

URINARY INCONTINENCE: PREVALENCE AMONG REPRODUCTIVE AGE WOMEN

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Abstract

Objective: The Objective of the study is to assess the Prevalence of urinary incontinence among reproductive age women. **Methods:** A quantitative study was used to conduct study at Saveetha Medical College Hospital. The sample size was 95 which was recruited by purposive sampling technique. The data was collected with structured questionnaire and Questionnaire for urinary incontinence diagnosis (QUID). **Results:** The study results depict that Frequency and percentage distribution of Level of Urinary incontinence severity are 67 (70.53%) had moderate incontinence severity, 5(5.26%) experienced slight incontinence severity and 23 (24.21%) had severe incontinence severity. **Conclusion:** The study's findings cannot be extrapolated widely due to the heterogeneity in the definition of Urinary incontinence and the variation in sample size across research. Educating women about workouts and rehabilitative programs may enhance treatment seeking trends for this condition.

Keywords: Women, Urinary Incontinence, Stress Incontinence, Urge Incontinence and Prevalence.

INTRODUCTION

Women experience urinary incontinence in varying levels, which can range from a few drops to multiple tablespoons.^[1] It is frequently regarded modest in women who only experience minor leakage after intensive exercises.^[2] Many women suffer with the disease out of embarrassment or because they believe it is a natural part of maturing and having children.^[3] It reduces quality of life and influences daily social decisions.^[4] Treatment includes behavioral therapy and lifestyle recommendations, but only 30% of women seek medical attention due to a lack of understanding, belief in aging as a natural process, or dismissive attitudes from healthcare professionals.^[5] The prevalence ranges between 30% and 40% in young adult to middle-aged women, and 30% to 50% in older women.^[6]

Urogenital disorders are more common in women. Among them, urine incontinence is a prevalent and uncomfortable issue. It has a tremendous impact on both the physical and mental aspects of life. The International Continence Society defines urinary incontinence (UI) as the involuntary leakage of pee that causes social or hygienic problems for the individual.^[7] Despite the fact that UI makes women feel embarrassed and frustrated, many do not seek medical attention. It is due to shyness and a lack of enthusiasm, especially among women living in semi-urban and rural settings. Some ladies might not have enough free time to schedule an appointment with a specialist. Some of them regard it as a natural occurrence with advancing age. The majority of them put up with the problem for a long time before seeking help. UI is more common

in girls than in males.^[8] The increased frequency in females is attributable to the drop in estrogen levels after menopause. This causes urogenital atrophy, resulting in urgency and urge incontinence.^[9] Weakness in the pelvic floor muscles may cause hypermobility of the bladder base, predisposing the individual to stress urinary incontinence (SUI).^[10] Another crucial and modifiable risk factor is pelvic support trauma during vaginal deliveries and obstetric procedures. ^[11,12]

The purpose of the study is to assess the Prevalence of urinary incontinence among women with Urinary Incontinence.

MATERIALS & METHODS

A quantitative research approach was used to assess the prevalence of urinary incontinence among women with Urinary Incontinence. This study was conducted among Women with Urinary Incontinence who are getting treatment from Saveetha Medical College Hospital, Thandalam, Chennai, India. Sample size is estimated by assuming 30% improvement in symptoms, 25% standard deviation, 90% power and 5% significance level. The estimated sample size is 95. Sigma plot 14.5 (Systat Software, USA) was used for the sample size calculation) The samples were allocated by purposive sampling technique by slot method from Gynaecology OPD. The study included all women with urinary incontinence irrespective of parity, with stress, urge and mixed urinary incontinence, who had undergone normal vaginal delivery and caesarean section, with age between 30-70 years, with pelvic organ prolapse stage I and II and who understand and speak Tamil/ English. Women with pelvic organ prolapse stage III, with history of neurological disease, history of respiratory problems, pregnant women and who are mentally ill were excluded from the study.

