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Prevalence, Risk Factors and Impact on Activities of Daily Living due to Urinary Incontinence among Older women Above 50 Years in urban locality in Chennai

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Abstract: **Background: The uncontrollable loss of pee is known as urinary incontinence. It significantly affects people's physical, emotional, and general quality of life. Most rural areas have neglected to address the issue of women's reluctance to seek medical attention. Objectives: The objectives of this study were to ascertain the prevalence of UI in older women, pinpoint risk variables that are linked to it, and investigate how it affects these women's capacity to carry out activities of daily living (ADL). Methodology: Among 346 women in Pudupet, Chennai, a cross-sectional study was conducted. The ladies were all over 50. Using a prevalence of 26.47% from earlier research, the sample size was determined with a 5% margin of error and a 95% confidence interval. In order to recruit participants, consecutive sampling was used. Urge, mixed urine incontinence, and stress were measured using a semi-structured questionnaire based on QUID scores. Stress incontinence was present if the score was greater than 4. Urge incontinence was present if the score was more than 6. All of these scores, along with the rest of the gathered data, were input into MS Excel and then exported to SPSS for further examination. Chi-square tests and descriptive statistics were run using SPSS version 20. It was deemed statistically significant when p <= 0.05. Results: Our inclusion criteria were met by 346 female participants. There were noteworthy correlations discovered for burning micturition, episiotomy, and hypertension. To be more precise, the prevalence of incontinence was higher in people with hypertension (p = 0.032), people who underwent an episiotomy (p = 0.016), and burning micturition was significantly linked to incontinence (p = 0.010). There was a marginally significant correlation (p = 0.050) between education level and incontinence, indicating that people with only a primary education have greater rates of incontinence. Diabetes became statistically significant (p = 0.099), suggesting a tendency for diabetics to have greater rates of incontinence. In conclusion, there is a substantial correlation between increased rates of incontinence and hypertension, episiotomy, and burning feelings.. Conclusion: It was discovered that the most common kind of urine incontinence in postmenopausal women was urge urinary incontinence. People who have experienced burning micturition, episiotomy, or high blood pressure should be routinely evaluated for urine incontinence.**

Keywords: **urinary incontinence, older women, risk factors for urinary incontinence, IIQ-7, QUID.**

1. INTRODUCTION

An increasing number of older women suffer with urinary incontinence (UI), which has a major negative influence on their everyday functioning and quality of life. The incidence of UI is predicted to increase with the aging of the world population, making it a critical public health concern. The purpose of this proposal is to determine the prevalence of urine incontinence in older women, as well as the risk factors that are linked to it and how it affects their capacity to carry out activities of daily living (ADLs).

According to research, a significant percentage of older women experience urine incontinence; prevalence rates can range from 30% to 60%, depending on the population and definitions applied (1). According to a study combining both urban and rural populations, 19% of older women reported having UI, with rural areas having a greater prevalence (23%) than urban areas (16%) (2). In India, urinary incontinence (UI) is a common problem that is not well recognized and addressed, particularly among older ladies. The prevalence rises with age: women in the 20–39 age group account for 7% of instances with moderate to severe UI, whereas the 40–59 age group accounts for 17%, the 60–79 age group for 23%, and the ≥80 age group for 32% (3).

Urge incontinence, stress incontinence, and mixed incontinence are some of the ways the disorder can present itself; each has its own underlying causes and contributing variables. The beginning of UI in this population is mostly caused by physiological changes that come with aging, such as weaker pelvic floor muscles and lower bladder capacity (4).

For older women, the chance of having urine incontinence is increased by a number of risk factors. These include chronic medical diseases including diabetes, obesity, multiparity, hormonal changes during menopause, and lifestyle risks like smoking and inactivity (5). The interaction of these variables makes managing user interface (UI) more difficult and calls for a more comprehensive strategy for both prevention and therapy.

Urinary incontinence has a major influence on daily activities and can have serious social, psychological, and physical repercussions. The inability to conduct basic activities like dressing, bathing, and walking might cause older women with UI to become less independent and more dependent on caregivers (6).

