

# To Determine the Awareness and Attitude towards Urinary Incontinence in Male Diabetics

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## ABSTRACT

**Background:** Diabetes is a condition where the body's capacity to either create or respond to the hormone insulin is compromised. Urinary incontinence, defined by the International Continence Society as any involuntary urine leaking, is one of the complications resulting from diabetes. While it may not directly increase the risk of death, it does have a detrimental effect on physical health and quality of life (QoL) related to health. Thus, this study helps assessing the level of awareness and attitude towards urinary incontinence in diabetic population.

**Method:** An observational study involving 376 male residents of Pune region with type 2 diabetes mellitus was carried out. The URINAS-Questionnaire (Urinary Incontinence Awareness & Attitude Scale) was employed to assess awareness and attitudes concerning Urinary Incontinence which includes 26 questions divided into 5 subdimensions.

**Results:** Result were obtained using MS Excel & SPSS version 21 & it was found that 61% of the population were neither aware nor unaware that Urinary Incontinence is a major health concern; 90% exhibited a positive attitude towards health in general; however, 63% were unaware of the various coping strategies; 50% found it difficult to carry out their daily activities while dealing with this health issue; and 73% of them were afraid to socialize.

**Conclusion:** The current study emphasized the significance of evaluating people's awareness and attitudes regarding urinary incontinence. According to the study's findings, increased knowledge of UI in healthcare settings is necessary to reduce its complications.

**Keywords:** Diabetes Mellitus, T2DM, Urinary Incontinence, awareness, attitude, quality of life.

## INTRODUCTION

Diabetes mellitus (DM) is a group of metabolic diseases that cause persistent hyperglycemia due to a variety of pathogenic processes. Its pathophysiology includes anomalies in the metabolism of fat and protein, increased glucose synthesis, decreased response to endogenous or exogenous insulin, and inadequate insulin secretion. The incidence of this global health issue is on the rise; 537 million

people worldwide may be affected by the alarmingly high global burden of diabetes, according to the recent data available from the World Health Organization (WHO).<sup>[2]</sup> China (116.4% of the world's population), India (77.7%), and the United States (31%) have the highest rates of diabetes, according to data from the International Diabetes Federation (IDF) for 2019.<sup>[1,2]</sup>

A shift in lifestyle, an increase in obesity rates, and early population aging are all being influenced by these rising prevalence numbers.

Diabetic neuropathy, which is caused by microvascular damage, is a likely cause of incontinence in diabetic individuals. The nerve supply to the bladder is disrupted by diabetic neuropathy, which affects around one-third of patients with diabetes. This can lessen bladder sensation and cause an increase in involuntary bladder contractions. The detrusor muscle might fail to function properly in cases of severe neuropathy, which can lead to an increase in bladder volume and overdistention. It is noteworthy, then, that disorders resulting in neurodegeneration, muscle atrophy or weakening, and frailty are linked to the pathophysiology of urinary incontinence.<sup>[3]</sup>

According to the National Health and Nutrition Examination Survey conducted in 2001–2002, the frequency of weekly incontinence was reported to be 16.8% in non-diabetic people and 35.4% in diabetic patients.<sup>[4]</sup> As diabetes mellitus is a chronic condition, people with it run the risk of developing life-threatening chronic consequences such as retinopathy, nephropathy, neuropathy, foot disease, and heart disease if their diabetes is not controlled<sup>[5,6]</sup>. Urinary incontinence (UI), defined by the International Continence Society as any involuntary leakage of urine, is one of the complications resulting from diabetes. Peripheral neuropathies can occur in long-term diabetes patients, as was previously described. This may be one of the factors causing the incontinence in the urine.<sup>[6,7]</sup>

## **MATERIALS & METHODS**

The study used convenient mode of sampling. It was carried out in the

individuals those having type 2 diabetes mellitus in Pune region. This study included subjects with a history of more than 10 years of diabetes mellitus and within the age group of 50-60 years. Subjects who had undergone any recent pelvic surgeries or having other neurological conditions were excluded from this study. Prior to the study, the participants were informed about the confidentiality of information and their anonymity. Participation in the study was entirely voluntary.

