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Original Research Article

Urinary incontinence: prevalence and general awareness across genders

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ABSTRACT

Background: Urinary incontinence (UI) is a common condition affecting individuals across the genders and can significantly impact their quality of life (QoL). Although it is highly prevalent, awareness regarding UI still remains limited. Therefore, this study aimed to evaluate the prevalence of UI and assess its general level of awareness among both male and female participants.
Methods: This cross-sectional study was conducted using a Google form-based questionnaire, distributed via email and social media. The questionnaire included sections on demographic information, medical history and evaluation of the presence and severity of UI was done by using International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF). It also contained questions related to general awareness about UI. A total of 171 participants responded to the survey.
Results: Among the reported participants, 57.3% were females and 42.6% were males. The overall prevalence of UI found to be 18.7%, with a higher occurrence in females (15.2%) as compared to males (3.5%). Although some participants demonstrated basic awareness, the overall general level of awareness regarding UI was moderate to low. A considerable number of respondents were unaware of available treatment options and commonly perceived UI as a normal consequence of aging rather than a treatable medical condition.
Conclusions: The study found that UI is prevalent among the general population, particularly among females, along with a significant gap in general awareness regarding UI. These findings highlight that there is a need for targeted educational interventions and promotion of public awareness programs so that timely healthcare-seeking behaviours can be facilitated.

Keywords: Awareness, Gender differences, Prevalence, Public health, Quality of life, Urinary incontinence

INTRODUCTION

UI which is involuntary leakage of urine, is a common condition which can affect all the age groups irrespective of gender.[1,2] It can significantly affect physical, occupational and emotional well-being of an individual.[3] Based on symptoms, UI can be categorized into three types stress, urge and mixed urinary incontinence.[4] International Continence Society (ICS) defines urge urinary incontinence (UUI) as complaint of urine leakage associated with a sudden, intense, and difficult to resist urge, while stress urinary incontinence (SUI) is the leakage of urine associated with coughing, sneezing, or physical exertion.[4] When combination of both symptoms are present then it is characterized as mixed urinary incontinence (MUI).[5]

Population-based studies report that the global prevalence of UI ranges from 25-45% in women and 11-34% in men worldwide.[6] Prevalence trends indicate that UI affects approximately 20-30% of young adults, 30-40% of middle-aged individuals, and nearly 40-50% of the elderly population.[7] In India, around 10-20% of individuals experience some form of UI, with higher prevalence

observed among women, particularly postmenopausal women.[8] Since UI is a dynamic condition, significant remission rates have been observed, with individuals frequently transitioning between continence and incontinence over time.[9]

The most commonly reported risk factors for UI among women include advancing age, childbirth, menopause, hysterectomy, and obesity.[10] In men, the major risk factors include age, stroke, diabetes mellitus, poor general health, radiation exposure, and prostate cancer surgery.[11] QoL can also be affected due to UI. Various social complications like lowered self-esteem and social isolation, leads to restricted social activity participation which eventually leads to loneliness and ultimately depression.[6] UI can further lead to various complications like Urinary tract infections (UTI), skin infections, decreased physical activity and may increase the risk of falls as well.[12] UI continues to be considered a taboo condition and is often associated with significant social stigma.[13] Studies have reported that awareness regarding UI among males is relatively low, nearly 63% of individuals are unaware of the various management approaches available for coping with UI.[14] The data reveals that nearly half of the affected women never consulted a doctor regarding their symptoms. Additionally, only a small proportion sought medical care, reflecting inadequate healthcare access and poor awareness regarding available treatment options.[15]

To the best of our knowledge, there is limited literature on prevalence of UI especially among men and there is lack of general awareness regarding the same across the genders. Additionally, most research has primarily focused on females, with comparatively limited attention given to males and overall public awareness. Therefore, there is a need to assess not only the prevalence of UI across genders but also the level of general awareness and common misconceptions associated with it. Thus, aim of our study was to assess the prevalence of UI and evaluate the level of general awareness about the condition among both genders. Understanding these aspects will help in developing targeted rehabilitation programs which will help to mitigate the problem.

