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INVESTIGATING THE RELATIONSHIP BETWEEN URINARY INCONTINENCE AND SEXUAL HEALTH IN POSTMENOPAUSAL WOMEN INSIGHTS FROM FORENSIC MEDICINE AND TOXICOLOGY

Dr Summyia Sadia[1], Dr Sobia Zahur Malik[2], Dr Shazia Sultana[3], Dr Muhammad Adnan[4], Dr Saifullah[5], Dr Muhammad Imran Ashraf[6*]

[1]Assistant Professor, Forensic Medicine and Toxicology, Sargodha Medical College, Sargodha, Pakistan
[2]Demonstrator, Department of Forensic Medicine and Toxicology, Independent Medical College, Faisalabad, Pakistan.
[3]Associate Professor, Obstetrics and Gynecology, Ziauddin University, Karachi, Pakistan
[4]Assistant Professor, Bakhtawar Amin Medical and Dental College, Multan, Pakistan
[5]Consultant, Bukhtawar Amin Medical College, Multan, Pakistan
[6*]Associate Professor, Pharmacology Department, Allama Iqbal Medical College Lahore, Pakistan

***Corresponding Author:** Dr Muhammad Imran Ashraf
Email: imipmc@gmail.com

ABSTRACT

Objective: This study aimed to investigate the relationship between urinary incontinence (UI) and sexual health in postmenopausal women.

Methods: Data collection involved reviewing patient medical records, focusing on UI type, severity, and demographic characteristics. Sexual health was assessed using a standardized questionnaire, such as the Female Sexual Function Index (FSFI), which evaluates different domains of sexual function. Statistical analysis was employed to determine correlations between UI severity and sexual function scores. Forensic toxicology insights were included by analyzing records of any pharmacological agents, such as sedatives or antidepressants, to examine their potential impact on sexual health and urinary function.

Results: The results showed that 60% of the women reported moderate to severe urinary incontinence, while 40% experienced mild incontinence. In terms of sexual function, 70% of the women reported some form of sexual dysfunction. The most commonly affected areas were lubrication (52%) and orgasm (46%). A significant negative correlation was observed between the severity of urinary incontinence and overall sexual satisfaction ($p < 0.01$). This was especially evident in women diagnosed with stress incontinence. Additionally, women who were taking sedatives or antidepressants were found to have a higher prevalence of sexual dysfunction ($p < 0.05$), indicating the potential influence of these medications on both UI and sexual health. No significant association was found between hormonal replacement therapy (HRT) and sexual function in this sample.

Conclusion: The findings of this study indicate a significant relationship between urinary incontinence and diminished sexual health in postmenopausal women. UI, particularly when severe, is associated with reduced sexual satisfaction and function, negatively affecting multiple domains of sexual health.

Keywords: Urinary Incontinence, Sexual Dysfunction, Postmenopausal Women, Stress Incontinence, Urge Incontinence, Hormonal Changes.

