

Study of socio-demographic profile of women suffering from urinary incontinence and associated co-morbid conditions in an urban slum in Mumbai

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Abstract

Background: Urinary incontinence (UI) defined by the International Continence Society as the complaint of any involuntary leakage of urine, is a social or hygienic problem. The purpose of this study was to determine the socio-demographic profile and prevalence of UI in women of an urban slum and associated co-morbidities of UI. **Methods:** A pre-formed, pre-tested, semi-structured questionnaire was designed to collect information from 1200 eligible and willing women; in a centre based study over a period of six months. The sample size was calculated taking the prevalence rate from other studies as 10-30% and sampling method was systematic random sampling. The data was entered in Microsoft Excel and analysis was done. **Results:** 78.59% of participants were Muslims, 36.5% were illiterate, 84.5% were housewives, maximum were in age group 31-40 years, belonging to socio-economic class 2 of Prasad's classification, prevalence of urinary incontinence was (30.08%) with stress UI being the most prevalent. The associated co-morbidities were seen in 20.2% of those with UI. **Conclusion:** The prevalence of UI was high in the study sample especially that of stress UI. The frequency of co-morbidities associated with UI was high.

Key Word: Prevalence, Socio-demographic profile, Urinary incontinence, Co-morbid conditions

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INTRODUCTION

Urinary incontinence (UI), defined by the International Continence Society as "the complaint of any involuntary leakage of urine that is a social or hygienic problem (International Continence Society, 1973)" is a common and distressing medical condition.^{1,2} Women are at a high risk of UI mainly because of the damage to the pelvic floor caused by pregnancy and the child birth process.^{3,4}

In many resource poor settings the common factors that have been reported to be associated with UI in women include low standards of living. With prevalence ranging from 10% to 34%, the condition is usually under reported as many women hesitate to seek help or report symptoms to medical practitioners due to the embarrassing and culturally sensitive nature of this condition.^{5,7} Co-morbid conditions such as urinary tract infections (UTIs), skin problems in the genital areas such as rashes, infections, and sores occur due to constantly wet skin. Little data exists on the prevalence of UI in India.⁸ There is need to continuously study the UI prevalence and associated factors as both of these are likely to change as countries economy and standards of living change. So we conducted this study to know the burden of UI in our women population. The purpose of this study was to determine the socio-demographic profile and prevalence of UI in women of an urban slum and associated co-morbidities of UI.

MATERIALS AND METHODS

This was a single centre, interview based, cross-sectional epidemiological study was carried out amongst 1200 women having at least one vaginal delivery, or one caesarean section or an abortion (medical/surgical) attending OPD in urban health centre (UHC), residing in the community around UHC, over a period of 6 months from July to December 2012. The frequency of UI in each of the different categories (vaginal labour, LSCS, Abortion) has not been calculated separately, as any/all criteria were considered as inclusion criteria for including the women in the study sample. Using systematic random sampling method, every 10th eligible and willing woman was included in the study. It was from previous centre records of daily OPD attendance that an estimate of 12,000 female patients was considered for calculation of sample size. On an average, 275 is the daily OPD attendance at the OPD of the UHC. Of these at least 80 are married women with children, thus 80 x 25 days = 2000 women in a month and 12000 women in six months. Taking as 10% for sample size, a sample size of 1200 was calculated for the study. A pre-formed, pre-tested, semi-structured questionnaire was designed to collect information about their socio-demographic profile, prevalence of UI, type of UI and associated co-morbidities of UI. The types of UI were stress UI i.e. the complaint of involuntary leakage of urine on effort or exertion, urge UI- the leakage of urine accompanied by or immediately preceded by urgency and mixed UI when leakage is associated with urgency and exertion. The religion profile of the study participants is available; however the prevalence of UI in each religious category was not studied. Associated co-morbidities included were any skin rashes, sores, infections in the genital area which were persistent for >1 month or of frequency of >6 times per year.

Statistical analysis: The data was entered in Microsoft Excel Sheet. The quantitative data was analyzed by using percentages, mean and standard deviation and the association between various qualitative data was analysed by using chi-square test and p-value of <0.05 was considered as level of significance.