Furthermore, social isolation, melancholy, and a lower quality of life might result from the shame and embarrassment around user interfaces (UI)(7) .

The purpose of this proposal is to clarify the prevalence and risk factors of urine incontinence in older women and to investigate the impact of this disorder on their day-to-day functioning. This research will yield important insights through thorough data collecting and analysis, which can guide the creation of efficient interventions and support systems to enhance the well-being of affected individuals.

2. METHODOLOGY

Study Design and Setting: In the Pudupet area, a cross-sectional study of women over 50 was carried out. Information was gathered in June.

Study population, sampling technique, and computation of sample size:

In order to recruit participants, we used consecutive sampling, whereby we numbered the six streets that we randomly selected, then selected one street and collected data from everyone who was willing to answer the questionnaires. We continued to sample consecutive streets until the desired sample size was reached. Over 50-year-old women participated in the study. According to the research done by Amritha Rekha et al (8). The sample size of 340 participants was calculated using pq/l2, guaranteeing a 95% confidence level, and the prevalence was found to be 26.47 with a margin of error of 5%.

Since P = 26.47, Q = 73.53(100-p) n = pq/l2 l = precision = 5, the sample size is 311.41 10% presumptive nonresponder percentage = 311.41+10%= 311.41+31.14= 342.55~340.

Criteria for inclusion and exclusion:

• Women living in Pudupet who are over 50 years old are eligible to apply.

Criteria for Exclusion:

• People with abnormalities of the urinary tract.

• UTIs that are symptomatic or have documentation.

• Drugs that impact the ability of the bladder to empty.

• A history of persistent neurological conditions.

• A history of serious mental illness or one that exists now.

Instruments for Gathering Data: Questionnaire The following sections contain demographic and clinical data: age, marital status, employment status, level of education, history of pelvic surgeries, use of caffeine, medication use, presence of

chronic medical illness, physical activity, number of vaginal and cesarean deliveries, number of babies delivered weighing more than 4 kg, and age at first delivery.

The Urinary Incontinence Diagnosis Questionnaire (QUID) is a 6-item test to evaluate the symptoms of urge versus stress urine incontinence (UI)(9).

Urinary Incontinence Questionnaire—International Consultation on Incontinence Questionnaire (ICIQ-UI): Assesses the degree, frequency, and effect of UI on quality of life (QoL)(10).

Incontinence Impact Questionnaire, Short Form (IIQ-7): Evaluates how UI affects social interactions, travel, physical exercise, and mental health. The severity of symptoms was scored on a scale of 0 to 3, with greater ratings indicating greater impact.(11)

Ethics, Consent, and Approval:

Before beginning the study, the subjects' informed verbal agreement was obtained. Their privacy was protected when collecting the data.

3. RESULTS

Table 1 – General characteristics of participants:

Three hundred and forty six females met our inclusion criteria; 255 (73.7%) of the participants were between 50 – 65 years old and 14 (4.0%) were above 76 years. 249(72%) of the females were married, and 80 (23.1%) were widowed. Regarding educational 211(61%) were below primary while only 16 (4.6%) were graduates. Approximately 52.3% of the participants had diabetes and 42.8% had hypertension. About 220 (63.5%) have more than or equal to 3 children of which 195(56.3%) were vaginally delivered in which only 130(37.6%) had episiotomy. Approximately one fourth of the females had abortion and one half of them were below 20 years at the time of first child birth. 13.6% females had more than 2 children delivered non institutionally where as 67% of them had institutional deliveries. 11 of the females delivered babies weighing more than 4kgs. One tenth of the population had constipation and 24 females had chronic cough. The frequency percentage of females who had undergone hysterectomy is 17.6% and only 1% had radiotherapy. Nearly 95% of the females had negative family history. (Table 1)