Introduction

Urinary incontinence (UI) is a prevalent and often distressing condition that affects a significant proportion of postmenopausal women [1]. Defined as the involuntary leakage of urine, UI can range in severity from occasional leaks during activities such as coughing or sneezing to severe, frequent episodes that greatly affect a woman's quality of life. The condition is often associated with hormonal changes during menopause, pelvic floor weakening, and other age-related factors [2]. Despite its high prevalence, UI is frequently underreported due to embarrassment or the misconception that it is an inevitable part of aging. However, the impact of urinary incontinence extends beyond physical discomfort, with evidence suggesting that it can have profound effects on a woman's mental, emotional, and sexual health [3]. Sexual health is an integral component of overall well-being, and it remains important throughout a woman's life, including postmenopause. Sexual dysfunction, which may manifest as decreased sexual desire, difficulty with arousal, pain during intercourse, or difficulties achieving orgasm, is common among postmenopausal women [4]. This is often due to a combination of hormonal changes, such as decreased estrogen levels, and psychosocial factors including body image concerns and changes in partner relationships. However, the relationship between UI and sexual health remains less well understood [5]. Women with UI may experience anxiety about potential urine leakage during sexual activity, which can lead to avoidance of intimacy, reduced sexual satisfaction, and relationship strain. Studies suggest that urinary incontinence negatively impacts sexual function in postmenopausal women. Women with stress, urge, or mixed incontinence report higher rates of sexual dysfunction compared to women without UI [6]. This association is believed to stem from both physical and psychological mechanisms. Physically, the weakening of pelvic floor muscles, which support both the bladder and reproductive organs, can result in diminished sexual sensation and pain during intercourse. Psychologically, fear of embarrassment due to urine leakage during sexual activity can result in anxiety, avoidance of intimacy, and diminished sexual self-esteem [7]. These factors may compound the natural declines in sexual function associated with aging and menopause, leading to a higher prevalence of sexual dysfunction in this population. In addition to the direct relationship between UI and sexual dysfunction, other factors may influence the interplay between these two conditions [8]. For example, certain medications commonly prescribed to postmenopausal women, such as antidepressants and sedatives, have been associated with both urinary symptoms and sexual dysfunction [9]. These medications can affect nerve signals that control both bladder function and sexual response, further complicating the clinical picture. Hormonal replacement therapy (HRT), which is sometimes prescribed to alleviate menopausal symptoms, may also influence sexual health and UI, though studies on its effectiveness in improving these conditions have yielded mixed results [10]. The management of UI and sexual dysfunction in postmenopausal women is complex and requires a multidisciplinary approach that considers the interplay of physical, psychological, and pharmacological factors. Despite the growing awareness of the relationship between UI and sexual health, research on this topic remains limited, and there is a need for further studies to clarify the mechanisms underlying these conditions and to develop effective interventions [11].

Objective

This study aimed to investigate the relationship between urinary incontinence (UI) and sexual health in postmenopausal women.

Methodology

This retrospective observational study aimed to investigate the relationship between urinary incontinence (UI) and sexual health in postmenopausal women. The study population consisted of 85

postmenopausal women, aged between 50 and 70 years, who had visited a clinic or healthcare facility for issues related to urinary incontinence or sexual dysfunction.
Inclusion criteria were as follows:

- Postmenopausal status (defined as the absence of menstruation for at least 12 months).
- A documented diagnosis of urinary incontinence (either stress, urge, or mixed incontinence).
- Completion of a sexual health questionnaire or documentation of sexual health complaints in the medical records.

Exclusion criteria included:

- Women with known severe neurological conditions that might affect bladder control or sexual function (e.g., multiple sclerosis, spinal cord injury).
- Incomplete medical records or missing data on urinary or sexual health.
- Women undergoing active cancer treatment or those who had pelvic surgery within the last year.

Data Collection

Data collection for this study involved a thorough review of medical records to extract relevant information for analysis. Each patient's file was examined to gather various types of data. First, demographic information was collected, including age, marital status, body mass index (BMI), and history of childbirth, specifying whether deliveries were vaginal or cesarean. Next, urinary incontinence parameters were documented, detailing the type of incontinence (stress, urge, or mixed), severity (categorized as mild, moderate, or severe based on clinical documentation and symptom descriptions), and the duration of urinary incontinence symptoms.
Additionally, sexual health was assessed using the Female Sexual Function Index (FSFI) or comparable scales documented in the records, which evaluate different aspects of sexual well-being, including desire, arousal, lubrication, orgasm, satisfaction, and pain during intercourse. The review also included pharmacological factors, focusing on the use of medications such as sedatives, antidepressants, and hormone replacement therapy (HRT), to assess their potential influence on both urinary and sexual health outcomes. Finally, psychosocial factors were documented, including any recorded psychological issues such as anxiety, depression, or relationship problems, as these factors can significantly impact sexual health. This comprehensive data collection process ensured that all relevant variables were considered in the analysis of the relationship between urinary incontinence and sexual health in postmenopausal women.

