

# Assessment of Urinary Tract Infection Symptoms and Health Hygiene among Adult Women

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**Abstract:** *The present study was done to assess the lower urinary tract infection among women and report practices related to hygiene and self care among them. The sample included women inmates (20-50 years) of urban Jammu slums. Three slums were chosen through purposive sampling and sample size was 90. Only married women were included in the study. The Urogenital distress inventory questionnaire by Shumaker et al (1994) was used to assess the degree to which symptoms associated with lower urinary tract infection were present in the selected sample. Results revealed the presence of many symptoms of lower urinary tract infection among women, which needed further investigation and treatment.*

**Keywords:** Slum, LUTS, Hygiene, Incontinence

## 1. Introduction

Urinary tract infection (UTI) is defined as the microbial invasion of any of the tissues of the urinary tract extending from the renal cortex to the urethral orifice. UTI can be asymptomatic or symptomatic, characterized by a wide spectrum of symptoms ranging from mild irritative voiding to bacteremia. Lower urinary tract problems are common and distressing among females (Takeda et al., 2003). Lower urinary tract symptoms include urinary incontinence, urgency incontinence and mixed urinary incontinence, over-active bladder, urinary storage and voiding problems (Zalina et al., 2011). The symptoms are overlapping and urinary tract infection (UTI) needs to be excluded. Lower urinary tract infection is often attributed to aging and associated with age-related changes such as reduced bladder capacity or incomplete bladder emptying (Moreno et al., 2006).

Urinary tract infections are common infections found among both young and adult women especially with low level of hygiene and unsafe toiletry practices. Many studies have documented presence of lower urinary tract infection among women residing in slums. Urinary tract infection (UTI), with its diverse clinical syndromes and affected host groups, remains one of the most common but widely misunderstood and challenging infectious disease encountered in clinical practice (Drekonja and Johnson, 2008). There was a significant association between prevalence of UTI and improper perineal washing technique, malnutrition, presence of vaginal discharge and use of trash clothes during menses (Ahmed and Avasarala, 2008). Lower urinary tract symptoms have been not only attributed to elderly, multiparity and sexually active group population but also in young age, nulliparous and those who are not sexually active (Takeda et al., 2004; Sander, 2002; Nemir and Middleton, 1954). UTIs occur most frequently among females and are usually uncomplicated and not associated with underlying anatomic abnormalities. The present study was focussed on assessment of lower urinary tract infections and hygiene practice among women slum dwellers of urban Jammu.

## Objective of the study

- To assess the extent of lower urinary tract infection symptoms among sample women
- To report practices related to hygiene and self care among sample women

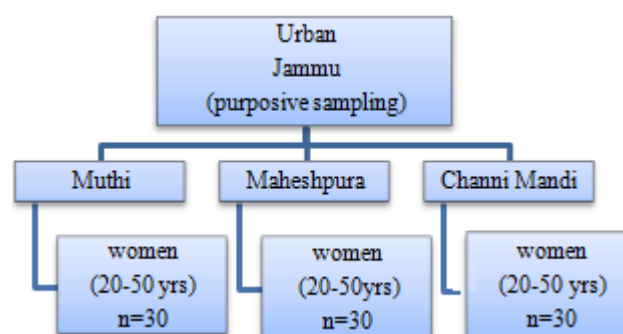
## 2. Research Methodology

The research design adopted to meet the objectives of the study is described below:

**Sample group-** three slums (Muthi, Maheshpura and Channi Mandi) were selected purposively depending upon the population of slum were selected. 90 sample women (30 from each slum) who fulfilled inclusion criteria and gave her consent to be part of research was included in the study.

### Inclusion criteria

- Age : 20-50 years
- Only married women were included in the study
- The women who were staying for more than one year in slum were included in the study.