Consent was taken from each participant and demographic data were collected. The subjects were asked to fill the URINAS Questionnaire. The questionnaire used 5-pt Likert scoring system. A detailed data analysis of each question was done using Microsoft Excel software after which an overall analysis was done to gain the final results and draw to a conclusion.

## **RESULT**

The results have highlighted the awareness and attitude towards urinary incontinence, it concludes that only 34% of the population are aware of the fact and accept urinary incontinence as a health problem whereas most of the population that is 63% are unaware of the different strategies used to cope with UI. On analysing it showed that more than 90% individuals are motivated towards their health positively. 51% subjects found this health condition as a restriction to their daily activities whereas 73% of the population have social fear regarding UI. This study showed that there is relatively low awareness towards coping strategies and less acceptance of UI as a health problem. It has observed that there is social anxiety in the diabetic population regarding this health problem which is restricting them in their routine activities.

Factors that prevent acceptance as a health problem	Percentage Count of Participants
Very Unaware	0%
Unaware	5%
Neither aware nor unaware	61%
Aware	34%
Very Aware	0%

Table 1: Distribution of participant responses that prevents accepting UI in diabetic population

Health Motivation	Percentage Count of Participants
Very Unaware	0 %
Unaware	0 %
Neither aware nor unaware	5%
Aware	58%
Very Aware	37%

Table 2: Distribution of participant responses towards health motivation

Coping with Urinary Incontinence	Percentage Count of Participants
Very Unaware	1%
Unaware	31%
Neither aware nor unaware	63%
Aware	5%
Very Aware	0%

Table 3: Distribution of participant responses to various coping strategies towards urinary incontinence

Restrictions	Percentage Count of Participants
Very Unaware	1%
Unaware	29%
Neither aware nor unaware	51%
Aware	19%
Very Aware	0 %

Table 4: Distribution of participant responses of factors restricting their activities due to urinary incontinence

Fear of Urination	Percentage Count of Participants
Very Unaware	1%
Unaware	8%
Neither aware nor unaware	17%
Aware	73%
Very Aware	1%

Table 5: Distribution of participant responses of factors contributing to fear of urination

## DISCUSSION

This study was conducted to assess the level of awareness and attitude towards Urinary Incontinence among subjects with type 2 Diabetes Mellitus in Pune Region. 376 participants were recruited who satisfied the inclusion and exclusion criteria for this study. All study participants were then asked for their informed consent and were assessed with the valid and reliable URINAS Questionnaire,<sup>[7]</sup> which consists of 26 items divided into 5 domains. Every question was forced choice, and a 5-point Likert scale was used to score the answers. According to the analysis obtained from the Table 1, it revealed that 34% population knew that problems with urination should be considered a health concern since there is growing awareness in healthcare settings regarding education in adults who are pre

diabetic on complications related to diabetes mellitus. These population group take diabetes as a serious health concern and try to implement a change in their quality of life.<sup>[8]</sup>

Statistically, 61% of the population, identify as neither aware nor unaware, which indicates that they either don't know anything about the problems related to urination or complications of diabetes or are unsure about them. In Mufunda et al. study it was observed that women had a higher risk awareness and a more active health-seeking behavior than men. Women perceived diabetes as a serious condition and, therefore, were more concerned of complications than men.<sup>[9]</sup> Of those who do not know about UI, 5% do not consider it to be a health concern, as they consider it as a normal ageing processes thus tend to ignore

it [9, 10] As a result of the above, it has been noted that men are more likely to underestimate the seriousness of their diabetes, putting their lives at risk.

The study participants responded that they find it difficult to approach female therapists about this health issue. Working with a therapist of one's chosen gender increases satisfaction with therapy, as evidenced by a study by Zac E. Seidler et al. Men may prefer male therapists because they reinforce their sense of relatability and understanding.<sup>[11]</sup>

According to results from Table 2, over 90% of people are extremely motivated and conscious of their health, and they perceive it optimistically. People with diabetes of this region prioritize their health and are prepared to seek medical attention from physicians upon noticing any significant complications. Research indicates that there were more men than women in the study who sought medical attention at an earlier age. This may be because men's prostate issues required them to seek medical attention, or it may be because male Urinary Incontinence (UI) is less common and has a greater negative impact on men's quality of life. Thus, it gives diabetic men a motive to maintain their health.<sup>[12]</sup>