Variable	Categories	Frequency (%)
Age (in years)	50-65	255 (73.7)
	66-75	77 (22.3)
	76 and above	14 (4.0)
Marital status	Single	4 (1.2)
	Married	249 (72.0)
	Divorced	13 (3.8)
	Widowed	80 (23.1)
Education	Below Primary	211 (61.0)
	Primary	72 (20.8)
	Secondary	47 (13.6)
	Graduate	16 (4.6)
Occupation	Employed	145(49.1)
	Unemployed	201(51.8)
Diabetes	Yes	181 (52.3)
	No	165 (47.7)
Hypertension	Yes	148 (42.8)
	No	198 (57.2)
Parity	0	8 (2.3)
	1 to 2	118 (34.1)
	3 to 4	186 (53.8)
	>4	34 (9.8)
Number of C-sections	0	270 (78.0)
	1	49 (14.2)
	2	27 (7.8)
Number of vaginal deliveries	0	33 (9.6)
	1 to 2	115 (33.5)

	3 to 4	165 (48.1)
	>4	30 (8.7)
Number of non-institutional deliveries	0	231 (67.0)
	1 to 2	67 (19.4)
	>2	47 (13.6)
Episiotomy	Yes	130 (37.6)
	No	216 (62.4)
Interventional delivery	Yes	12 (3.5)
	No	334 (96.5)
Abortion	Yes	71 (20.5)
	No	275 (79.5)
Age at first childbirth	<20	179 (51.7)
	20 to 26	145 (41.9)
	>26	14 (4.0)
Maximum birth weight (in g)	<3000	126 (36.4)
	3000 to 4000	209 (60.4)
	>4000	11 (3.2)
Menopause	Yes	315 (91.0)
	No	31 (9.0)
Smoking	Yes	3 (0.9)
	No	339 (98.0)
	Quit	4 (1.2)
Burning micturition	Yes	65 (18.8)
	No	281 (81.2)
Constipation	Yes	37 (10.7)
	No	309 (89.3)
Chronic cough	Yes	24 (6.9)
	No	322 (93.1)
Hysterectomy	Yes	61 (17.6)
	No	285 (82.4)
Radiotherapy	Yes	4 (1.2)
	No	342 (98.8)
Family history of incontinence	Yes	17 (4.9)
	No	329 (95.1)

Table 2 – Prevalence of incontinence:

Stress urinary incontinence was found among 67 (19.4%) participants while urge urinary incontinence was found among 75(21.7%) participants. 252 of the females had either stress or urge urinary incontinence whereas approximately 20% of them do not have any type of incontinence. (Table 2)

Type of incontinence	Categories	Frequency (%)
Stress incontinence	Yes	67 (19.4)
	No	279 (80.6)
Urge incontinence	Yes	75 (217)
	No	271 (78.3)
Any incontinence	Yes	252 (72.8)
	No	67 (19.4)

Table 3 – Association of variables with incontinence:

Our inclusion criteria were met by 346 female participants. There were noteworthy correlations discovered for burning micturition, episiotomy, and hypertension. To be more precise, the prevalence of incontinence was higher in people with hypertension ($p = 0.032$), people who underwent an episiotomy ($p = 0.016$), and burning micturition was significantly linked to incontinence ($p = 0.010$).

There was a marginally significant correlation ($p = 0.050$) between education level and incontinence, indicating that people with only a primary education have greater rates of incontinence. Diabetes became statistically significant ($p = 0.099$), suggesting a tendency for diabetics to have greater rates of incontinence. Age ($p = 0.076$), marital status ($p = 0.752$), parity ($p = 0.259$), number of C-sections ($p = 0.725$), number of vaginal deliveries ($p = 0.374$), non-institutional deliveries ($p =$

0.255), interventional delivery (p = 0.070), history of abortion (p = 0.931), age at first childbirth (p = 0.429), maximum birth weight (p = 0.289), menopause status (p = 0.547), smoking (p = 0.458), constipation (p = 0.984), chronic cough (p = 0.819), hysterectomy (p = 0.277), radiation (p = 0.302), and family history of incontinence (p = 0.729). In conclusion, there is a substantial correlation between increased rates of incontinence and hypertension, episiotomy, and burning feelings.

Diabetes and education level have shaky relationships, indicating these variables may possibly be important. Age, marital status, and a number of characteristics associated to childbirth do not significantly correlate with incontinence in this dataset.