METHODS

A cross-sectional study was conducted among general population including both genders across India from January 2026 to March 2026 by using an online survey. The survey was conducted in accordance with the checklist for reporting results of internet e-surveys guidelines.[16] This study involved a voluntary participation and the online survey was administered through Google forms. The questionnaire included an informed consent statement at the beginning and the participants were required to provide consent before proceeding. Participants were informed that their responses would remain confidential and will be used solely for the research purposes. The survey link was circulated via email and various social media platforms to ensure wide participation.

Inclusion criteria and exclusion criteria

The study included both genders, who were 18 years and above. Individuals able to understand and respond to the questionnaire. Participants who voluntarily provided informed consent to participation were included in the study. Individuals who declined to give consent or submitted incomplete questionnaires were excluded from the final analysis.

Procedure

The questionnaire, presented in English, included a brief introduction explaining the study objectives along with clear instructions for completion. Pre-testing of the questionnaire was conducted on five respondents to assess the wording, clarity, flow, and overall structure of the questionnaire. Based on the feedback received, items that were difficult to understand were either modified or excluded.

The questionnaire consisted of four sections with a total of 23 questions and required approximately 3-4 minutes to complete. It included sections on demographic details, medical history, and assessment of the frequency, severity, type, and impact on UI was done using the ICIQ-UI-SF.[17] It has demonstrated good reliability, with moderate to very good test-retest stability and a Cronbach's alpha value of 0.95.[18] It is freely available for non-commercial purposes such as academic research and clinical practice.[17] The ICIQ-UI-SF scores were categorized as follows: 1-5 = slight, 6-12 = moderate, 13-18 = severe, and 19-21 = very severe.[19] Additionally, the questionnaire included a section assessing general awareness regarding UI, consisting of 10 questions.

RESULTS

A total of 171 participants responded to the questionnaire, of which 98 (57.3%) were females and 73 (42.6%) were males. The socio-demographic characteristics of the study participants are presented in Table 1. Most participants were residents of Haryana State (Figure 1). The medical and clinical characteristics of the study participants were also evaluated and are presented in Table 2.

The results showed that UUI was the most commonly reported type among the participants, affecting 16 individuals in total, including 6 males and 10 females. SUI was reported only among female participants (n=15). MUI was the least common type observed UI (Figure 2).

Table 1: Frequency and percentage distribution of socio-demographic variables of study participants.

Variables	Category	Male frequency (%)	Female frequency (%)	Total frequency (%)
Gender distribution	Male	73 (48)	NA	73 (42.6)
	Female	NA	98 (57)	98 (57.3)
Age group (in years)	Less than 40	16 (9.35)	30 (17.54)	46 (26.9)
	40-49	4 (2.33)	26 (15.2)	30 (17.54)
	50-59	12 (7.01)	22 (12.86)	34 (19.8)
	60-69	31 (1.81)	12 (7.0)	43 (25.1)
	>70	10 (5.84)	8 (4.67)	18 (10.5)
Profession	Working professionals	26 (15.2)	44 (25.7)	70 (40.9)
	Homemaker	NA	37 (21.6)	37 (21.6)
	Retired professionals	37 (21.6)	5 (2.92)	42 (24.56)
	Students	7 (4.09)	7 (4.09)	14 (8.18)
	Others (business associates)	3 (1.75)	5 (2.92)	8 (4.67)

*NA- not applicable.

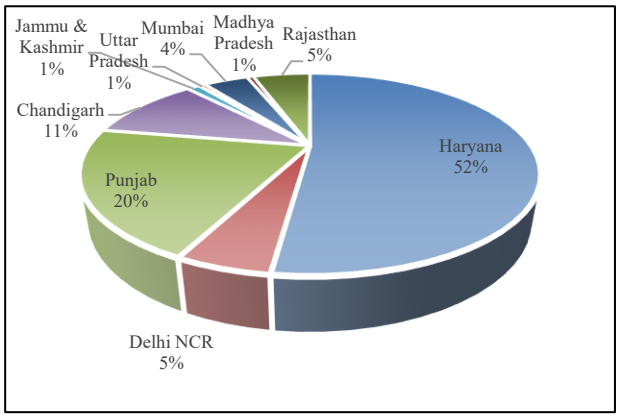

Figure 1: Geographical distribution of the study participants.