Only 5% of the 376 study participants are able to manage this health concern, and 31% are unaware of possibilities available to help them manage UI says Table 3, due to unacceptance of implementing the coping strategies in their daily worklife which changes their perception related to UI.<sup>[12]</sup> In a study by Li et al, 53.8% of females and 44.3% of males did not apply to a doctor due to UI.<sup>[13]</sup> The behavior of not help-seeking was significantly more in men when compared to women. Studies show that the idea that incontinence is a typical problem associated with aging and feelings of embarrassment are what prevent men from seeking medical attention.<sup>[12-14]</sup> The results of the study indicate that there is an apparent ignorance about coping strategies for incontinence. Therefore, it is important to take care of things like patient education

on various coping mechanisms and techniques for preventing UI in this population group.

Consequently from Table 4, it has been demonstrated that 50% of the population in the samples obtained is neither aware nor uninformed, indicating that they may be hesitant to participate in public activities because of embarrassment,<sup>[13,14]</sup> or are uncertain of the condition.<sup>[15]</sup> Urinary incontinence is a substantial job restriction and an independent risk factor for depression and anxiety, according to Cheng MC et al. Even with these detrimental consequences, quite a few of men continue to refuse aid.<sup>[16]</sup> People therefore think that this is a social problem that is keeping them from going about their everyday activities affecting the quality of life.<sup>[8,16]</sup>

Table 5 depicts that more than half of the samples collected, or 73% of the population, stated they were afraid about urine-related issues. According to Toye & Barker, 2020; urinary incontinence (UI) has a significant impact on an individual's quality of life, despite being perceived as a normal part and parcel of life. There is a taboo regarding incontinence.<sup>[17]</sup> UI discussion should be handled with caution as it can have both positive and negative effects. Notwithstanding the obvious advantages of talking about UI, there is always a risk of exposure, which may be very stressful. People that have UI are seen to feel guilty, embarrassed, and stigmatized.<sup>[18]</sup> The study participants have a tendency to be alert for restrooms in public areas and the surrounding area. They also have to rearrange their daily activities in response to the need to urinate because they perceive it as embarrassing and unhygienic, which lowers their quality of life and increases their social fear factor.<sup>[8, 16, 18]</sup>

This suggests that the lack of public discussion of this health issue and inadequate education about leads to depression-like situation hampering their social life and routine activities.<sup>[8,16-19]</sup> The study's findings suggest that there should be more awareness raised about urinary

incontinence. To address this health issue and eliminate the social stigma and embarrassment that negatively impacts people's quality of life, healthcare settings should attempt to employ a wide range of measures.

## CONCLUSION

Our findings thus bring us to the conclusion that diabetes mellitus (DM) is an undeniable independent risk factor for UI, and it is essential to evaluate people's awareness of it while also simultaneously evaluating their attitudes about this particular health issue. This research showed that raising people's knowledge of UI and educating them about it would be beneficial in encouraging help-seeking behavior. The local governing authorities should create a strong plan for these actions and private and public health care specialists should collaborate to finish this effort in order to raise enough awareness of this lethal impact of this metabolic condition.

## Strength And Weaknesses of The Study

Clinical practitioners can easily assess awareness and attitude of UI in T2DM subjects using simple, easy to administer, less time-consuming questionnaire like URINAS.

This study did not take into account the addiction component because addiction to substances similar to alcohol also affects the neurological regions that cause problems related to the urine; taking this component into consideration would have provided a more precise outlook on the results and helped improve quality of life.

Because this scale lacks translations into other languages, it can be challenging to use in clinical settings across diverse locations.

## Clinical Implications

As a result, this study recommends that, in order to raise awareness and prevent this health issue, all diabetic patients should get information about urinary incontinence for long-term treatment. Patients attitude towards UI should be implemented a change,

which may be achieved by encouraging them, teaching them coping mechanisms, and assisting them in socializing even more. Therefore, coping mechanisms and eradicating social anxiety in the diabetic population should receive greater attention in professional healthcare settings.

## Declaration by Authors

**Ethical Approval:** Approved

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**Conflict of Interest:** The authors declare no conflict of interest.

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