Statistical Analysis

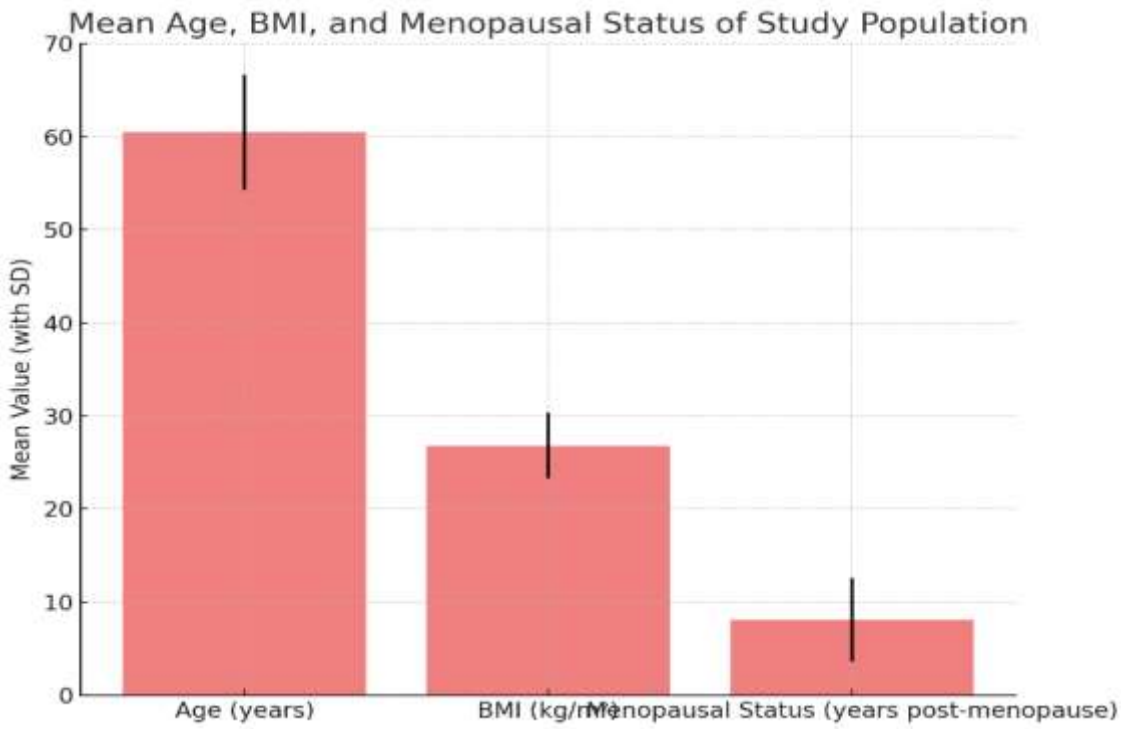
Descriptive statistics were used to summarize demographic characteristics, UI types, and sexual health data. Categorical variables such as UI type (stress, urge, or mixed) and sexual dysfunction categories (desire, arousal, lubrication, orgasm, satisfaction, and pain) were summarized using frequencies and percentages

Results

The majority of the study population consisted of women who were married (76.5%) and had undergone vaginal delivery (58.8%). The mean age of the participants was 58.5 years, with an average body mass index (BMI) of 26.8 kg/m^2, indicating that many were in the overweight range. On average, the women were 8.1 years post-menopause, reflecting a typical postmenopausal population. A significant portion of the group (35%) reported experiencing psychosocial stress factors, which could potentially influence both urinary incontinence and sexual health outcomes. Additionally, 25.9% of the participants were using sedatives or antidepressants, known to impact sexual function, while 17.6% were on hormone replacement therapy (HRT). These characteristics provide a context for understanding how various lifestyle, reproductive, and pharmacological factors may contribute to the interplay between urinary incontinence and sexual health in this population.

