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# Prevalence of Overactive Bladder Syndrome (OAB) among Individuals and its Prevention through Improved Strategies, a Cross-Sectional Study

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## ABSTRACT

**Background**: Overactive bladder (OAB) is a chronic condition characterized by urinary urgency, frequency, nocturia, and urgency incontinence, significantly affecting patients' quality of life. Despite its high prevalence, OAB remains underdiagnosed and undertreated due to social stigma and lack of awareness.
**Objectives**: This study aimed to determine the prevalence of overactive bladder (OAB) and its impact on patients' quality of life in Mirpur, Azad Jammu and Kashmir (AJK), and Gujranwala, Punjab. The research also sought to explore demographic factors, risk associations, and the overall burden of OAB on daily living.
**Methodology**: A descriptive cross-sectional study was conducted in three healthcare facilities across Mirpur and Gujranwala. A structured questionnaire was administered to 323 participants aged 18 years and above. The questionnaire collected data on OAB symptoms, their bothersome nature, and their effects on quality of life. Statistical

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analysis was performed using SPSS, employing descriptive and inferential techniques to identify significant trends and associations.

**Results**: The prevalence of OAB symptoms was notably high, with 55.1% of participants reporting frequent daytime urination (15 or more times daily) and 43.7% experiencing nighttime urination twice or more. Females (63.8%) and individuals aged over 50 years (48.9%) reported the highest symptom burdens. OAB significantly disrupted daily life, leading to embarrassment, reduced social engagement, and impaired sleep. Conditions like diabetes, depression, and anxiety were strongly linked with OAB symptoms.

**Conclusion**: The study revealed a high prevalence of overactive bladder in the regions studied, with significant negative impacts on quality of life. Females, older adults, and individuals with comorbid conditions such as diabetes and depression were particularly vulnerable. These findings highlighted the urgent need for increased awareness, targeted interventions, and improved management strategies to alleviate the burden of OAB and enhance patient well-being.

**Keywords:** Overactive Bladder (OAB), Urinary Urgency, Urinary Frequency, Nocturia, Urgency Urinary Incontinence, Risk Factors, Diabetes Mellitus.

## INTRODUCTION

Overactive bladder (OAB) syndrome is a chronic condition that significantly affects the quality of life for both men and women. While it is more frequently observed in individuals over 40 years, it can also impact children and younger adults. A study conducted in 2011 involving 10,000 participants across Europe revealed that 36% of men and 43% of women over 40 experienced OAB symptoms. Research has consistently shown that symptom severity increases with age, with older individuals reporting more pronounced issues [1]. The urinary bladder is a hollow, muscular organ located in the pelvic region that stores urine until it is excreted from the body through a process called micturition. The filling and emptying of the bladder are controlled by the autonomic nervous system (ANS) and the somatic nervous system; both are part of the peripheral nervous system. Overactive bladder (OAB) is a condition where the bladder acts up, leading to frequent and sometimes urgent urges to urinate. This happens because the normal communication between nerves and muscles in the bladder. Acetylcholine (ACh) is a neurotransmitter that signals the bladder to contract and relax the urethral sphincter muscles [2]. In OAB, too much ACh is released, causing the bladder to contract even when it's not necessary. Another neurotransmitter, **ATP**works alongside ACh to increase bladder urgency, making you feel the need to go even when your bladder isn't full. Nitric oxide (NO), which typically helps relax the bladder, is reduced in OAB. This loss of relaxation causes the bladder to become more active, contributing to the frequent urges [3-4]. Diabetic neuropathy chronic high blood sugar can damage the nerves controlling the bladder, impairing its ability to hold or release urine properly, and causing involuntary contractions. Increased Urine Production due to elevated blood sugar levels lead to increased urine output, putting more pressure on the bladder and causing frequent urges to urinate [5]. A urinary tract infection (UTI) can lead to overactive bladder (OAB) by causing inflammation and nerve sensitization in the bladder. During a UTI,