Sociodemographic Information was assessed by the demographic and clinical variables. Questionnaire for urinary incontinence diagnosis (QUID) was used to assess the level of urinary incontinence among women.^[13] It consists of 6 questions with three questions focusing on stress incontinence and three on urge incontinence symptoms. Each item includes 6 frequency-based response options ranging from “none of the time” to “all of the time”, which are scored from 0 to 5 points. Stress scores ≥ 4 for stress urinary incontinence and Urge scores ≥ 6 for urge urinary incontinence. Incontinence Severity Index scoring is 1-2 scored as Slight urinary incontinence, 3-6 - scored as Moderate incontinence and 7 – 15 scored as Severe incontinence. The collected data was analysed by descriptive and inferential statistics.

RESULTS

The results of the demographical variables in experimental group are 26(52%) belong to the age group of 40- 49 years, 21(45%) had completed higher secondary education, 31(67.4%) live as nuclear family, 25(54.3%) live a moderate lifestyle. In control group 25(51%) belong to the age group of 40- 49 years, 25(51%) had completed higher secondary education, 29(59.2%) live as nuclear family and 22(44.9%) live a moderate lifestyle. The characteristics of the obstetrical variables are in experimental group are 28(60.9%) are para second, 22(47.8%) had Normal Vaginal Delivery, 19(41.3%) are having 1-3 and 4-6 years equally after delivery. In Control group are 32 (65.3%) are para second, 21(43.8%) had Normal Vaginal Delivery, 21(42.9%) are having 4-6 years after delivery. The characteristics of the Gynaecological variables are in experimental group are 19(51.4%) had menopause at the age of 46 – 50 years, 36(87.8%) are Post

menopause, 4 had grade 1 Pelvic organ prolapse, 25(54.3%) had less than 1 year of urinary incontinence complains and 4 participants took Beta – 3 adrenoreceptor agonists (Mirabegron).

Table 1: Frequency and Percentage Distribution of Demographic Variables of Women N=95

Demographic Variables	Study Samples	
	F	%
Age in years		
30 – 39	22	23.16
40 – 49	51	53.68
50 – 59	22	23.16
60 – 70		
Educational status		
No formal education	1	1.05
Primary school education	18	18.95
Higher secondary education	46	48.42
Graduate	30	31.58
Type of family		
Nuclear family	60	63.16
Joint family	35	36.84
Extended family	-	-
Type of lifestyle		
Sedentary	20	21.05
Moderate	47	49.47
Heavy	28	29.47

The table 1 presents the demographic variables of women. It shows that most of them, 51(53.68%) were in the age group between 40 – 49 years, 46 (48.42%) had higher secondary education, 60 (63.16%) belonged to nuclear family, 47 (49.47%) had moderate type of lifestyle.

Table 2: Frequency and Percentage Distribution of Obstetrical Variables of Women N=95

Obstetrical Variables	Study Samples	
	F	F
Parity		
1	18	18.95
2	60	63.16
3	17	17.89
4	0	0
Mode of delivery		
Normal vaginal delivery	43	45.26
Forceps assisted vaginal delivery	9	9.47
Vacuum assisted vaginal delivery	5	5.26
Caesarean section	37	38.95
Both normal vaginal delivery and cesarean section	0	0
Period after delivery in years		
<1	1	1.05
1 – 3	37	38.95
4 – 6	40	42.11
7 – 10	13	13.68
>10	4	4.21

The table 2 depicts the obstetrical variables of women. It shows that most of them, 60 (63.16%) were of 2nd parity, 43 (45.26%) had normal vaginal delivery and 40 (42.11%) were in the period of 4 – 6 years after delivery.