Variable	Categories	Incontinence present (%)	Incontinence absent (%)	p value
Age (in years)	50-65	61 (23.9)	194 (76.1)	0.076
	66-75	28 (36.4)	49 (63.6)	
	76 and above	5 (35.5)	9 (64.3)	
Marital status	Single	1 (25.0)	3 (75.0)	0.752
	Married	71 (28.5)	178 (71.5)	
	Divorced	4 (30.8)	9 (69.2)	
	Widowed	18 (22.5)	62 (77.5)	
Education	Below Primary	48 (22.7)	163 (77.3)	0.050
	Primary	31 (43.1)	41 (56.9)	
	Secondary	13 (27.7)	34 (72.3)	
	Graduate	2 (12.5)	14 (87.5)	
Occupation	Employed	65(32.3)	136(52.7)	0.011
	Unemployed	29(20)	116(80)	
Diabetes	Yes	56 (30.9)	125 (69.1)	0.099
	No	38 (23.0)	127 (77.0)	
Hypertension	Yes	49 (33.1)	99 (66.9)	0.032
	No	45 (22.7)	153 (77.3)	
Parity	0	3 (37.5)	5 (62.5)	0.259
	1 to 2	25 (21.2)	93 (78.8)	
	3 to 4	54 (29.0)	132 (71.0)	
	>4	12 (35.3)	22 (64.7)	
Number of C-sections	0	76 (28.1)	194 (71.9)	0.725
	1	12 (24.5)	37 (75.5)	
	2	6 (22.2)	21 (77.8)	
Number of vaginal deliveries	0	8 (24.2)	25 (75.8)	0.374
	1 to 2	28 (24.3)	87 (75.7)	
	3 to 4	46 (27.9)	119 (72.1)	
	>4	12 (40.0)	18 (60.0)	
Number of non-institutional deliveries	0	60 (26.0)	171 (74.0)	0.255
	1 to 2	23 (34.3)	44 (65.7)	
	>2	10 (21.3)	37 (78.7)	
Episiotomy	Yes	45 (34.6)	85 (65.4)	0.016
	No	49 (22.7)	167 (77.3)	
Interventional delivery	Yes	6 (50.0)	6 (50.0)	0.070
	No	88 (26.3)	246 (73.7)	
Abortion	Yes	19 (26.8)	52 (73.2)	0.931
	No	75 (27.3)	200 (72.7)	
Age at first childbirth	<20	52 (29.1)	127 (70.9)	0.429
	20 to 26	37 (25.5)	108 (74.5)	
	>26	2 (14.3)	12 (85.7)	
Maximum birth weight (in g)	<3000	29 (23.0)	97 (77.0)	0.289
	3000 to 4000	63 (30.1)	146 (69.9)	
	>4000	2 (18.2)	9 (81.8)	
Menopause	Yes	87 (27.6)	228 (72.4)	0.547
	No	7 (22.6)	24 (77.4)	
Smoking	Yes	1 (33.3)	2 (66.7)	0.458
	No	93 (27.4)	246 (72.6)	
	Quit	0 (0.0)	4 (100.0)	

Burning micturition	Yes	26 (40.0)	39 (60.0)	0.010
	No	68 (24.2)	213 (75.8)	
Constipation	Yes	10 (27.0)	27 (73.0)	0.984
	No	84 (27.2)	225 (72.8)	
Chronic cough	Yes	7 (29.2)	17 (70.8)	0.819
	No	87 (27.0)	235 (73.0)	
Hysterectomy	Yes	20 (32.8)	41 (67.2)	0.277
	No	74 (26.0)	211 (74.0)	
Radiotherapy	Yes	2 (50.0)	2 (50.0)	0.302
	No	92 (26.9)	250 (73.1)	
Family history of incontinence	Yes	4 (23.5)	13 (76.5)	0.729
	No	90 (27.4)	239 (72.6)	

Table 4: Incontinence and its impact:

Score	Mean	Standard Deviation
Stress incontinence score	0.193	0.395
Urge incontinence score	0.216	0.412
Total incontinence score	4.572	5.919
Impact score	2.991	4.304

Table 5 – Correlation between Incontinence and Impact score:

There was a strong correlation between UUI and the severity of incontinence measured by the ICIQ-UI (r=.563) (p=0.000). Furthermore, there was a statistically significant correlation between the severity of IIQ-7, SUI and the severity of UI (r=0.557 and r=0.474.; p=0.000, respectively) (Table 5).