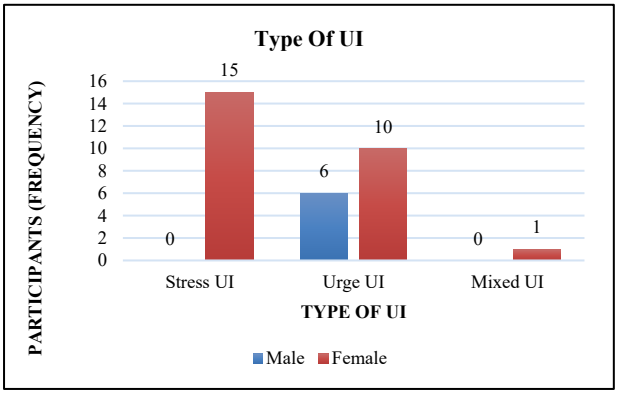

Figure 2: Type of urinary incontinence present among the study participants.

Out of the total participants, 139 individuals had no UI symptoms. Mild UI was observed in 14 participants, while moderate UI was reported by 17 participants. Only 1 participant experienced severe UI, and no cases of very severe UI were reported (Figure 3).

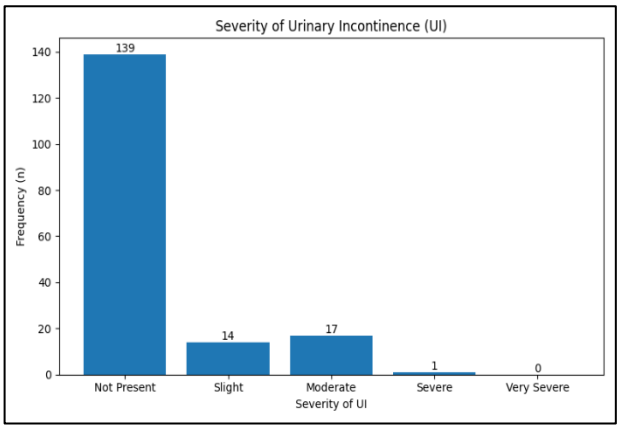

Figure 3: Severity of urinary incontinence among study participants.

The analysis showed that female participants generally had greater awareness regarding UI and its symptoms compared to males. Most awareness-related questions did not show statistically significant gender differences ($p>0.05$). A borderline significant association was observed for awareness that aging may increase urine leakage ($\chi^2=3.704$, $p=0.05$). A highly significant gender difference was found in awareness of pelvic floor muscle (Kegel) exercises, where females demonstrated significantly greater awareness than males ($\chi^2=10.68$, $p=0.001$) (Table 3).

Statistically significant association between gender and UI was found ($\chi^2=9.222$, $p=0.002$), with a higher prevalence observed in females as compared to males (Table 4).

The Mann-Whitney U test showed that females had higher mean UI scores (19.46) compared to males (13.41), indicating greater severity or prevalence of UI symptoms among female participants (Figure 4).

Table 2: Medical and clinical characteristics of the study participants.

Variables	Category	Gender	Total frequency (%)
Pre-existing medical condition	Diabetes	Male	8 (4.67)
		Female	8 (4.67)
	High blood pressure /low blood pressure	Male	23 (13.4)
		Female	20 (11.69)
	Neurological problem	Male	0
		Female	2 (1.16)
	Kidney stones	Male	3 (1.75)
		Female	4 (2.3)
	Thyroid Problems	Male	5 (2.9)
		Female	9 (5.26)
	Respiratory Problems	Male	2 (1.16)
		Female	1 (0.58)
	Others	Male	6 (3.5)
		Female	6 (3.5)
	None	Male	26 (15.2)
		Female	48 (28)
Prostate related condition	Male	Yes	17 (9.94)
		No	56 (32.7)
	Female	NA	NA
Use of medications like diuretics	Male	Yes	9 (5.26)
		No	64 (37.4)
	Female	Yes	5 (2.92)
		No	93 (54.3)
Undergone any prostate, pelvic or abdominal surgery	Male	Yes	5 (2.92)
		No	68 (39.7)
	Female	Yes	19 (11.1)
		No	79 (46.1)

Table 3: Association between gender and awareness about UI: chi-square analysis.