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bacteria invade the bladder, triggering an immune response that releases inflammatory mediators like cytokines. This inflammation irritates the bladder lining, causing pain and increased sensitivity. Repeated UTIs can result in chronic inflammation, which makes the bladder's sensory nerves more reactive to normal bladder filling [6-7]. Irritable bowel syndrome (IBS) can lead to overactive bladder (OAB) due to shared mechanisms between the gastrointestinal and urinary systems. One key link is**visceral hypersensitivity**, where heightened sensitivity in the intestines extends to nearby organs like the bladder, causing increased urgency and frequency of urination. In IBS, **central sensitization** amplifies pain and urges sensations in both the gut and bladder, making them more reactive to normal stimuli. Additionally, the **gut-brainaxis**, a communication network between the brain and digestive system, plays a role. Depression and anxiety can lead to overactive bladder (OAB) through several interconnected mechanisms involving the brain, nerves, and bladder. In individuals with depression or anxiety, heightened stress and emotional dysregulation can activate the hypothalamic-pituitary-adrenal (HPA) axis, which governs the body's stress response. This activation increases stress hormones like cortisol, which can stimulate the bladder's sensory nerves, heightening the perception of urgency [8-9]. The treatment strategies includes drugs that prevent involuntary bladder contractions by blocking the bladder's muscarinic receptors like Tolterodine and Darifenacin [10]. Mirabegron is a beta-3 adrenergic agonist that relaxes the bladder muscle and increases its capacity. It can be a good alternative for patients who cannot tolerate anticholinergics, as it has a different side effect profile, primarily involving hypertension in some patients [11]. For patients who do not respond adequately to monotherapy, combining an anticholinergic agent with mirabegron may enhance efficacy while potentially reducing side effects [10, 12]. This research study was carried out to assess the prevalence of OAB and understand its impact on patient lives in these areas. By addressing this gap, the study aimed to support the development of targeted healthcare interventions and improve overall patient well-being. This study was essential for addressing gaps in awareness and early diagnosis of overactive bladder (OAB), a condition often underreported due to social stigma and limited knowledge. By determining its prevalence, the research aimed to encourage timely diagnosis and management, ultimately improving patient outcomes. The objectives of this study were to assess the prevalence of OAB, to identify demographic, lifestyle, and clinical risk factors associated with OAB and to compare the quality of life of individuals with and without OAB.

## METHODOLOGY

### Study Design

A descriptive cross-sectional study design was used.

### Study Settings

The study was conducted in the following healthcare settings including, (i) District headquarters hospital and medical college, Gujranwala, (ii) District headquarters hospital, Gujranwala, Pakistan, and (iii) Divisional headquarters teaching hospitals, Mirpur, AJK.

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**Study Duration**
The study duration was from April 2024 to February 2025.

**Study Population**
The study was conducted on patients who were previously diagnosed with overactive bladder (OAB) or had symptoms of OAB, such as urinary urgency, frequency, nocturia, and urge incontinence.

**Sampling Method**
Convenient sampling was employed to recruit participants based on their availability at the selected healthcare facilities. This method was chosen to ensure efficient data collection within the specified timeframe of the study.

**Sample Size**
The sample size was calculated using the Rao soft sample size calculator. A 5% margin of error and a 95% confidence level were applied to ensure the results had adequate statistical power and the sample size was N=323.

**Data Collection Tools**
A pre-validated questionnaire was used for data collection which was composed of three sections. The first section was about the demographic data of participants. The second section was to evaluate the overactive bladder symptom score ([13]. The third section was about the overactive bladder symptom and health related quality of life [14].

**Overactive Bladder Symptom Score (OABSS)**
It consisted of four questions assessing urinary urgency, daytime frequency, nocturia, and urge urinary incontinence (UUI) over the past week. Scores range from 0 to 15, with higher scores indicating greater severity. OAB was defined as OABSS $\geq$ 3 (Qudah et al., 2024). Severity categories: Mild: $\leq$ 5, Moderate: 6–11, and Severe: $\geq$ 12

**Statistical Analyses**
Data was analyzed using Statistical Package for Social Sciences version 20 (SPSS20). Descriptive statistics which include frequency and percentage. Inferential statistics, such as chi-square test were employed to ascertain the association between qualitative variables, with significance set at $p < 0.05$.

