

Prevalence of Urinary Incontinence among Pregnant Women of Multan City

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ABSTRACT

Background: Incontinence of urine (UI) is a type of lower urinary tract dysfunction that can occur when the natural urination process is disrupted. During pregnancy, incontinence, particularly stress UI, is a common issue.

Aim: To identifying the prevalence, factors associated, and the effects of UI throughout pregnancy on health-related QoL.

Methods: A cross - sectional descriptive research was carried out. 220 pregnant women who were attending an outpatient clinic at one of the hospitals in Multan were included in the study. As a means of measuring the results, the ICIQ—International Consultation on Incontinence Questionnaire—was utilized. The Questionnaire was distributed among pregnant women, and researcher filled the questionnaire by asking questions to them according to their response.

Results: UI was present in 48(21.81%) of the study population. According to a frequency distribution analysis of urine incontinence in females, those b/w 29& 28 years of age, who have a B.M.I of range 18. 5 to 24.9 kg/m² exhibit the most severe incontinence. Chi square test showed that p value is below 0.05 and study concluded that there is a statistically significant association between urinary incontinence and gravida, as well as between urinary incontinence and trimester. Understanding the prevalence of this condition can help healthcare providers to identify the risk factors associated with urinary incontinence in pregnant women and develop targeted interventions to prevent or manage the condition.

Conclusion: UI occurs frequently in expectant mothers. Study concluded that there is a statistically significant association between urinary incontinence and gravida, as well as between urinary incontinence and trimester, among pregnant women in Multan City. A higher risk of UI throughout pregnancy was linked to age, the week of gestation & parity.

Keywords: Pregnancy; Prevalence; Quality of life; Urinary incontinence

INTRODUCTION

UI is a type of lower urinary tract dysfunction that can occur when the natural urination process is disrupted. During pregnancy, significant metabolic factors affect numerous systems of the human body that may lead to continence. It is well documented to have the negative impact on QoL in four domains in roughly 54.3% of all pregnant women: activity level, travel, social interactions, and emotional health¹.

The QOL of pregnant ladies with UI or MUI had lower than the pregnant females with Stress UI solely. QOL in the categories of physiological, psychosocial, and emotional wellbeing were low, although scores in the domains of independent mobility & embarrassing discomfort were greater, indicating a minimum constraint in living style². According to a published research³ signs of the low urinary tract peaked at thirty six weeks gestation and persisted during the first year of postpartum life. All of these factors were taken into account as predictors of troublesome SUI till one year following birth including SUI developed in elderly mothers, & the incidence of unpleasant LUTS occurred at twelve weeks of gestation. Due to variances in criteria, population surveyed, research type, number of participants, age, sexuality, accessibility and the efficacy of healthcare, and other factors, determining the global prevalence is difficult⁴.

When a person acknowledges the need to urinate, but is unable to reach the washroom, this is referred to as functional incontinence⁵. Urine loss could be significant. Confusion, dementia, impaired eyesight, motility or nimbleness, unwillingness to toilet due to stress or anxiousness, or inebriation due to alcohol is all reasons of functional incontinence⁶.

Pregnancy and vaginal delivery, post-partum, overweight, persistent cough, prolonged excessive lifting, and bowel problems: stress incontinence might occur if the retroperitoneal pressure exceeds the counter force of core stability muscles⁷.

Training the pelvic floor & abdominal muscles in gestation minimizes the likelihood of developing urine incontinence in females who has never had it before. A meta-analysis of randomized trials on prenatal or post-natal ladies discovered that females who received PFMT prior pregnancy had a substantial reduction in urine incontinence at as much as three months postpartum⁸.

According to research by R. Novo et al. SUI & dyspareunia were relatively common following delivery, SUI and dyspareunia were relatively common—20.4% and 23.4% respectively. A history of episiotomy, breastfeeding, and the presence of dyspareunia during pregnancy (adjusted prevalence ratio PR 2.1) were all factors linked to dyspareunia after delivery. A woman's prior experiences with SUI before childbirth (PR 2.4) and during gestation (PR 2.0), as well as having a vaginal birth, were related to SUI after delivery (PR 2.0)⁹.

This research was aimed at identifying the prevalence of urine incontinence in pregnant females, as well as its potential risks & effects on life quality in terms of health. Understanding the prevalence of this condition can help healthcare providers to identify the risk factors associated with urinary incontinence in pregnant women and develop targeted interventions to prevent or manage the condition. There is a significant gap in the literature on the prevalence of urinary incontinence among pregnant women in Multan City. Although studies have been conducted in other parts of the world, the prevalence of urinary incontinence among pregnant women in Multan City remains unknown. Therefore, conducting a study in this area can help to fill this gap in the literature and provide much-needed information for healthcare providers in Multan City to develop effective strategies for managing this condition.

MATERIALS AND METHODS

After IRB permission this cross - sectional descriptive research was carried out. Data was collected from pregnant women of

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Multan City. Data was gathered by using convenient or opportunity sampling technique. The study sample was 220.

Inclusion criteria: Pregnant women of the Multan city.