Question	Options	Male (%)	Female (%)	Chi-square	P value
Aware about urine leakage	Yes	49 (28)	76 (44.4)	2.313	0.128
	No	24 (14.03)	22 (12.8)		
Do you know that leaking urine during coughing, sneezing or exercise may indicate urine leakage	Yes	42 (24.5)	69 (40.3)	3.044	0.081
	No	31 (18.1)	29 (16.9)		
Are you aware that frequent urination and sudden urge to urinate can be symptoms of urine leakage	Yes	44 (25.7)	61(35.6)	0.069	0.793
	No	29 (16.9)	37 (21.6)		
Do you know that waking up frequently at night to urinate may be related to bladder problems	Yes	47 (27.4)	66 (38.5)	0.164	0.686
	No	26 (15.2)	32 (18.7)		
Are you aware that aging may increase urine leakage	Yes	54 (31.5)	84 (49.1)	3.704	0.05
	No	19 (11.1)	14 (81.8)		
Do you know that neurological diseases may lead to bladder problem	Yes	36 (21)	48 (28)	0.002	0.965
	No	37 (21.6)	50 (29.2)		
Do you know that urine leakage is treatable	Yes	53 (30.99)	73 (42.6)	0.077	0.782
	No	20 (11.6)	25 (14.6)		
Do you know that medications or surgery may be used to treat severe cases of UI	Yes	49 (28.65)	65 (38)	0.012	0.913
	No	24 (14)	33 (19.29)		
Do you believe people often feel embarrassed to seek treatment for urine leakage	Yes	56 (32.74)	76 (44.4)	0.017	0.897
	No	17 (9.9)	22 (12.8)		
Are you aware of the term pelvic floor muscle exercise or Kegel exercises	Yes	27 (15.7)	61 (35.6)	10.68	0.001
	No	46 (26.9)	37 (21.6)		

χ^2=Pearson Chi-Square test; *p<0.05 indicates statistical significance.

Table 4: Association between gender and urinary incontinence: chi-square analysis.

Gender	UI Present (%)	UI Absent (%)	Total (%)	χ^2 value	P value
Male	6 (3.5)	67 (91.8)	73 (42.7)		
Female	26 (15.2)	72 (73.5)	98 (57.3)	9.222	0.002*
Total	32 (18.7)	139 (81.3)	171 (100)		

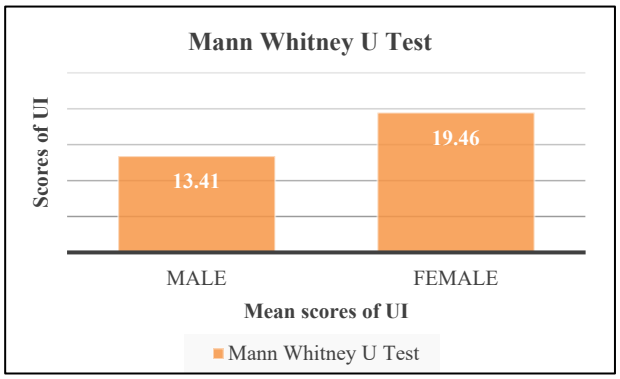

Figure 4: Comparison of urinary incontinence scores between males and females (Mann-Whitney U test).