Type of incontinence	Correlation coefficient	p value
Total incontinence	0.557	0.000
Stress incontinence	0.474	0.000
Urge incontinence	0.563	0.000

4. DISCUSSION

Urinary incontinence (UI), also known as involuntary urination, is the uncontrolled leakage of urine. The Questionnaire for Urinary Incontinence Diagnosis (QUID) was found to be a reliable tool for diagnosing stress and urge urinary incontinence in community settings. Our study showed that Stress Urinary Incontinence (SUI) was prevalent among 67 participants (19.4%) while Urgency Urinary Incontinence (UUI) was found among 75 participants (27.7%).

These results are consistent with those of previous studies, in which the prevalence of SUI was 48.9% among Palestinian women (12), 15% in Bollikunta village (13), 13.9% in Kochi, Kerala (8), and 51% in West Bengal (3). Similarly, the prevalence of UUI was 36.7% among Palestinian women (12), 17% in Bollikunta village(13), 5.4% in Kochi, Kerala (8), and 16.3% in West Bengal (3), while mixed UI was reported in 8% of women in Bollikunta village (13) and 33.7% of women in West Bengal (3).

The prevalence of SUI and UUI varies across different populations and regions, but our study's findings align with the general trend observed in previous research, suggesting that urinary incontinence is a significant health issue affecting a substantial proportion of women worldwide.

In this study, prevalence of incontinence was similar among women aged between 66 and 75 years (36.4%) and 76 years and above (35.5%), while it was lower among women aged between 50 and 65 years (23.9%). These figures were compatible with those of previous studies done in Kerala, where the prevalence of urinary incontinence was found to be 27% among women aged 75 and above, 26.8% among women between 45 and 59 years and 25% among women aged 60 and 74 years (3). Another study done by Singh *et al*. showed a low prevalence in age groups < 20 (7.6%), 31-40 years (11.6%) and > 70 years (20%) and a higher prevalence in age groups 41-50 (38.4%), 51-60 (37.8%) with the highest prevalence among women aged 61-70 years (42.8%) (13). The trend of prevalence increasing with age can be attributed to factors such as weakening

of pelvic floor muscles with age, hormonal changes particularly after menopause and structural changes in the urinary tract. Using the Chi-square test, the study failed to uncover any significant correlation (p = 0.076) between age and urine incontinence. This could be explained by age classification. But when the independent T test was used to compare the standard error of means, a statistically significant difference was found (p = 0.011).

Married women exhibit a greater prevalence of incontinence (28.5%) compared to single women (25%), probably due to factors such as pregnancy and hormonal changes. A similar trend was observed in a study done among Palestinian women (12).

Occupation was found to be associated with incontinence as housewife 65 (32.3%) and employed 29 (20.0%), whereas in similar studies of Aathira Kizhakkeveetil Ajith et al (8) has no significance of occupation as an as a homemaker (0.081) and Bijit Biswaset al (3) has no significance of work (heavy) (0.236). Whereas the study of Faris Abushamma has the significance of occupation (0.014).

A total of 392 individuals fulfilled our inclusion criteria. The following levels of education were linked to incontinence: primary 48 (22.7), primary 31 (43.1), secondary 13 (27.7), and graduate 2 (12.5). In contrast, comparable studies using a sample size of 315 000 females reveal that 129 (41.5%) of the participants were graduates of college or university, and 72 (23.2%) had education below the high school level(12).

Based on earlier research by Singh U et al (13), L Peyrat et al (14), Chuanchom Sakondhavat et al (15) , V W Nitti et al(16) it is acknowledged that multiparity, diabetes mellitus, hysterectomy, hypertension, and constipation are significant risk factors for urine incontinence. Higher scores on the Incontinence Impact Questionnaire (IIQ-7) have been linked to the previously indicated factors: diabetes mellitus (DM), hypertension (HTN), and inactivity. The impact of urine incontinence (UI) on daily activities and quality of life is evaluated using this questionnaire. Higher IIQ-7 scores suggest that UI has a more detrimental effect on day-to-day functioning according to Hala Qasrawi et al (17).