RESULTS

Socio-demographic factors: In this study, majority of subjects were of Muslim religion [943(78.59%)] and rest were Hindu [253(21.08%)] and Christian [4(0.33%)] by religion. Majority of subjects were housewives [1015 (84.58%)] and rest were mostly unskilled workers and doing low paying jobs [119(9.92%)], (housemaids, caretaker, helper, etc). Only 66(5.4%) were semi-skilled or semi-professionals. Maximum subjects 438(36.5%) were illiterate, 309(25%) had studied up to primary and

405(33.75%) secondary school. Only 40(3.33%) completed higher secondary school and 8(0.67%) graduation. Age wise distribution revealed the maximum prevalence of UI in 31-40 years age group (As shown in Table 1).

Table 1: Prevalence of urinary incontinence according to age group

Age (in years)	Urinary Incontinence		Total (%)
	Yes (%)	No (%)	
20-30	55 (13.86)	342 (86.14)	397 (100)
31-40	122 (35.99)	217 (64.01)	339 (100)
41-50	117 (46.25)	136 (53.75)	253 (100)
51-60	54 (32.14)	114 (67.86)	168 (100)
≥61	13 (30.23)	30 (69.77)	43 (100)
Total	361 (30.08)	839 (69.92)	1200 (100)

($\chi^2 = 13.647$ d.f.= 3; $p=0.0003$ Highly significant)

Prevalence and types of Urinary Incontinence: In this study, diagnosis of UI was based on answers to leading questions about symptoms of UI. Out of 1200 women, 361(30.08%) women reported UI. The prevalence of stress, mixed, and urge type UI was 236(65.37%), 103(28.53%), and 22(6.1%) respectively. As seen from Table 2 that using modified Prasad classification, the maximum participants were of socio-economic class II.

Table 2: Prevalence of urinary incontinence according to socio-economic class

Socio-economic status	Urinary Incontinence		Total (%)
	Yes (%)	No (%)	
Class I	30 (24.39)	93 (75.61)	123 (100)
Class II	167 (31.21)	368 (68.79)	535 (100)
Class III	93 (28.79)	230 (71.21)	323 (100)
Class IV	56 (29.47)	134 (70.53)	190 (100)
Class V	15 (51.72)	14 (48.28)	29 (100)
Total	361 (30.08)	839 (69.92)	1200 (100)

($\chi^2 = 1.375$ d.f.=3; $p=0.231$ Non-significant)

Association of Urinary Incontinence with co-morbid conditions: The prevalence of UI associated co-morbidities was found to be 20.2% in those having UI and the most common condition was skin rash (As shown in Table 3). In subjects who had UI [n=361 ($p=0.0003$)], there was significant association between UI and co-morbid conditions. In this study most common co-morbid condition was rash (50.68%).

Table 3: Association of urinary incontinence with co-morbid conditions

Co-morbid Conditions	Urinary Incontinence		Total (%)
	Yes (%)	No (%)	
Infection	17 (85)	03 (15)	20 (100)
Rash	37 (90.24)	04 (9.76)	41 (100)
Sores	12 (75)	04 (25)	16 (100)
Rash/Sores	05 (83.33)	01 (16.67)	06 (100)
Rash/Infection/Sores	02 (50)	02 (50)	04 (100)
No Morbidity	288 (25.88)	825 (74.12)	1113 (100)
Total	361 (30.08)	839 (69.92)	1200 (100)

($\chi^2 = 15.327$ d.f. = 3; $p=0.0003$ Highly significant)

DISCUSSION

As most of the people were Muslim in the community where study was conducted it was imperative that majority of participants were from Muslim community. The impact of UI is much higher among the middle aged and older women, and in these categories of women, its prevalence is estimated to be 40% and 50% respectively.⁹ In this study, maximum subjects were from socio-economic class-II though there was no significant difference in the prevalence of UI in different classes. Similar result was seen in study by Bodhare et al, from India.⁸ This could be because of influence of other risk factors such as BMI which is more common in higher class while poor obstetric practices in lower class. Therefore, Women from any of socioeconomic class will have equal chances of getting UI. Most of the study subjects were housewives and only few who were employed were unskilled workers. Similarly unskilled workers had high prevalence of UI in China.¹⁰ The prevalence of UI in this study was 30.08%. In other studies from India, prevalence was 10%⁸ and 21.87%.¹¹ In a study conducted in Coimbatore (India), out of 598 participants, a total of 202(33.8%) reported that they have UI.¹² Many international studies viz. Australian study, Buckley and Lapitan (2010) had prevalence ranging from 32–64%.¹³⁻¹⁶ Prevalence in European countries was higher than in our study population, 23% in Spain (an exception), 44%, 41% and 42% for France, Germany and UK respectively.¹⁷ This variation in prevalence of UI is due to differences in definitions used, population surveyed, survey type, response rate, age, availability and efficacy of health-care, and other factors. In this study, the prevalence of stress, mixed, and urge type UI was 236(65.37%), 103(28.53%), and 22(6.1%) respectively. This was similar to most of the other studies, these studies also showed stress UI as the commonest type.^{8,11,12} Differences in the prevalence of types of UI could be due to variations in definitions used, age groups and populations studied. The associated co-morbid conditions were found in 20.02% of those women with UI. These co-morbid conditions were mostly due to leakage of urine causing rash initially then sores and infection in local area (wet skin causes itching). These co-morbid conditions were due to negligence of UI by women. Many of them just keep washing their cloths as soon as got wet but avoid consultation because of embarrassment.

