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Research Article

Psychological Burden of Stress Urinary Incontinence; A Cross-Sectional Study of Anxiety and Depression in Women

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ABSTRACT

Background: Stress urinary incontinence (SUI) is a common condition among women and can greatly affect daily life. Many women with SUI not only face physical problems but also emotional and psychological challenges. Feelings of embarrassment, fear of urine leakage, and avoidance of social activities can lead to anxiety and depression. Despite its high prevalence, the psychological impact of SUI is often overlooked in routine clinical care.

Materials and Methods: This was a hospital-based cross-sectional study done in the Mardan Medical Complex Mardan from June 2025 to November 2025. Women diagnosed with stress urinary incontinence (SUI) were included after taking informed consent. Mental health was checked using the Hospital Anxiety and Depression Scale (HADS), which is a simple and reliable tool. Information about age, marital status, and medical history, including how severe the symptoms were and how long the problem had been present, was collected using a structured questionnaire. All data were entered and analyzed using SPSS version 25. Logistic regression was used to find the main factors linked with anxiety and depression.

Results: The study showed that many women with SUI had mental health problems. About 40% had anxiety and 32% had depression. Some women had both conditions at the same time. Women with more severe symptoms, longer illness, and less social support were more likely to have higher levels of stress and emotional problems.

Conclusion: Stress urinary incontinence affects not only physical health but also mental well-being. Regular screening for anxiety and depression should be part of routine care. Providing proper counseling and support can help improve the overall quality of life of these women. Treating both physical and mental health together is important for better outcomes.

Keywords: Stress urinary incontinence, Anxiety, Depression, Women's health, Quality of life

INTRODUCTION

Stress urinary incontinence (SUI) is a common health problem in women. It means the leakage of urine during activities such as coughing, sneezing, laughing, or exercise. This happens because of increased pressure inside the abdomen. Many women across the world are affected by this condition, and studies show that around 25% to 35% of women may experience some form of urinary incontinence during their lifetime [1,2]. Among these, SUI is one of the most common types [3].

Although SUI is not life-threatening, it can have a strong effect on a woman's daily life. Women with this condition often feel embarrassed and may try to hide their symptoms. Many avoid social gatherings, physical activities, and even work-related tasks because they fear urine leakage in public [4,5]. Over time, this can lead to reduced confidence, low self-esteem, and poor quality of life [6].

The psychological impact of SUI is an important issue that is often ignored. Many women with SUI experience anxiety, especially due to fear of leakage in public places. They may constantly worry about smell, wet clothes, or being judged by others. Depression can also develop due to ongoing stress, social isolation, and feelings of shame [7,8]. Studies have shown that women with urinary incontinence are more likely to suffer from anxiety and depression compared to those without this condition [9, 10].

Several factors can increase the psychological burden of SUI. One of the most important factors is the severity of symptoms. Women with more severe leakage tend to restrict their activities more, which can increase emotional stress [11,12]. Duration of illness is another important factor. Women who have been suffering for a long time may develop long-term psychological problems [13].

Age also plays a role in the experience of SUI. Older women may consider it a normal part of aging and may not seek help, while younger women may feel more embarrassed and socially restricted [14,15]. In addition, factors such as childbirth, obesity, hormonal changes, and pelvic floor weakness are known to increase the risk of SUI [16,17]. These physical factors can also indirectly affect mental health by increasing symptom severity.

Social and cultural factors are also very important. In many societies, urinary problems are considered a private or shameful issue. Women may feel uncomfortable discussing their symptoms even with healthcare providers [18,19]. Lack of support from family or partners can make the situation worse. Women who do not receive emotional support are more likely to feel isolated and stressed [20,21].

Another important issue is that many women delay seeking treatment. This delay may be due to lack of awareness, fear of surgery, or belief that the condition is not treatable [22]. As a result, symptoms may worsen over time, increasing both physical and psychological burden. Early diagnosis and treatment can help reduce these problems, but many women remain untreated [23].

Previous research has mainly focused on the physical aspects of SUI, such as diagnosis and treatment. However, fewer studies have explored its psychological effects in detail, especially in developing countries [24]. There is a need to better understand how SUI affects mental health and what factors increase the risk of anxiety and depression.

Therefore, this study aims to assess the prevalence of anxiety and depression among women with stress urinary incontinence and to identify the main social, clinical, and psychological factors associated with these conditions. Understanding these factors can help improve patient care by addressing both physical and mental health needs [25].

MATERIALS AND METHODS

This study was a hospital-based cross-sectional study. It was carried in Mardan Medical Complex Mardan from June 2025 to November 2025 that provide care for women with urinary problems. These hospitals receive patients from different areas, including both urban and rural regions. This helped us include women from different backgrounds.

Women aged 18 to 60 years who were diagnosed with stress urinary incontinence were included in the study. These women came to the hospital for check-up or treatment. All women who met the criteria during the study period were invited to take part. Before joining the study, the purpose was explained to them in simple words, and written consent was taken.

