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Urinary Incontinence among Reproductive Age Women: A Prevalence Study

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Abstract

Women experience urinary incontinence in varying levels, which can range from a few drops to multiple tablespoons. It is frequently regarded modest in women who only experience minor leakage after intensive exercises. Many women suffer with the disease out of embarrassment or because they believe it is a natural part of maturing and having children. It reduces quality of life and influences daily social decisions. 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. The Objective of the study is to assess the Prevalence of urinary incontinence among reproductive age women. 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). 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. 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: *Good Health, Mixed Incontinence, Stress Incontinence, Urge Incontinence, Urinary Incontinence, Women, Women Health.*

Introduction

International continence society recently defined incontinence as “the complaint of any involuntary leakage of urine [1] that is a social or hygienic problem” [2]. Women have urine incontinence at varied degrees, ranging from a few drops to several tablespoons [3]. It is commonly characterized as modest among women who only experience mild leakage during strenuous exercise [4]. Many women suffer from the sickness due to embarrassment or because they assume it is a normal part of growing up and having children [5]. It lowers quality of life and influences daily social choices [6]. Treatment includes behavioral therapy [7] and lifestyle changes, but only 30%

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of women seek medical help due to a lack of understanding, a belief in aging as a natural process, or dismissive attitudes from healthcare experts [8].

The prevalence is between 30% and 40% in young adult to middle-aged women, and 30% to 50% in elderly women [9]. Urinary incontinence (UI) affects around 38.4 percent of Iranian women aged 40 to 50, making it the most frequent chronic condition [10, 11]. In addition, women had a higher prevalence of UI (27.6%) than men (10.5%). The three most prevalent types of UI sections are as follows: stress urinary incontinence (SUI), characterized by an unintentional loss of urine occurring as a result of an increase in intraabdominal pressure due to effort or exertion, or when sneezing or coughing; urge urinary incontinence (UUI), denoting involuntary leakage arising for no apparent reason and associated with urgency; mixed. Urinary incontinence (MUI), a mix of SUI and UUI [12]. Furthermore, SUI is the most common type of UI (50%), with UUI and MUI accounting for 11% and 36%, respectively (3% unclassified) [13].

Urogenital diseases are more prevalent in women. Urine incontinence is one of the most common and uncomfortable issues. It has a significant impact on both the physical and psychological aspects of life. Urinary incontinence (UI) is defined by the International Continence Society as the involuntary flow of urine that causes social or hygiene issues in the individual [14]. Despite the fact that UI causes women to feel ashamed and frustrated, many do not seek medical help. It is related to shyness and lack of excitement, particularly among women living in semi-urban and rural areas. Some ladies may not have enough free time to make an appointment with a professional. Some of them believe it is a natural occurrence with advancing age. The majority of them dealt with the problem for a long period before seeking assistance. UI is more common in girls than in boys. The higher incidence in females is due to a reduction in estrogen levels following menopause. This promotes urogenital atrophy, which leads to urinary urgency and urge incontinence [15]. Weakness in the pelvic floor muscles can produce hypermobility of the bladder base, increasing the risk of stress urinary incontinence (SUI) [16]. Another important and modifiable risk factor is pelvic support trauma during vaginal births and obstetric procedures [17, 18].

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 [19]. 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.

Statistical Analysis

An Excel spreadsheet containing the collected data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics were used to summarize the data, and the variables quantified as frequency and percentage.

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 are19(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 (Figure 1), 46 (48.42%) had higher secondary education, 60 (63.16%) belonged to nuclear family, 47 (49.47%) had moderate type of lifestyle.

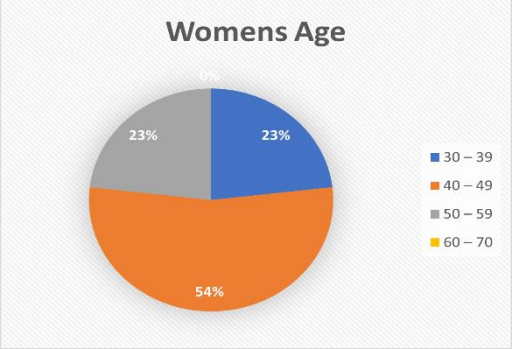

Figure 1. Frequency and Percentage Distribution of Women age

Table 2. Frequency and Percentage Distribution of Obstetrical Variables of Women

N=95

Obstetrical Variables	**Study Samples**	
	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

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

Table 4 presents the frequency and percentage distribution of the 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 (Figure 2).

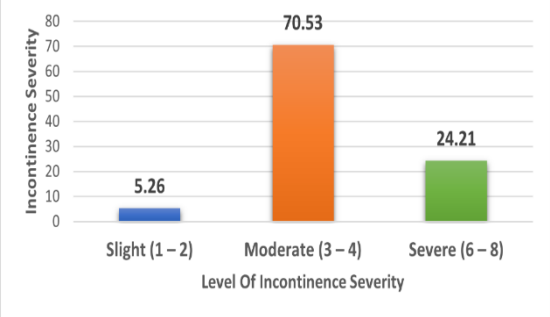

Figure 2. Frequency and Percentage Distribution of Level of Incontinence Severity among Women

Discussion

A 70.53% of individuals in our survey said they had moderate urine incontinence. According to other research, the adult population has a higher prevalence of urine incontinence, which ranges from 17.4% to 53.4% [20-22]. Urinary incontinence is more widespread, thus, identifying its cause and putting preventative measures in place are essential to reducing its incidence [23]. As people age, UI becomes more common. Moderate to severe UI affects 7% of women aged 20 to 39, 17% of women aged 40 to 59, 23% of women aged 60 to 79, and 32% of women over 80, according to a study done on US women [24-26]. This is because, following menopause, urethral sphincter contractility and muscular tone both decrease due to a decrease in hormone levels, which causes UI [27, 28].

The incidence of pelvic floor dysfunction-related urine and fecal symptoms was increased by vaginal birth and higher parity. According to multiple logistic regressions of persistent UI, women who had many vaginal births experienced UI more frequently than those who had just one [29, 30]. With an increase in deliveries, the odds ratio grows. For women who had two births, the chances of UI were 1.36 (95% CI: 1.06-1.74; P value: 0.015), 1.85 (95% CI: 1.42 - 2.42; P value: 0.001), and 2.16 (95% CI: 1.57-2.97; P value: 0.001). Ultrasonography was utilized in several investigations to evaluate the mobility of the bladder and neck after the first delivery [31]. They discovered that following a vaginal delivery, bladder-neck mobility increased but stayed the same following a cesarean. According to Fritel et al., compared to a normal delivery, a cesarean section was significantly associated with a decreased risk of SUI [32]. It's uncertain if fewer cesarean sections performed will result in a lower incidence of SUI. The opposite is also true: women who need cesarean sections have less flexible connective tissue (lower prevalence of SUI), which delays cervical dilatation and necessitates surgery [33].

Conclusion

The prevalence of mild urine incontinence in our study was 70.53%, suggesting that this is a significant social problem. The results of the study cannot be broadly generalised because of the differences in sample sizes throughout studies and the inconsistency in the definition of urinary incontinence. Large sample sizes should be used in future research. Women's inclinations to seek therapy for this illness may be improved by educating them about fitness and rehabilitation programs.

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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