### Research tool

#### *The Urogenital Distress Inventory*

The Urogenital distress inventory questionnaire was designed by Shumaker et al in 1994 to assess the degree to which symptoms associated with incontinence are troubling. It consists of 19 questions covering 3 domains: symptoms

related to stress urinary incontinence, detrusor overactivity, and bladder outlet obstruction. Shumaker et al assessed the validity, reproducibility, and sensitivity to change of the full-length UDI in a population of community-dwelling women recruited in an uncontrolled clinical study. All patients had to fulfill urodynamic criteria of genuine stress incontinence or detrusor instability. They reported a low but significant correlation with incontinence severity on the 1-hour pad test ( $r = 0.27$ ). The authors concluded from this and other psychometric tests that the questionnaires were reliable and valid. Short forms of UDI was developed with the original data on the full-length questionnaire. Regression analyses suggested that a 7- to 8-item questionnaire would accurately predict the UDI long from total score, and a 6-item form would predict the UDI long form.

#### Applicability to Indian population

UDI-6 demonstrated excellent test-retest reliability and validity but showed reduced internal reliability. These could hold greater significance in the facilitation of population-based epidemiologic research within India. The tool has

been used in many Indian studies (Sandhu et al., 2017; Pandey et al., 2015; Patil et al., 2012; Srivastava et al., 2006).

### 3. Result and Findings

The results of the study have been presented under various sections, each focusing on the objectives of the study. The results have been presented by illustrations in the form of tables and figures.

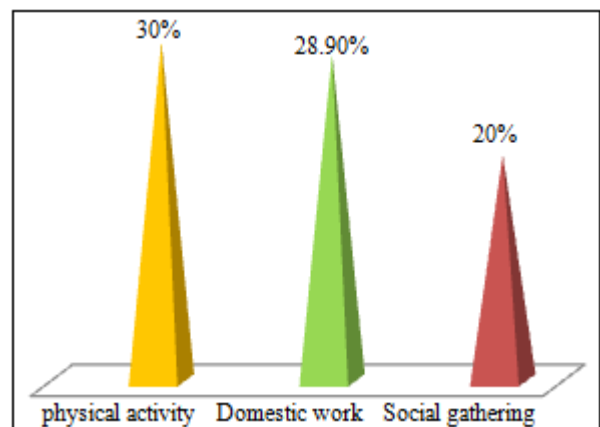
#### Assessment of lower urinary tract infection symptoms among sample women

Urinary tract symptoms are common among adolescents, predominantly in females (Weir and Brien, 2000). Depending upon the time duration and intensity of infection, many symptoms are observed in the patient. The symptoms may include pyrexia, pain in inguinal region, burning during micturation, frequent urge to pass urine (Sarah, 2010).

**Table 1:** Frequency of lower urinary tract symptoms (LUTS) among sample women

Symptoms	Muthi Slum n=30	Channi Himmat Slum n=30	Maheshpura Slum n=30	Total N=90
Day frequency (> 8 times)	0	2 (6.5%)	2 (6.5%)	4 (4.4%)
Night frequency/nocturnal(>2times)	0	2 (6.5%)	2 (6.5%)	4 (4.4%)
Urgency	26 (86.7%)	28 (90.3%)	26 (86.6%)	80 (88.8%)
Urgency incontinence	5 (16.7%)	4 (12.9%)	2 (6.5%)	11 (12.2%)
Stress incontinence	14 (46.7%)	5 (16.1%)	9 (29%)	28 (31.1%)
Bed wetting	0	0	0	0
Incomplete emptying	10 (33.3%)	7 (22.6%)	14 (45.2%)	31 (34.4%)
Straining	4 (13.3%)	5 (16.1%)	4 (12.9%)	13 (14.4%)
Pain During Micturation	10 (33.3%)	13 (41.9%)	12 (38.7%)	35 (38.8%)

Table 1 represents clinical presentation of LUTS among sample women. It was observed that 4.4% women experienced frequency of urination more than others (>8 times per day). Few women (4.4%) experienced nocturnal urination more than 2 times. No sample women from Muthi slum experienced day frequency or nocturnal micturation. Maximum number of sample women had strong urge for urination. Few women from all three groups suffered urgency incontinence many times in their lives. 31.1% women also suffered from stress incontinence which made them prone to urinary tract infection. Incomplete emptying was experienced by 34.4% women, where number was highest among women residing in Maheshpura slum. 14.4% women had to strain before passing urine. Overall 38.8% had pain and burning sensation during micturation which was much of concern and needed further investigation and treatment.