Exclusion criteria: Non pregnant females, ladies who refused to take part in research, females with any diagnosed psychological issue and women suffering with any other diagnosed systematic disorder.

Data collection tool: s a means of measuring the results, the ICIQ—International Consultation on Incontinence Questionnaire—was utilized.

Data collection procedure: The Questionnaire was distributed among pregnant women, and researcher filled the questionnaire by asking questions to them according to their response. The version 21 of SPSS was used to analyze the data.

RESULTS

Table 1: Descriptive statistics

Age	18-28 y	29-38 y	39-48 y	
	70(31.8%)	108(49.1%)	42(19.1%)	
Urine incontinences	Yes	No		
	48(21.81%)	172(78.18%)		
BMI	Under weight	Normal	Over weight	Obese
	3(1.4%)	111(50.5%)	97(44.1%)	9(4.1%)
Gravida	Primigravida	Multigravida	Grand Gravid	
	51(23.2)	121(55.0)	48(21.8)	
Trimester	1st	2nd	3rd	
	33(15.0%)	42(19.1%)	145(65.9%)	

Descriptive statistics includes age of participants, urinary incontinence symptoms, BMI of pregnant women, distribution of

Gravida and distribution of trimester among pregnant women having urinary incontinence.

The score of International consultation on the incontinence questionnaire showed that the percentage of women having urine incontinence 2-3 times a week is greater. About 24(10%) women never feels urine leakage, 76(34.5%) experienced about once a week or less , 84(38.2%) women experienced 2-3 times a week and 36(16.4%) women experienced urine leakage several times a day. The percentage of women having urine incontinence with a small amount urine leak was greater. Almost 18(8.2%) response none, 115(52.3%) women experienced a small amount of urine leakage, 63(28.6%) experienced a moderate amount and 24(10.9%) women experience a large amount of urine leakage. The value of interference of urine leakage with daily activities revealed that about 67(30.5%) women have experienced the moderate rate of interference of urine leakage with activity of daily living which shows the maximum interference value of 5. While 6 (2.7%) women had not been effected by urine leakage with value zero, 3(1.4%) women had value 1, 9(4.1%) women with value 2, 30(13.6%) women with value 3, 27(12.3) women with value 4, 42(19.1%) women with value 6, 21(9.5%) women with value 7, 12(5.5%) women with value 8, 3(1.4%) women had value 9 of urine leakage. However, no women had experienced a great deal of urine leakage with value 10. The result indicated that 61(27.7%) women had maximum frequency whose urine leak while cough or sneezing. Moreover, 12(5.5%) women never experienced urine leakage, 39(17.7%) women leaked urine before getting to the toilet, 27(12.3%) women experienced urine leakage with having no obvious reason, 51(23.2%) women experienced urine leakage as dressed up after urination, 3(1.4%) women bears urine leakage while sleeping and 27(12.3%) women experienced urine leakage during physical activity or exercise.

Table 2: Percentage Score of International consultation on incontinence Questionnaire

How often does urine leak?	Never		about once a week or less		2-3 times a week		several times a day					
	10.9%		34.5%		38.2%		16.4%					
Amount of urine leak	None		Mild		Moderate		Large					
	8.2%		52.3%		28.6%		10.9%					
Interference of urine leakage with ADLs	0	1	2	3	4	5	6	7	8	9	10	
	2.7%	1.4%	4.1%	13.6%	12.3%	30.5%	19.1%	9.5%	5.5%	1.4%	0%	
How often does urine leak?	Never		Leakage before using lavatory		Leakage while coughing or sneezing		Leakage without any obvious cause		leakage after urinating & dressing		Leakage while asleep	Leakage while physical activity
	5.5%		17.7%		27.7%		12.3%		23.2%		1.4%	12.3%

The results of the study showed that p value is below 0.05 and concluded that there is a statistically significant association between urinary incontinence and gravida, as well as between urinary incontinence and trimester, among pregnant women in Multan City

Table 3: Chi square test

Urine leakage * Trimester		Pearson Chi-Square	Likelihood Ratio	Linear-by-Linear Association	N of Valid Cases
	Value	31.244 ^a	36.142	30.074	220
	df	3	3	1	
	Asymptotic Significance (2-sided)	.000	.000	.000	
Urine leakage * Gravida		Pearson Chi-Square	Likelihood Ratio	Linear-by-Linear Association	N of Valid Cases
	Value	144.163 ^a	148.274	78.429	220
	df	6	6	1	
	Asymptotic Significance (2-sided)	.000	.000	.000	

DISCUSSION

The survey was carried out from October 2019 to February 2020 in Multan, with a sample size of 220 pregnant women. Among a total of 220 women tested, 108 (49.1%) were reported to have urine incontinence. Women aged 29 to 38y had a greater frequency of suffering UI than females aged less than 29y and more than 38 years. These results are in line with earlier research suggesting a rise in urine problems in elderly females¹⁰.