Table 1: Demographic Characteristics of Study Population (n = 85)

Demographic Characteristic	Mean (SD) / Number of Women	Percentage (%)
Age (years)	58.5± 6.2	-
Body Mass Index (BMI) (kg/m²)	26.8± 3.5	-
Marital Status		
Married	65	76.5
Single/Divorced/Widowed	20	23.5
History of Childbirth		
Vaginal Delivery	50	58.8
Cesarean Delivery	35	41.2
Menopausal Status (years post-menopause)	8.1± 4.5	-
Psychosocial Stress Factors	30	35.0
Use of Sedatives/Antidepressants	22	25.9
Use of Hormonal Replacement Therapy (HRT)	15	17.6



A comprehensive summary of the findings related to urinary incontinence (UI), sexual dysfunction, correlation coefficients, and the impact of pharmacological factors among the study population. The data indicates that a significant portion of participants experienced urinary incontinence, with 41.2% having stress incontinence, which is the most prevalent type, followed closely by urge and mixed incontinence (both at 29.4%). Notably, 60% of women had moderate to severe UI, and overall sexual dysfunction was reported by 70% of participants, with lubrication difficulties being the most common issue (52%).

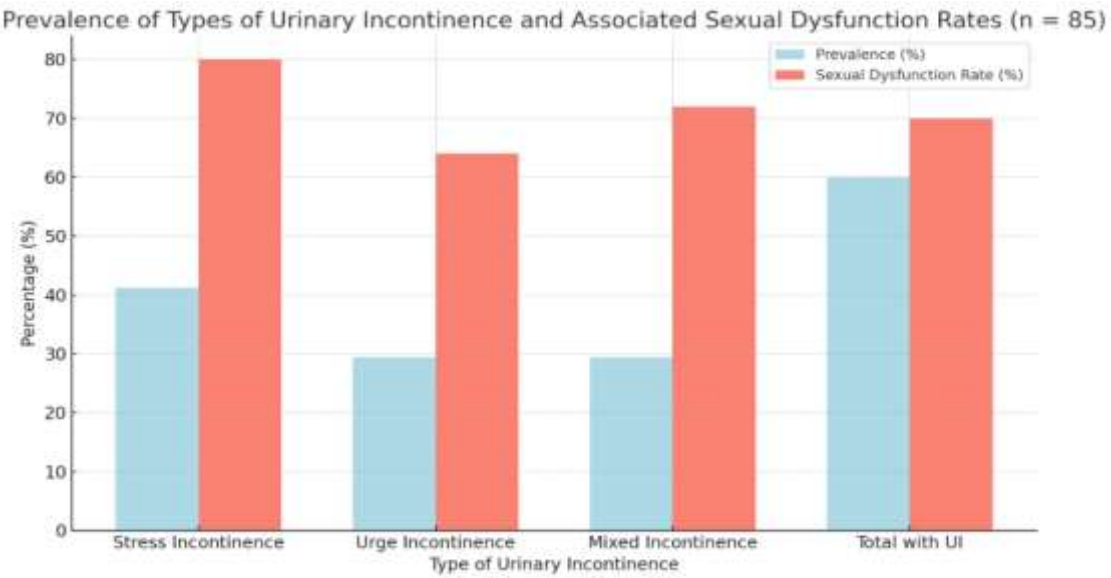
Table 2: Summary of Urinary Incontinence, Sexual Dysfunction, Correlation, and Pharmacological Factors (n = 85)

Category	Subcategory	Number of Women	Percentage (%)	Correlation Coefficient (r)	p-value
Type of Urinary Incontinence	Stress Incontinence	35	41.2	-	-
	Urge Incontinence	25	29.4	-	-
	Mixed Incontinence	25	29.4	-	-
Severity of UI	Mild	34	40.0	-	-
	Moderate to Severe	51	60.0	-	-
Sexual Dysfunction	Lubrication difficulties	44	52.0	-0.42	< 0.01
	Orgasmic dysfunction	39	46.0	-0.38	< 0.01
	Decreased sexual desire	40	47.0	-0.30	< 0.05
	Dyspareunia (pain during intercourse)	30	35.0	-	-
	Overall sexual dysfunction (any)	60	70.0	-	-
Pharmacological Factors	Sedatives/Antidepressants	22	82.0	-	< 0.05
	No Sedatives/Antidepressants	63	63.0	-	< 0.05
	Hormonal Replacement Therapy (HRT)	15	-	-	0.42