With the exception of hypertension (p=0.0032), which is linked to higher risks of vascular and cardiovascular disease and can worsen urological symptoms, our investigation did not reveal any of these correlations.

Urinary tract and bladder problems can be exacerbated by high blood pressure, which may also make UI symptoms worse.

The study did not find any associations between urinary incontinence and risk factors such as multiparity (p=0.259), diabetes mellitus (p=0.099), hysterectomy (p=0.277) and constipation (p=0.984) using chi square test. Possible reasons include the study's population characteristics control for confounding factors.

The finding that diabetes mellitus and urine incontinence are associated may have been influenced by an individual's age. Younger adults were included in Bijit Bitwas(3) study citation, which discovered a strong correlation between diabetes and urine incontinence.

According to a number of studies, women who give birth to their first child while they are younger may be more likely to experience urine incontinence in the future. This is justified by the possibility that younger moms may lack fully formed pelvic floor muscles, which are essential for preserving continence. According to a research by Wesnes et al.(5) (2010), women who gave birth for the first time before turning 25 were more likely to have UI than women who were older when they gave birth.

On the other hand, other research suggests that women who have their first child later in life may also be more susceptible to UI. An increased risk of pelvic floor dysfunction may result from decreasing pelvic tissue elasticity and strength in older mothers at the time of their first delivery. According to Fritel et al. (2012)(18), women who gave birth to their first child beyond the age of 35 were more likely to have UI than those who did so earlier in life.

The incidence of urine incontinence in older women and their age at first birth have a complicated relationship that is impacted by a number of biological, hormonal, and mechanical factors. Although a higher risk of UI is linked to both extremely young and older mother ages at first birth, the underlying mechanisms may be different. This could be the cause of the lack of a significant correlation between the incidence of urine incontinence and the age at first birth in our study.

Greater mechanical strain on the pelvic floor muscles during delivery is linked to higher birth weights; this stress can cause damage to the pelvic floor, which increases the likelihood of developing UI later on. Studies have indicated that a larger baby at birth significantly raises the risk of pelvic floor issues, including UI (Brown et al., 2009)(19).

Larger babies are more likely to have longer labors, more instrumental deliveries (such as vacuum extraction or forceps), and episiotomies, all of which increase the risk of pelvic damage. (2003) Rortveit et al(5)., vikrup et al. (20) In contrast, low birth weight was more common (36.4 percent) in our study, with just 3.2 percent exhibiting a birth weight of more over 4 kg. Consequently, we were unable to discover any meaningful correlation between the highest birth weight and the prevalence of urine incontinence in senior citizens.

In our study, burning micturition was also discovered to be one of the contributing variables in as many as 65 (18.8) of the women. Recurrence may result from women's reduced help-seeking tendencies and the stigma attached to genitourinary illnesses.

Previous studies' findings indicate that 6 (75) is prevalent(13)

In our study, 37 people had chronic constipation (10.7%). A total of 16 observational studies with 35,629 participants and 6054 urinary incontinence patients were identified in the meta-analysis. Women's risk of urine incontinence was considerably higher when they were constipated (OR 2.46, 95% CI 1.79–3.38) (21)

Chronic cough indicates a prevalence of 24 (6.9) in our study, but similar studies previously conducted revealed a prevalence of 50.1% (22,23)

Family history of incontinence was found to be one of the associated factors in as low as 17(4.9) of women in our study; similar studies show prevalence of 116(52.0). Radiotherapy was found to be an associated factor in as low as 4(1.2) of women in our study. Whereas similar studies show prevalence of 7(53.5).

This study and the study by Laine et al.(24) Suggest a decrease in the incidence of urinary incontinence among women who undergo cesarean section. This observation leads to the conclusion that cesarean section might act as a protective factor against urinary incontinence.

However, this protective effect was not consistently observed in the study by Nojomi (25) et al., which found no difference in urinary incontinence rates between women with previous cesarean sections and nulliparous women. This inconsistency suggests that the relationship between cesarean section and urinary incontinence may vary across different populations or study methodologies.