**Ethical Considerations**
This study was conducted with the permission of Akson College of Pharmacy Joint venture with Mirpur University of Science and Technology, Mirpur, AJK bearing reference number 566/09/ACP/24. The permission from Executive Directors of aforementioned study setting was also approved, prior to the conduction of the study.

## RESULTS

**Demographics Characteristics**
Out of 323 participants, 158 (48.9%) were aged >50 years, followed by 103 (31.9%) aged 40-50 years. Regarding gender, 206 (63.8%) were female and 117 (36.2%) were

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male. Most participants were married 289 (89.5%), while 34 (10.5%) were unmarried. In terms of diseases, 158 (48.9%) had diabetes, 80 (24.8%) had depression and anxiety, and 63 (19.5%) had a UTI. A detailed description is given in Table 4.1 below;

**Overactive bladder symptom score of patients**

Out of 323 participants, 178 (55.1%) reported urinating 15 or more times from morning until night, followed by 123 (38.1%) who urinated 8-14 times. Regarding nocturnal urination, 141 (43.7%) participants woke up twice to urinate, with 112 (34.7%) waking up three or more times. For sudden urges to urinate, 175 (54.2%) participants experienced this 2-4 times a day, followed by 66 (20.4%) experiencing it about once a day. In terms of urinary leakage, 142 (44.0%) participants leaked 2-4 times a day, and 96 (29.7%) leaked about once a day. A detailed description is given in **Table 1** below.

**Table 1: Overactive Bladder Symptom Score of Patients**

| **Variables Regarding Overactive bladder symptom score of patients** | | **Frequency (n)** | **Percentage %** |
|---|---|---|---|
| How many times do you typically urinate from waking in the morning until sleeping at night? | 7 or less | 22 | 6.8 |
| | 8-14 | 123 | 38.1 |
| | 15 or more | 178 | 55.1 |
| How many times do you typically wake up to urinate from sleeping at night until waking in the morning? | 0 | 17 | 5.3 |
| | 1 | 53 | 16.4 |
| | 2 | 141 | 43.7 |
| | 3 or more | 112 | 34.7 |
| How often do you have a sudden desire to urinate, which is difficult to defer? | Not at all | 5 | 1.5 |
| | Less than once a week | 5 | 1.5 |
| | Once a week or more | 44 | 13.6 |
| | About once a day | 66 | 20.4 |
| | 2-4 times a day | 175 | 54.2 |
| | 5 times a day or more | 28 | 8.7 |
| How often do you leak urine, because you cannot defer the sudden | Not at all | 4 | 1.2 |
| | Less than once a | 4 | 1.2 |

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| | | | |
|---|---|---|---|
| desire to urinate? | week | | |
| | Once a week or more | 52 | 16.1 |
| | About once a day | 96 | 29.7 |
| | 2-4 times a day | 142 | 44.0 |
| | 5 times a day or more | 25 | 7.7 |

**Overactive Bladder Symptom Bothered**

Out of 323 participants, 121 (37.5%) were greatly bothered by an uncomfortable urge to urinate, followed by 111 (34.4%) who were quite a bit bothered. In terms of a sudden urge to urinate with little or no warning, 110 (34.1%) participants were greatly bothered, and 102 (31.6%) were quite a bit bothered. Regarding accidental loss of small amounts of urine, 125 (38.7%) participants were quite a bit bothered, followed by 92 (28.5%) who were greatly bothered. For nighttime urination, 154 (47.7%) participants were quite a bit bothered, and 75 (23.2%) were greatly bothered. In terms of waking up at night to urinate, 148 (45.8%) were quite a bit bothered, followed by 87(26.9%) who were greatly bothered. Lastly, 124 (38.4%) participants were quite a bit bothered by urine loss associated with a strong desire to urinate, followed closely by 123(38.1%) who were greatly bothered.