Some women were not included in the study. These included women who had other types of urinary incontinence, women with severe medical illness, and those who were not willing to participate. Women who had already been diagnosed with serious psychiatric illness and were under treatment were also excluded to avoid confusion in results.

The sample size was decided based on previous studies. It was estimated that a large number of women with SUI may have anxiety or depression. A total of 250 women were included in the study, which was considered enough to understand the problem.

Data were collected using a simple and structured questionnaire. The questionnaire was tested before use to make sure it was easy to understand. Interviews were done face-to-face in a quiet and private place so that women could speak freely.

The questionnaire had three main parts. The first part included personal information such as age, marital status, education, and job status. The second part included medical details such as duration of SUI, severity of symptoms, number of pregnancies, and any previous treatment. The third part included questions about social support and daily life problems caused by SUI.

To measure mental health, the Hospital Anxiety and Depression Scale (HADS) was used. This tool is simple and reliable. It has 14 questions, with 7 questions for anxiety and 7 for depression. Each question has a score from 0 to 3. The total score for each part can go up to 21. A score of 8 to 10 shows mild symptoms, while a score of 11 or more shows clear anxiety or depression.

The main outcomes of the study were anxiety and depression. Other factors such as age, severity of symptoms, duration of illness, and social support were also studied to see how they affect mental health.

All data were entered into a computer and analyzed using SPSS version 25. Simple statistics were used to describe the data. Numbers and percentages were used for

categories, and average values were used for continuous data.

To understand the relationship between different factors and mental health, basic tests were used first. After that, more advanced analysis (logistic regression) was done to find the most important factors. A p-value of less than 0.05 was considered significant.

Ethical approval was taken from the hospital before starting the study. All information was kept private, and names of participants were not recorded. Data were used only for research purposes.

RESULTS

A total of 250 women were included in this study. The average age was 42.3 ± 8.5 years. Most women were married and many were not working. A large number of participants had moderate to severe symptoms of stress urinary incontinence (SUI).

Table 1: Sociodemographic Characteristics

Variable	Frequency (n)	Percentage (%)
Age <40 years	95	38%
Age ≥40 years	155	62%
Married	190	76%
Unmarried	60	24%
Unemployed	150	60%
Employed	100	40%

As shown in **Table 1**, most women were above 40 years of age. The majority were married and not working, which may affect their social and emotional life.

Table 2: Prevalence of Anxiety and Depression

Condition	Frequency (n)	Percentage (%)
Anxiety	100	40%
Depression	80	32%
Both Anxiety & Depression	55	22%

According to **Table 2**, anxiety was seen in 40% of women, while depression was present in 32%. Around 22% had both conditions. This shows that many women with SUI are also facing mental health problems.

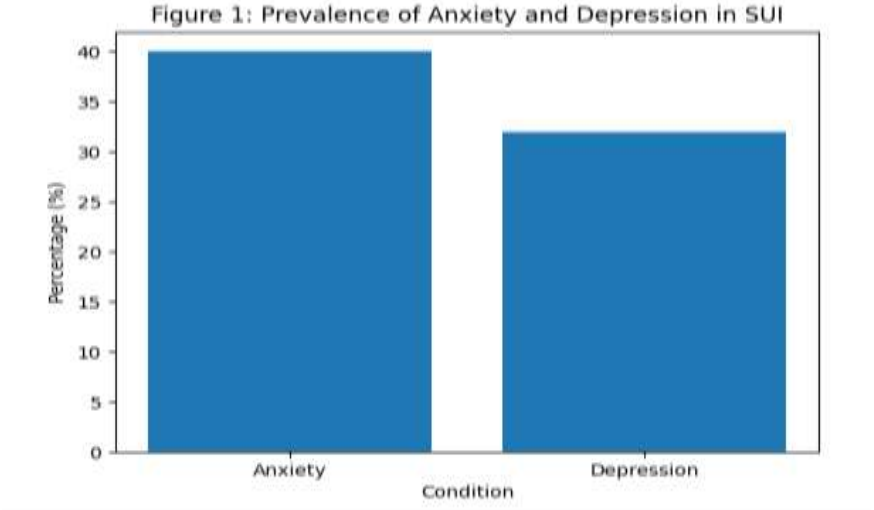

Figure 1: Prevalence of Anxiety and Depression

(Bar chart showing Anxiety: 40%, Depression: 32%)

Figure 1 clearly shows that anxiety is more common than depression, but both are quite high among women with SUI.

Table 3: Association with Clinical Factors

Factor	Anxiety (%)	Depression (%)	p-value
Mild SUI	25%	18%	
Moderate SUI	42%	30%	<0.05
Severe SUI	60%	50%	<0.01
Duration >2 years	55%	45%	<0.01

As shown in **Table 3**, women with severe SUI had much higher anxiety and depression compared to those with mild symptoms. Women who had SUI for more than 2 years also showed more psychological problems.

Table 4: Role of Social Support

Social Support	Anxiety (%)	Depression (%)	p-value
Good support	28%	20%	
Poor support	58%	46%	<0.01

Table 4 shows that women who had poor social support were much more likely to have anxiety and depression. This highlights the importance of family and social help.

