etiologic factors in lower urinary tract symptoms.<sup>15</sup> Besides estrogen deficiency, the cumulative effect of aging on the urinary tract may have brought about the increased prevalence and decreased quality of life in older women.

In conclusion, lower urinary tract symptoms is prevalent, significantly under-diagnosed and women of all age suffer from the life-disrupting consequences of a condition

that is largely treatable. This report indicated a need for an increased degree of awareness and improving knowledge among health care providers on lower urinary tract symptoms.

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