CONCLUSION

Our study area had more of Muslim population and most of them were with low educational status. Socio-economically most of them were in class-II and class-III of modified Prasad classification. Stress incontinence was the most common subtype. Subjects suffering from UI

had other co morbid conditions e.g. rash, sores, infection due to frequent leakage of urine.

REFERENCES

1. Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U. The standardization of terminology in lower urinary tract function: Report from the standardisation sub-committee of the International Continence Society. *Urology* 2003; 61: 37-49.
2. Currie CJ, McEwan P, Poole CD, Odeyemi IA, Datta SN, Morgan CL. The impact of the overactive bladder on health-related utility and quality of life. *BJU Int* 2006; 97:1267-72.
3. Mily SL, Jean ML, Richard C, Charles WN, Karl ML. Parity, Mode of delivery and pelvic floor disorders. *Obstet Gynecol.* 2006; 107(6):1253–60.
4. Press J, Klein M, Kaczorowski J. Does Cesarean section reduce postpartum Urinary incontinence? A systematic review. *Birth* 2007; 4(3):228–37.
5. Kumari S, Singh AJ, Jain V. Treatment seeking behaviour for urinary incontinence among north Indian women. *Indian J Med Sci* 2008; 62: 352-56.
6. Thom DH, Van den, Eeden SK, Ragins AI, Wassel-Fyr C, Vittinghof E, et al. Differences in prevalence of urinary incontinence by race/ethnicity. *J Urol* 2006; 175: 259-64.
7. Burgio KL, Ives DG, Locher JL, Arena VC, Kuller LH. Treatment seeking for urinary incontinence in older adults. *J Am Geriatr Soc* 1994;42:208-12
8. Bodhare TN, Valsangkar S, Bele SD. An epidemiological study of urinary incontinence and its impact on quality of life among women aged 35 years and above in a rural area. *Indian J Urol.* 2010; 26(3):353–58.
9. Friedman B, Stothers L. Risk factors of the development of stress Urinary incontinence in women. *Female Urology* 2011; 12(5):363–69.
10. Song YF, Zhang WJ, Song J. Prevalence and risk factors of urinary incontinence in Fuzhou Chinese women. *Chin Med J (Engl).* 2005;118(11):887-92
11. Singh U, Agarwal P, Verma ML, Dalela D, Singh N, Shankwar P. Prevalence and risk factors of urinary incontinence in Indian women: A hospital-based survey. *Indian J Urol* 2013; 29: 31-36.
12. Seshan V, Muliira JK. Self-reported urinary incontinence and factors associated with symptom severity in community dwelling adult women: implications for women's health promotion. *BMC Womens Health.* 2013; 13: 16.
13. Minassian VA, Drutz HP, Al-BadrA. Urinary incontinence as a worldwide problem. *Int J Gynaecol Obstet.* 2003; 82(3):327-38.
14. Taylor DW, Weir M, Jacqueline JC, Diao E. The Self-reported Prevalence and Knowledge of Urinary Incontinence and Barriers to Health Care-Seeking in a Community Sample of Canadian Women. *American Journal of Medicine and Medical Sciences* 2013; 3(5):97-102.
15. Ebbesen M, Hunskaar S, Rortveit G, Hannestad Y. Prevalence, incidence and remission of urinary incontinence in women: longitudinal data from the

- Norwegian HUNT study (EPINCONT) BMC Urology 2013;13:27.
16. Melville JL, Katon W, Delaney K, Newton K. Urinary Incontinence in US Women: A Population-Based Study. Arch Intern Med. 2005; 165(5):537-42.
17. Hunskaar S, Lose G, Sykes D and Voss S. The prevalence of urinary incontinence in women in four European countries. BJU International 2004; 93: 324–30.

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