In an American study(12), multiparity was identified as a significant risk factor for SUI compared to uniparity or nulliparity. Complicated labor was significantly more strongly associated with UI than uncomplicated labor

Episiotomy is a surgical cut made at the opening of the vagina during childbirth to facilitate easier delivery and prevent severe perineal tears. Traditionally, it was believed to reduce the risk of pelvic organ prolapse and urinary incontinence by providing better perineal support.

However, recent studies(8) have cast doubt on the effectiveness of routine episiotomy in preventing these complications. The rationale for how episiotomy decreases the risk of pelvic organ prolapse or urinary incontinence remains unclear and may not be supported by current evidence.

Prolonged labor is associated with various complications, including an increased risk of urinary incontinence according to previous study(8). The physiological changes during protracted labor, such as increased pressure on pelvic structures, may contribute to this risk.

Duration of labor emerged as an independent risk factor for urinary incontinence. This finding underscores the impact of labor duration on pelvic floor integrity and subsequent urinary continence. Longer durations of labor are typically associated with vaginal delivery, which itself has been linked to a higher risk of urinary incontinence compared to cesarean section.

LIMITATIONS:

The cross-sectional study methodology of the research presents limitations since it does not allow for the identification of a periodic association that would reveal the cause and impact of the disease. Since the study is single-centered, its conclusions are not generalizable to a wider population.

STRENGTH:

One of the few studies examining the prevalence of UI during pregnancy, its risk factors, and its impact on women's quality of life is this one. Our nation rarely studies or draws attention to these problems, which means that the actual severity of the issue and how it affects patients' day-to-day lives are not discussed.

REFERENCES

[1] Milsom I, Altman D, Cartwright R, Lapitan MC, Nelson R, Sillén U, et al. Epidemiology of Urinary Incontinence (UI) and other Lower Urinary Tract Symptoms (LUTS), Pelvic Organ Prolapse (POP) and Anal Incontinence (AI). In: Abrams P, Cardozo L, Khoury S, Wein AJ, editors. Incontinence. Paris: ICUD-EAU; 2013. p. 15–107.

[2] Murukesu RR, Singh DKA, Shahar S. Urinary incontinence among urban and rural community dwelling older women: prevalence, risk factors and quality of life. BMC Public Health. 2019 Jun 13;19(Suppl 4):529.

[3] Biswas B, Bhattacharyya A, Dasgupta A, Karmakar A, Mallick N, Sembiah S. Urinary Incontinence, Its Risk Factors, and Quality of Life: A Study among Women Aged 50 Years and above in a Rural Health Facility of West Bengal. J - Life Health. 2017;8(3):130–6.

[4] DuBeau CE, Kuchel GA, Johnson T, Palmer MH, Wagg A, Fourth International Consultation on Incontinence. Incontinence in the frail elderly: report from the 4th International Consultation on Incontinence. Neurourol Urodyn. 2010;29(1):165–78.

[5] Rortveit G, Hunskaar S. Urinary incontinence and age at the first and last delivery: The Norwegian HUNT/ EPINCONT study. Am J Obstet Gynecol. 2006 Aug 1;195(2):433–8.

[6] Thom DH, Haan MN, Van Den Eeden SK. Medically recognized urinary incontinence and risks of hospitalization, nursing home admission and mortality. Age Ageing. 1997 Sep;26(5):367–74.

[7] Nygaard I, Barber MD, Burgio KL, Kenton K, Meikle S, Schaffer J, et al. Prevalence of symptomatic pelvic floor disorders in US women. JAMA. 2008 Sep 17;300(11):1311–6.

[8] Ajith AK, Rekha A, Duttagupta S, Murali V, Ramakrishnan D, Krishnapillai V. Prevalence and Factors of Urinary Incontinence among Postmenopausal Women Attending the Obstetrics and Gynecology Outpatient Service in a Tertiary Health Care Center in Kochi, Kerala. Indian J Community Med Off Publ Indian Assoc Prev Soc Med. 2019 Oct;44(Suppl 1):S30–3.