**Impact on quality of life**

Out of 323 participants, 142 (44.0%) reported planning “escape routes” to toilets most of the time, followed by 121 (37.5%) who did so all of the time. In terms of feeling like something is wrong with them, 108 (33.4%) felt this most of the time, and 76 (23.5%) felt it a good bit of the time. Regarding sleep, 110 (34.1%) participants were most often disturbed by the need to urinate, while 101 (31.3%) were disturbed a good bit of the time. In terms of frustration about the time spent in the toilet, 107(33.1%) were bothered by a good bit of the time, with 59 (18.3%) feeling this most of the time. In activities away from toilets, 117 (36.2%) participants were a little bothered, followed by 72 (22.3%) who were bothered a good bit of the time. For sleep disturbance, 136 (42.1%) participants were awakened a good bit of the time, and 74 (22.9%) were disturbed most of the time. This has been given in Table 2.

**Table 2: Reliability Analysis**

| **Reliability Statistics (OABSS)** | |
|---|---|
| **Cronbach's Alpha** | **Number of Items** |
| 0.642 | 4 |
| **Reliability Statistics (OAB-q SF)** | |

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| Cronbach's Alpha | Number of Items |
|---|---|
| 0.817 | 19 |

**Crosstabulation and chi square test**

*Age versus Overactive Bladder Symptom Score*

Out of 323 participants, the highest number of people who reported urinating 15 or more times a day were from the >50 years age group, with 107 participants. This showed a significant association between age and daytime urination. The >50 years group also had the highest number of participants (74) waking up three or more times a night to urinate, which also had a significant association with age. Similarly, 94 participants from the >50 years group experienced sudden urges to urinate 2-4 times a day, showing a significant relationship between age and this issue. On the other hand, while 75 participants from the >50 years group experienced urinary leakage 2-4 times a day, this did not show a significant association with age. A detailed description is given in Table 3 below.

**Table 3: Age versus Overactive Bladder Symptom Score**

| Variables Regarding Overactive Bladder Symptom Score | | Age (years) | | | | P-value |
|---|---|---|---|---|---|---|
| | | <30 | 30-40 | 40-50 | >50 | |
| How many times do you typically urinate from waking in the morning until sleeping at night? | 7 or less | 3 | 2 | 7 | 10 | 0.001 |
| | 8-14 | 7 | 21 | 54 | 41 | |
| | 15 or more | 7 | 22 | 42 | 107 | |
| How many times do you typically wake up to urinate from sleeping at night until waking in the morning? | 0 | 3 | 2 | 4 | 8 | 0.001 |
| | 1 | 7 | 6 | 20 | 20 | |
| | 2 | 6 | 27 | 52 | 56 | |
| | 3 or more | 1 | 10 | 27 | 74 | |
| How often do you have | Not at all | 0 | 2 | 1 | 2 | 0.021 |

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| a sudden desire to urinate, which is difficult to defer? | Less than once a week | 1 | 2 | 1 | 1 | |
| | Once a week or more | 2 | 10 | 18 | 14 | |
| | About once a day | 3 | 14 | 20 | 29 | |
| | 2-4 times a day | 11 | 13 | 57 | 94 | |
| | 5 times a day or more | 0 | 4 | 6 | 18 | |
| How often do you leak urine, because you cannot defer the sudden desire to urinate? | Not at all | 1 | 0 | 1 | 2 | 0.087 |
| | Less than once week | 1 | 0 | 1 | 2 | |
| | Once a week or more | 1 | 4 | 24 | 23 | |
| | About once a day | 8 | 16 | 32 | 40 | |
| | 2-4 times a day | 6 | 20 | 41 | 75 | |
| | 5 times a day or more | 0 | 5 | 4 | 16 | |

*Gender versus Overactive Bladder Symptom Score*

Out of 323 participants, the highest number of individuals who reported urinating 15 or more times a day were females, with 118 participants. However, the relationship between gender and daytime urination was not significant. The highest number of participants waking up 2 times a night to urinate were females, with 92 participants, and this association between gender and nighttime urination was significant. The highest frequency of sudden urges to urinate (2-4 times a day) was also reported by females, with 117 participants, but the relationship was not significant. Finally, the highest frequency of urinary leakage (2-4 times a day) was reported by females, with 95 participants, and this association with gender was found to be significant. A detailed description is given in Table 4 below.