**Figure 1:** Illustration of hindrance caused by lower urinary tract symptoms (LUTS) in day to day activity

Figure 1 highlights hindrance faced by sample women in her daily activities due to presence of lower urinary tract symptoms. It was seen that 28.9% of sample women had experienced difficulty while doing their domestic chorus due to presence of these symptoms. Sample women (30%) were not able to do the work which involved physical activity or exertion as they were afraid that they would have urine incontinence during work. Many women (20%) restrained themselves from attending the social gatherings due to presence of these symptoms.

To report practices related to hygiene and self care among sample women

Approximately 20–40% of women have had at least one lower urinary tract infection in their lifetime. The symptoms are extremely uncomfortable. Women with LUTIS need to be properly investigated by urinalysis, urine cultures and

other radiological techniques in order to rule out causes of recurrence, as well as to assess possible anatomical or functional urinary tract abnormalities (Badr & Sheikh, 2013). LUTIS often are associated with low hygiene practices and personal care.

**Table 2:** Practices and personal hygiene among sample women

Practices	Muthi Slum n=30	Channi Himmat Slum, n=30	Maheshpura Slum n=30	Total N=90
Wash the inner part of labia majora during bath	30 (100%)	21 (71%)	30 (100%)	81 (90%)
Drying after bath	22 (73.3%)	9 (30%)	8 (26.7%)	39 (43.3%)
Use of cotton made inner wear	2 (6.7%)	2 (6.7%)	4 (13.3%)	8 (8.8%)
Washing separately and sun drying the inner wear	21 (71%)	21 (71%)	26 (86.7%)	68 (75.5%)
Use of sanitary pad	12 (40%)	10 (25%)	9 (30%)	31 (34.4%)
Change sanitary pad/ trash cloth more than 3 times per day	5 (16.7%)	2 (6.7%)	3 (10%)	10 (11.1%)
Wash rectum and vagina after sexual intercourse	0	0	0	0

Table 2 represents practices and personal hygiene among sample women. Majority of sample women reported to wash their inner part of labia majora during bath but only 43.3% accepted that they used towel (non-disposable) to dry it. Only 8.8% women used cotton innerwear and other women preferred nylon made panties, besides knowing the fact that it will be not hygienic especially during summers. Only 34.4% women used sanitary pads during menstruation and other women used trash clothes during those days. Some sample women (11.1%) were experiencing menorrhagia, so they frequently used more sanitary pad/ trash cloth, they were advised to consult gynecologist by researcher. No women was found to practice washing her inner parts after sexual intercourse.

#### 4. Conclusion

Majority of women under study experienced urgency, incomplete bladder emptying after urination, urgency incontinence and pain during urination. Most women used trash cloth rather than sanitary pad during menstruation. No women was found to wash her vagina and rectum after sexual intercourse. Lower urinary tract symptoms has proven not only attributed to elderly, multiparity and sexually active group population but also in young age, nulliparous and those who are not sexually active and are common infection found in women (Takeda et al., 2003; Sander, 2002; Nemir and Middleton, 1954 ). Wolin et al. (1969) found some degree of stress incontinence in 51% and daily problem with urine leakage in 16%. More females are affected by UTI than males (Irwin et al., 2009). Even UTIs occur most frequently among adolescent females and are usually uncomplicated and not associated with underlying anatomic abnormalities.

Women from slum are more prone to such infections due to unhygienic environment, low personal hygiene practices and non availability of health care facilities. The LUTS should be immediately reported to concerned doctor for appropriate treatment.

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