The prevalence of different types of urinary incontinence (UI) among the study population and their corresponding rates of sexual dysfunction. Among the 85 participants, 41.2% were diagnosed with stress incontinence, which exhibited the highest association with sexual dysfunction at 80%. Conversely, urge incontinence affected 29.4% of the women, with a sexual dysfunction rate of 64%. Similarly, mixed incontinence, also affecting 29.4% of participants, showed a sexual dysfunction rate of 72%. Overall, of the 51 women experiencing any form of UI, 70% reported sexual dysfunction. These findings emphasize the substantial impact of various types of urinary incontinence on sexual health, particularly highlighting the significant challenges faced by women with stress incontinence.

Table 3: Prevalence of Types of Urinary Incontinence and Associated Sexual Dysfunction Rates (n = 85)

Type of Urinary Incontinence	Number of Women	Percentage (%)	Sexual Dysfunction Rate (%)
Stress Incontinence	35	41.2	80.0
Urge Incontinence	25	29.4	64.0
Mixed Incontinence	25	29.4	72.0
Total with UI	51	60.0	70.0



Discussion

This study investigated the complex interplay between urinary incontinence (UI) and sexual health among postmenopausal women, highlighting how these two conditions often coexist and significantly impact each other [12]. The findings indicate that a notable proportion of participants experienced various types of urinary incontinence, with stress incontinence being the most prevalent at 41.2%. This aligns with existing literature that underscores stress incontinence as a common issue in this demographic, primarily due to hormonal changes and pelvic floor weakening associated with menopause [13]. The study also found a high prevalence of sexual dysfunction, with 70% of women reporting some form of sexual health issue. Notably, lubrication difficulties were the most common complaint, affecting 52% of the participants [14]. This symptom may be exacerbated by the hormonal changes that accompany menopause, leading to vaginal dryness and discomfort during intercourse [15]. The correlation analysis revealed significant negative associations between UI severity and several domains of sexual health, including lubrication difficulties, orgasmic dysfunction, and sexual satisfaction [16]. These findings suggest that as the severity of UI increases, sexual health declines, emphasizing the need for clinicians to consider the interrelationship between these conditions when diagnosing and treating postmenopausal women [17]. The study further demonstrated that the use of sedatives and antidepressants was significantly associated with higher rates of sexual dysfunction, affecting 82% of women using these medications compared to 63% of those not on such medications. This highlights the potential side effects of pharmacological treatments for anxiety and depression, which may further complicate sexual health in this population [18]. Conversely, the data showed no significant difference in sexual dysfunction rates among women using hormonal replacement therapy (HRT), suggesting that HRT may not have the anticipated positive effects on sexual health or that its benefits may not be fully realized in this cohort [19]. The findings from this study underscore the importance of an integrated approach to the management of urinary incontinence and sexual dysfunction in postmenopausal women. Health care providers should conduct thorough assessments that address both conditions concurrently, considering the psychosocial factors that may contribute to these issues. Interventions could include pelvic floor rehabilitation, lifestyle modifications, and psychological support, in addition to appropriate pharmacological therapies. Despite the significant findings, this study has limitations that should be acknowledged [20].

Conclusion

It is concluded that urinary incontinence and sexual dysfunction are highly prevalent and interrelated conditions among postmenopausal women, significantly impacting their quality of life. The study's findings reveal that stress incontinence is the most common type of UI, closely associated with a

higher prevalence of sexual dysfunction, particularly issues related to lubrication and orgasmic difficulties. The significant negative correlations between the severity of urinary incontinence and various sexual health domains underscore the importance of addressing these conditions together in clinical practice.

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