**Table 4: Gender versus Overactive Bladder Symptom Score**

| **Variables Regarding Overactive Bladder Symptom Score** | **Gender** | | **P-Value** |
|---|---|---|---|
| | **Male** | **Female** | |

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| How many times do you typically urinate from waking in the morning until sleeping at night? | 7 or less | 7 | 15 | 0.424 |
| | 8-14 | 50 | 73 | |
| | 15 or more | 60 | 118 | |
| How many times do you typically wake up to urinate from sleeping at night until waking in the morning? | 0 | 2 | 15 | 0.003 |
| | 1 | 13 | 40 | |
| | 2 | 49 | 92 | |
| | 3 or more | 53 | 59 | |
| How often do you have a sudden desire to urinate, which is difficult to defer? | Not at all | 2 | 3 | 0.381 |
| | Less than once a week | 4 | 1 | |
| | Once a week or more | 16 | 28 | |
| | About once a day | 26 | 40 | |
| | 2-4 times a day | 58 | 117 | |
| | 5 times a day or more | 11 | 17 | |
| How often do you leak urine, because you cannot defer the sudden desire to urinate? | Not at all | 1 | 3 | 0.041 |
| | Less than once a week | 2 | 2 | |
| | Once a week or more | 24 | 28 | |
| | About once a day | 28 | 68 | |

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| | | | | |
|---|---|---|---|---|
| | 2-4 times a day | 47 | 95 | |
| | 5 times a day or more | 15 | 10 | |

*Symptom Bothered Quality of Life*

Out of 323 participants, the highest value for an uncomfortable urge to urinate was observed in participants aged 50 and above, with 74 individuals reporting "a great deal." This association was significant. For a sudden urge to urinate with little or no warning, 70 individuals in the age group 50 and above reported "a great deal," and this relationship was significant. Regarding accidental loss of small amounts of urine, the highest value was observed in individuals aged 50 and above, with 59 reporting "quite a bit," although the association was not significant. In terms of nighttime urination, 78 individuals aged 50 and above reported "quite a bit," but the association was not significant. For waking up at night due to urination, the highest value was found in the 50 and above age group, where 72 individuals reported "quite a bit," but the association was not significant. When considering urine loss associated with a strong desire to urinate, 65 individuals aged 50 and above reported "a great deal," but the association was not significant.

The highest number of individuals who planned “escape routes” to toilets in public places were from the 50 and above age group, with 76 reporting "most of the time," though the association was not significant. The feeling that something was wrong with them was highest in individuals aged 50 and above, with 58 reporting "most of the time," but this relationship was not significant either. Interference with getting a good night’s rest was most prevalent in individuals aged 50 and above, with 58 reporting "a good bit of the time," and this association was significant. The frustration with the amount of time spent in the toilet was highest in the 50 and above age group, with 55 individuals reporting "a good bit of the time," and the association was significant. The highest values for avoiding activities away from toilets were found in individuals aged 30-40, with 77 reporting "a little of the time," and this relationship was significant. The reduction in physical activities was most prominent in the 50 and above group, with 40 individuals reporting "a good bit of the time," and this association was significant. Problems with partners or spouses were most common in individuals aged 50 and above, with 54 reporting "none of the time," and the association was significant.