Table 3: Frequency and Percentage Distribution of Gynaecological Variables of Women N=95

Gynaecological Variables	Study Samples	
	F	%
Age at menopause (in years)		
35 – 40	0	0
41 – 45	38	40
46 – 50	38	40
51 – 55	0	0
Menopausal status		
Pre menopause	10	10.53
Post menopause	72	75.79
History of Pelvic organ prolapse, if yes		
Grade 0 Normal position	1	1.05
Grade 1 descent into vagina not reaching introitus	10	10.53
Grade 2 descent upto the introitus.	0	0
Duration of urinary incontinence (years)		
<1	48	50.53
1 – 5	47	49.47
6 – 10	0	0
>10	0	0
Drug intake for treatment for urinary incontinence		
Anti – Cholinergic (Oxybutynin)	0	0
Beta – 3 adrenoreceptor agonists (Mirabegron)	11	11.58
Antidepressant (Duloxetine)	0	0

The table 3 depicts the gynaecological variables of women. It shows that most of them, 38 (40 %) between the age group of 46 – 50 & 41 – 45 at the time of attaining menopause, 72 (75.79%) were in the post menopause status, among those who were in premenopause status 10s (10.53%) had history of pelvic organ prolapse of Grade I descent into vagina not reaching introitus, 47 (49.47%) severe experiencing urinary incontinence for 1 – 5 years, 11 (11.58%) had taken Beta-3 adrenoreceptor agonists treatment for urinary incontinence.

Table 4: Frequency and Percentage Distribution of Level of Incontinence Severity among Women N=95

Test	Level of ISI	Study Group	
		F	%
Pretest	Slight (1 – 2)	5	5.26
	Moderate (3 – 4)	67	70.53
	Severe (6 – 8)	23	24.21

The table 4 presents the frequency and percentage distribution of level of incontinence severity among women. 67 (70.53%) had moderate incontinence severity, 5(5.26%) experienced slight incontinence severity and 23 (24.21%) had severe incontinence severity.

DISCUSSION

In our study, 70.53% of participants reported moderate urinary incontinence. Other studies reveal a higher prevalence of urinary incontinence in the adult population,

ranging from 17 to 53.4%. [14-17] Because urinary incontinence is more common, it is critical to determine the cause and implement preventive measures to limit its incidence. The prevalence of UI rises with age. A study of US women found that moderate to severe UI affects 7% of women aged 20 to 39, 17% aged 40 to 59, 23% aged 60 to 79, and 32% aged 80.[18] The reason for this is that as hormonal levels diminish after menopause, muscle tone and urethral sphincter contractility decline, leading to UI.[19,20]

Vaginal birth and higher parity raised the incidence of urine and fecal symptoms caused by pelvic floor dysfunction.[21] several logistic regressions of persistent UI revealed that women who had several vaginal deliveries had a higher frequency of UI than those who had only one.[22] The odds ratio is larger as the number of delivery increases. The odds of UI were 1.36 (95% CI- 1.06-1.74; P value- 0.015) in women with two deliveries, 1.85 (95% CI- 1.42 - 2.42; P value < 0.001) in those with three deliveries, and 2.16 (95% CI- 1.57-2.97; P value < 0.001). Several studies used ultrasound to assess bladder-neck movement following the initial delivery.[23] They found that bladder-neck mobility increased after vaginal delivery but remained unchanged after cesarean. Fritel et al. found that cesarean section was significantly associated with a lower risk of SUI than regular delivery.[24] It is unclear whether increasing the number of cesarean sections can reduce the prevalence of SUI. Even the reverse is true: women who require a cesarean section have more inflexible connective tissue (lower prevalence of SUI), resulting in delayed cervical dilatation and the need for surgical intervention.

CONCLUSION

In our study, the prevalence of moderate urinary incontinence was 70.53%, indicating that it is an important societal issue. The study's findings cannot be extrapolated widely due to the heterogeneity in the definition of Urinary incontinence and the variation in sample size across research. Future studies should include a big sample size. Educating women about workouts and rehabilitative programs may enhance treatment seeking trends for this condition.

Author Contributions

- JJ: carried out research, furnished research materials, and accumulated and organized data.
- JJ wrote a preliminary draft of the article.
- JJ, KS, and BG created and conceptualized the study, evaluated, interpreted the data. All authors critically evaluated and approved the final documenting, and they are responsible for the manuscript's content and similarity index.

Conflicts of Interest

The authors state that they have no conflicts of interest.

Ethical Approval

The institutional ethics committee of Saveetha Medical College and Hospital granted formal ethical approval (No.001/09/2021/IEC/SMCH) on September 24, 2021.

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