The correlation of urine incontinence along with BMI found that urine incontinence is more likely to occur in the BMI range of 18.5 to 24.5kg/m-2. But the results of previous research by JM Choi et al¹¹, reported that participants who put on weight between the ages of 18 and 50 were more likely to report higher UI than those who kept their weight at a healthy level. A rise in BMI from age between the ages of 18 and 50 was linked to higher rates of experiencing UI, and being overweight or obese at age 35 years resulted in a greater likelihood of experiencing UI and urge UI later in life (11). HM Elbisset al. reported that ladies with previous

episodes of incontinence had a significantly higher rate of UI during pregnancy than those without it. UI is linked to overweight and obesity, a chronic cough, persistent constipation, and recurrent UTI. UI prior to and during pregnancy was linked to postpartum stress UI¹².

Increased umbilical spaces and Diastasis recti abdominis (DRA) were discovered to be significant possibly associated risk factors for UI in all pregnant women and the 3rd trimester. The wall of the abdominal cavity fails to offer effective co-contraction during pelvic floor contraction if the abdominal muscles aren't strong or damaged, as in DRA. In several instances, the abdominal & pelvic floor muscles work in tandem. Because both muscle groups encompass the abdominal cavity, they play an active part in the regulation of intra-abdominal pressure during respiration, sneezing, coughing, exercising and motion and their weakness can lead to incontinence and other such problems¹³. A meta-analysis and systematic review by HFA Moossdorff et al reported that, in pregnancy, UI is exceptionally prevalent and rises with the weeks of gestation. SUI is probably the most frequent type, and in most of the cases it was normally a small amount¹⁴. These results were in line with our study which showed that percentage (52.3%) of women having urine incontinence with a small amount urine leak was greater. Almost 80% of pregnant ladies, both primi-gravidae & multi-gravidae, experience greater urinary frequency at a certain time in their trimester¹⁵. Our study also showed that 55% of multigravida ladies experience UI. The third trimester was where affected women were more frequently found to be pregnant and have urine incontinence¹⁵.

Our findings were consistent with that research and showed that last three to six weeks of pregnancy are when stress urine incontinence is most likely to occur. Our research on the frequency of urine leakage in incontinent pregnant women led to the observation of a higher frequency of women who experienced urination leakage 2-3 times per week. The pelvic floor muscle (PFM) may become weaker during pregnancy, which may affect the PFM's ability to function as a sphincter and support system, which might result in the development of SUI. According to current study, the majority of pregnant women who experience urinary incontinence have relatively minor pee leaks. The main cause of this leakage is the PFM's weakness^{16,17}.

Our findings show that urine incontinence affects pregnant women's daily activities more frequently and to a lesser extent. These outcomes are in keeping with the results of other trials, which also showed a negative connection between urine incontinence & quality of life^{18,19}. The results of our study showed that only 1.5% of ladies had urine leakage while asleep. These results are accordance with the results of previous research that determined the incontinence effects in sleep quality of older people. It was discovered that nearly 20% of elderly individuals struggle with incontinence. It turns out that incontinence does not affect the quantity of sleep in the elderly, but it does reduce their standard of life^{20,21}. Our findings showed that only 12.3% expected ladies had encounter incontinence while physical activity. Physical activity before, during, or after childbirth does not correlate with urinary incontinence, according to the limited evidence available. For the evidence-based advantages on other obstetrical effects moderate amounts of exercise should be recommended²².

CONCLUSION

Prevalence of urine incontinence in pregnant ladies of the Multan city was identified by this study. Age, gestational age, the number of pregnancies, physical activity, Obesity, and impact on ADL were the most prevalent risk factors. UI has mild to moderate influence on overall QoL. These findings suggest that the rising female's awareness of UI prevention & improving and maintaining community health are the most crucial roles for health professionals to design and carry out in terms of training and consulting services.

Limitations: Although the study's intended sample size was 300, the researcher was able to manage only 220 samples due to time and resource limitations, which is far too few to extrapolate the findings to the pregnant community as a whole. Since there are no researches on UI in pregnant ladies from the Multan perspective, it is challenging to compare the findings to other studies. For a brief period of time, the researcher was able to gather information from Multan, Pakistan's private hospitals' maternity wards, which will have an impact on the study's ability to generalize its findings to a larger population.

RECOMMENDATIONS

1. Physiotherapy awareness initiatives should be run to educate expectant mothers.
2. To further enable the power of generalization the results, the random sampling technique would be selected rather than the convenient.
3. While the study period was brief, a longer time frame would be used in the future.
4. A larger sample size would be essential for an effective study.
5. Healthcare providers should screen pregnant women for urinary incontinence (UI) during routine prenatal visits. This will help identify women who may be at risk for developing UI and provide them with appropriate education and treatment options.
6. Healthcare providers should provide pregnant women with education about pelvic floor exercises, such as Kegels, and other strategies to prevent UI. This will help women maintain good pelvic floor health during pregnancy and prevent UI.
7. Healthcare providers should provide pregnant women with information about bladder habits and strategies to promote healthy bladder function. This can include recommendations to drink enough fluids, empty the bladder regularly, and avoid certain foods and drinks that can irritate the bladder.

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