*Any Other Disease versus Symptom Bothered Quality of Life*

Out of 323 participants, the highest values were observed in diabetes participants. For an uncomfortable urge to urinate, 78 reported "a great deal," and the association was significant. A sudden urge to urinate with little or no warning had 77 diabetes participants reporting "a great deal," with a significant association. For accidental loss of small amounts of urine, 77 participants with diabetes reported "quite a bit," and the relationship was significant. Nighttime urination was most common in diabetes participants, with 85 reporting "quite a bit," and the association was significant. Waking up at night due to urination had 73 diabetes participants reporting "quite a

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bit," and the association was significant. Urine loss with a strong desire to urinate showed 65 diabetes participants reporting "a great deal," and the relationship was significant. Planning escape routes to toilets in public places was highest among diabetes participants, with 80 reporting "most of the time," and the association was significant. For feeling something was wrong with them, 68 diabetes participants reported "most of the time," and the association was significant. Interference with rest had 104 diabetes participants reporting "most of the time," with a significant association. Frustration with time spent in the toilet was highest among diabetes participants, with 67 reporting "a good bit of the time," and the association was significant. Avoiding activities away from toilets was most common in diabetes participants, with 67 reporting "a little of the time," but this was not significant.
Reduced physical activities were reported by 39 diabetes participants with "a good bit of the time," and the association was significant. Problems with a partner or spouse were most common in diabetes participants, with 47 reporting "none of the time," and the relationship was significant. Uncomfortable travel due to needing to stop at toilets had 53 diabetes participants reporting "a good bit of the time," with a significant association. Relationships with family and friends were most affected in diabetes participants, with 54 reporting "most of the time," and the relationship was significant. Interference with sleep had 56 diabetes participants reporting "most of the time," and the association was significant. Embarrassment was highest in diabetes participants, with 73 reporting "most of the time," and the relationship was significant. Locating the closest toilet upon arrival at a new place had 64 diabetes participants reporting "most of the time," with a significant association.

**Scoring of responses**

Scoring of data was conducted to evaluate the severity of overactive bladder (OAB) symptoms, the extent of symptoms bothered experienced by participants, and their impact on health-related quality of life (HRQL). This comprehensive scoring system was applied to the study population of 323 participants, enabling a detailed assessment of these interrelated dimensions.

**Scoring Regarding OAB Classification**

Out of 323 participants, 190 respondents were classified with Moderate OAB (58.82%), 122 respondents were classified with Severe OAB (37.77%) and only 11 respondents were classified with Mild OAB (3.41%). A detailed description is given in Table 5 below.

**Table 5: Scoring RegardingOAB Classification**

| OAB Classification | Total Response | Percentage |
|---|---|---|
| Mild (≤ 5) | 11 | 3.41% |
| Moderate (6-11) | 190 | 58.82% |

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|---|---|---|
| Severe (≥ 12) | 122 | 37.77% |
| **Total** | **323** | **100.00%** |

**Scoring Regarding Symptom Bothered Classification**

The study shows that from the total responses, 305 (94.43%) respondents were shown to have increased symptom bother, while only 18 (5.57%) respondents had less symptom bother. A detailed description is given in Table 6 below.

**Table 6: Scoring Regarding Symptom Bother Classification**

| **Symptoms Bother Classification** | **Total responses** | **Percentage** |
|---|---|---|
| Increased Symptom Bother | 305 | 94.43% |
| Less Symptom Bother | 18 | 5.57% |
| **Total** | **323** | **100.00%** |

**Scoring Regarding HRQL Outcome**

The study assessed the Health-Related Quality of Life (HRQL) outcomes among participants, revealing that 270 (83.59%) respondents had a worse HRQL outcome while only 53 (16.41%) respondents had a better HRQL outcome. A detailed description is given in Table 7 below.

**Table 7: Scoring RegardingHRQL Outcome**

| **HRQL Outcome** | **Total Responses** | **Percentage** |
|---|---|---|
| Worse | 270 | 83.59 % |
| Better | 53 | 16.41 % |
| **Total** | **323** | **100.00 %** |

## DISCUSSION

The results of this study provided valuable insights into the severity of Overactive Bladder (OAB), the extent of symptom bother, and their impact on health-related quality of life (HRQL) among the participants. A total of 323 participants were

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assessed to classify the severity of OAB, which revealed that 58.82% experienced moderate symptoms, 37.77% experienced severe symptoms, and only 3.41% reported mild symptoms. These findings highlighted the considerable burden of OAB, with many participants falling into moderate-to-severe categories. This distribution is consistent with prior studies which identified similar proportions of moderate-to-severe OAB prevalence in diverse populations, emphasizing the widespread nature of the condition and its associated challenges [15].