[9] Bradley CS, Rovner ES, Morgan MA, Berlin M, Novi JM, Shea JA, et al. A new questionnaire for urinary incontinence diagnosis in women: development and testing. Am J Obstet Gynecol. 2005 Jan;192(1):66–73.

[10] ICIQ-UI SF | ICIQ [Internet]. [cited 2024 Jul 4]. Available from: https://iciq.net/iciq-ui-sf

[11] Emmons K, Robinson J. Urinary Incontinence Severity and Quality-of-Life Instruments. J Wound Ostomy Cont Nurs Off Publ Wound Ostomy Cont Nurses Soc WOCN. 2013 Jul 1;40:350–4.

[12] Abushamma F, Mansour A, Nassar R, Badran H, Abu Alwafa R, Ktaifan M, et al. Prevalence, Risk Factors, and Impact on Quality of Life Due to Urinary Incontinence Among Palestinian Women: A Cross-Sectional Study. Cureus. 2024 Apr;16(4):e57813.

[13] Singh U, Agarwal P, Verma ML, Dalela D, Singh N, Shankhwar P. Prevalence and risk factors of urinary incontinence in Indian women: A hospital-based survey. Indian J Urol IJU J Urol Soc India. 2013;29(1):31–6.

[14] Peyrat L, Haillot O, Bruyere F, Boutin JM, Bertrand P, Lanson Y. Prevalence and risk factors of urinary incontinence in young and middle-aged women. BJU Int. 2002 Jan;89(1):61–6.

[15] Sakondhavat C, Choosuwan C, Kaewrudee S, Soontrapa S, Louanka K. Prevalence and risk factors of urinary incontinence in Khon Kaen menopausal women. J Med Assoc Thail Chotmaihet Thangphaet. 2007 Dec;90(12):2553–8.

[16] Nitti VW. The prevalence of urinary incontinence. Rev Urol. 2001;3 Suppl 1(Suppl 1):S2-6.

[17] Qasrawi H, Tabouni M, Almansour SW, Ghannam M, Abdalhaq A, Abushamma F, et al. An evaluation of lower urinary tract symptoms in diabetic patients: a cross-sectional study. BMC Urol. 2022 Nov 10;22(1):178.

[18] Fritel X, Ringa V, Varnoux N, Fauconnier A, Piault S, Bréart G. Mode of delivery and severe stress incontinence. a cross-sectional study among 2,625 perimenopausal women. BJOG Int J Obstet Gynaecol. 2005 Dec;112(12):1646–51.

[19] Brown JS, Wing R, Barrett-Connor E, Nyberg LM, Kusek JW, Orchard TJ, et al. Lifestyle intervention is associated with lower prevalence of urinary incontinence: the Diabetes Prevention Program. Diabetes Care. 2006 Feb;29(2):385–90.

[20] Viktrup L, Rortveit G, Lose G. Risk of stress urinary incontinence twelve years after the first pregnancy and delivery. Obstet Gynecol. 2006 Aug;108(2):248–54.

[21] Lian WQ, Li FJ, Huang HX, Zheng YQ, Chen LH. Constipation and risk of urinary incontinence in women: a meta-analysis. Int Urogynecology J. 2019 Oct;30(10):1629–34.

[22] Yang C, Feng Z, Chen Z, Xu D, Li Y, Lai K, et al. The risk factors for urinary incontinence in female adults with chronic cough. BMC Pulm Med. 2022 Dec;22(1):276.

[23] Zoglmann R, Nguyen T, Engberts M, Vaessen D, Patberg N, Berg JV den. Do patients with stress incontinence cough or do cough patients suffer from urinary incontinence? Eur Respir J [Internet]. 2015 Sep 1 [cited 2024 Jun 27];46(suppl 59). Available from: https://erj.ersjournals.com/content/46/suppl_59/pa713

[24] Lane GI, Hagan K, Erekson E, Minassian VA, Grodstein F, Bynum J. Patient–Provider Discussions About Urinary Incontinence Among Older Women. J Gerontol A Biol Sci Med Sci. 2020 Apr 30;76(3):463–9.

[25] Nojomi M, Amin E, Rad R. Urinary incontinence: Hospital-based prevalence and risk factors. J Res Med Sci. 2008 Feb 1;13.