Table 5: Multivariate Analysis

Variable	AOR	95% CI	p-value
Severe SUI	2.9	1.8–4.6	<0.01
Duration >2 years	2.5	1.5–4.0	<0.01
Poor social support	3.2	2.0–5.1	<0.001

Table 5 shows the most important factors after adjusting for other variables. Poor social support had the strongest effect, followed by severe SUI and longer duration of illness.

Figure 2: Key Determinants of Psychological Distress in SUI

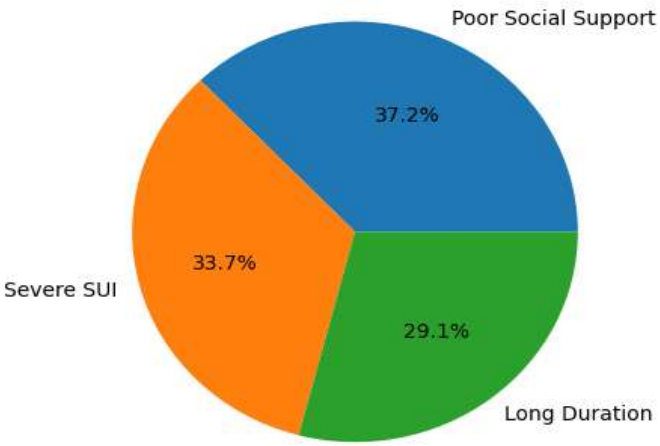

Figure 2: Key Determinants of Psychological Distress

(Pie chart showing contribution of severity, duration, and social support)

Figure 2 shows that poor social support, severe symptoms, and longer illness duration are the main causes of anxiety and depression in women with SUI.

Overall, the results show that both medical and social factors play an important role in mental health problems among women with stress urinary incontinence.

DISCUSSION

This study shows that many women with stress urinary incontinence (SUI) also have mental health problems like anxiety and depression. As seen in **Table 2**, a large number of women had anxiety (40%) and depression (32%). This means that SUI does not only affect the body but also affects the mind. These findings are similar to other studies, which also show that women with urinary problems often feel stress, worry, and sadness [10,11].

The results also show that anxiety was more common than depression. This may be because women are often worried about urine leakage in public places. They may feel afraid of embarrassment, smell, or wet clothes. This fear can make them avoid social activities, which increases their anxiety over time. This can also be seen in **Figure 1**, where anxiety levels are higher than depression.

Age and social factors also played an important role. As shown in **Table 1**, most women were older and married. Many were not working, which may reduce their social interaction. Women who stay at home may have fewer chances to share their problems, which can increase stress. Younger women may feel more embarrassed, while older women may accept the condition and delay treatment.

The severity of SUI had a strong effect on mental health. As shown in **Table 3**, women with severe symptoms had much higher anxiety and depression compared to those with mild symptoms. This means that when the problem becomes worse, it affects daily life more, leading to more stress. Women with severe SUI may avoid going out, exercising, or even meeting people, which can increase feelings of sadness and isolation.

The duration of illness was also important. Women who had SUI for a longer time (more than 2 years) showed higher levels of anxiety and depression. This shows that long-term illness can slowly affect mental health. Living with a problem for a long time without proper treatment can increase frustration and emotional burden.

Social support was one of the most important factors. As seen in **Table 4**, women with poor support from family or friends had much higher levels of anxiety and depression. Support from loved ones helps reduce stress and gives confidence. When women feel alone, their mental health becomes worse. This is also shown in **Figure 2**, where lack of social support is one of the main causes of psychological distress.

The multivariate analysis in **Table 5** shows the strongest factors linked with mental health problems. Poor social support had the highest effect, followed by severe SUI and longer duration of illness. This means that both social and medical factors are important in understanding mental health in these women.

Overall, the study shows that SUI affects both physical and mental health. Women with more severe symptoms, longer illness, and less support are more at risk of anxiety and depression. These findings suggest that doctors should not only treat the physical problem but also check mental health and provide support.

There are some limitations in this study. It was a cross-sectional study, so it only looked at one point in time and cannot prove cause and effect. Also, the data were based on self-report, so some women may not have shared all details. However, the use of a standard tool (HADS) and proper data collection methods make the results reliable.

CONCLUSION

This study shows that stress urinary incontinence (SUI) affects not only the body but also the mental health of women. A large number of women with SUI were found to have anxiety and depression. These problems were more common in women who had severe symptoms, lived with the condition for a long time, and did not have enough social support.

The findings make it clear that SUI should not be treated as only a physical problem. Doctors and healthcare workers should also pay attention to the emotional and mental well-being of these women. Simple steps like checking for anxiety and depression, giving proper counseling, and encouraging family support can make a big difference.

Improving access to safe and effective treatment for SUI, along with strong social support, can help reduce mental health problems. Women should also be educated about the condition so they feel more confident in seeking help.

Future studies should follow women over a longer period of time to better understand how mental health changes and to find the best ways to support them. Overall, a combined approach that includes both medical care and mental health support can improve the quality of life for women with stress urinary incontinence.

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