The classification of symptom bother demonstrated that 94.43% of participants reported increased bother, further emphasizing the disruptive nature of OAB on daily life. These symptoms not only interfere with physical activities but also have significant psychological and social implications, contributing to increased stress, embarrassment, and social isolation. A similar pattern was observed in research conducted which linked high symptom bothers in OAB patients to avoidance behaviors, diminished confidence, and social withdrawal. The strong association between symptom bother and activity limitations in this study underscores the pervasive impact of OAB on patients' overall well-being [16].

Additionally, HRQL analysis revealed that 83.59% of participants experienced a worse quality of life due to OAB, indicating the profound impact of this condition on overall well-being [17]. This high prevalence of negative HRQL outcomes aligned with findings from studies which highlighted that OAB significantly impairs HRQL by affecting physical, emotional, and social functioning. Participants reporting worsened HRQL outcomes in this study experienced compounding effects of physical limitations sleep disturbances, and the stigma associated with OAB. Sleep disturbances, in particular, have been shown to exacerbate fatigue, mood disorders, and reduced productivity, as noted in research by [18-19].

This study revealed the high prevalence of Overactive Bladder (OAB) and its significant impact on patients' daily lives. Among the 323 participants, more than half (55.1%) reported frequent daytime urination, with 78.4% experiencing nocturia, and 34.7% waking up multiple times during the night. These findings highlighted how disruptive OAB symptoms can be to daily activities. A notable relationship was found between age and daytime urination frequency, which aligns with previous research by [16, 20].

Study finding reported that OAB was also negatively affecting quality of life, with 44% of participants frequently planning toilet stops in public, 40.6% feeling embarrassed by their symptoms, and 31.9% noting a negative impact on their social and family relationships. Sleep disturbances due to nocturia were reported by 42.1%, leading to daytime fatigue and cognitive decline. A significant correlation between age and sleep disruption was also observed, consistent with [21].

Gender differences were evident, as women reported higher frequencies of urgency, nocturia, and urinary leakage than men. Marital status was another factor, with married individuals experiencing more severe symptoms than unmarried ones, a trend seen in the study by [22-24].

The presence of comorbidities, such as diabetes and urinary tract infections (UTIs), exacerbated OAB symptoms, in participants with diabetes reporting more frequent daytime and nighttime urination. Depression and anxiety, reported by 24.8% of participants, were also strongly linked to increased urgency and nocturia, supporting

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research [25-28].

This study had certain limitations that should be acknowledged. The sample population was limited to 323 participants, and the study was conducted in Mirpur, Azad Jammu and Kashmir (AJK), where the availability of patients for participation was a challenge. The relatively small sample size may limit the generalizability of the findings to broader populations. A larger, more diverse sample size would be beneficial for future research to confirm these results and provide a more comprehensive understanding of OAB's impact across different regions and demographics.

## CONCLUSIONS

The results and findings of the study concluded the significant impact of Overactive Bladder (OAB) on individuals, particularly among older adults and those with comorbid conditions. The high prevalence of urinary urgency, frequency, and nocturia suggested that OAB remains a significant yet underreported health issue. Additionally, its association with chronic conditions like diabetes and depression highlighted the need for a multidisciplinary approach in managing OAB. The impact on quality of life, including sleep disturbances, emotional distress, and activity limitations, reinforced the need for increased awareness and timely interventions. Given the high prevalence and associated risk factors, early diagnosis, lifestyle modifications, and medical management are crucial in mitigating the adverse effects of OAB, demonstrating that most participants experience moderate to severe symptoms, which notably affect their daily lives. The findings revealed that 58.82% of participants reported moderate severity of OAB, while 37.77% experienced severe symptoms. Additionally, a substantial 94.43% of individuals indicated that OAB symptoms caused considerable distress, and 83.59% experienced a marked decline in their health-related quality of life due to the condition.

## Conflict of Interest

There is no conflict of interest between the authors.

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