DISCUSSION

The present study reported an overall prevalence of UI of 18.7% among the general population across both genders. Although this prevalence is slightly lower than the globally reported range of 25-45%, it still highlights that UI is a relatively common condition affecting a substantial proportion of individuals.[10] The comparatively lower prevalence observed in this study may be attributed to underreporting, social stigma, or lack of awareness, which often leads individuals to conceal symptoms. Gender-wise analysis demonstrated a markedly higher prevalence among females compared to males, with a ratio of approximately 5:1. This finding is consistent with existing literature, which consistently reports a higher burden of UI in women.[12] Previous studies have reported SUI as the most prevalent subtype, particularly among women.[20] A hospital-based survey conducted in North India reported that 21.8% of women experienced UI, with SUI being the most common type, followed by MUI and UUI.[21] Owing to anatomical and physiological differences between males and females, SUI is commonly associated with pelvic floor muscle weakness, urethral hypermobility, and intrinsic sphincter deficiency which contribute significantly to the increased susceptibility of females to UI.[22] In contrast, male SUI primarily occurs due to external urethral sphincter weakness following radical prostatectomy, transurethral resection of the prostate, or radiation therapy.[23] Higher occurrence of UUI among males is reported in the present study, which aligns with earlier research and often associated with conditions such as bladder overactivity or prostate-related issues.[24] Another study from India found that 15.4% of males with type 2 diabetes mellitus suffered from UI and UUI is the most prevalent type, followed by MUI and SUI.[9,25] UUI is commonly associated with detrusor muscle overactivity, resulting in involuntary bladder emptying in both genders.[26] In females, UUI may additionally be related to reduced estrogen levels and increased bladder hypersensitivity, whereas in males it is often associated with bladder outlet obstruction secondary to benign prostatic enlargement and neurogenic dysfunction affecting urine storage.[27] This supports the notion that while overall prevalence is lower in men, the type of UI differs in distribution compared to women. The present study demonstrated a statistically significant association between gender and urinary incontinence (UI) (χ^2=9.222, p=0.002), indicating that the occurrence of UI is not independent of gender. Specifically, a significantly higher prevalence was observed among females compared to males. This finding is consistent with a large body of epidemiological literature, which identifies female gender as a major risk factor for UI.[12] Among the affected individuals in the present study, most cases were categorized as slight to moderate in severity, suggesting that UI often remaining mild or moderate in nature is underreported, as individuals may not perceive the condition as serious enough to seek medical attention. Despite its lower severity in most participants, UI can still adversely affect daily activities, psychosocial well-being, and quality of life. Significant lack of general awareness regarding UI among the general population, irrespective of gender was found in the current study. This finding suggests that limited knowledge about UI is widespread and not confined to either males or females. This observation is in line with previous studies, which indicate that many individuals perceive UI as a normal part of aging or a non-medical issue, leading to reluctance in discussing symptoms or seeking professional help. Women frequently perceive UI as a natural consequence of childbirth and age-related physiological changes, whereas men often associate incontinence with loss of masculinity and feel uncomfortable discussing it with others.[13]

The study relied on a self-administered online questionnaire distributed via google forms, which may have introduced self-selection and response bias. Self-reported data are subject to recall bias which may have influenced the accuracy of responses. The sampling approach using email and social media platforms limits control over the sampling frame and may affect the representativeness of sample.

CONCLUSION

The present study demonstrated that UI is an important yet poorly acknowledged health issue affecting a considerable proportion of the population, especially women.

Awareness regarding its causes, symptoms, and available treatment options remains limited. Therefore, there is a strong need to improve community-level awareness and promote open discussion about UI, thereby reducing its negative impact on daily life and overall quality of life.

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REFERENCES

1. Buckley BS, Lapitan MC. Prevalence of urinary incontinence in men, women, and children- current evidence: findings of the Fourth International Consultation on Incontinence. Urology. 2010;76(2):265-70.
2. Abu Raddaha AH, Nasr EH. Kegel exercise training program among women with urinary incontinence. In Healthcare 2022;10(12):2359.
3. Frigerio M, Barba M, Cola A, Braga A, Celardo A, Munno GM, et al. Quality of life, psychological wellbeing, and sexuality in women with urinary incontinence- where are we now: a narrative review. Medicina. 2022;58(4):525.
4. Haylen BT, De Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. Neurourol Urodynam. 2010;29(1):4-20.
5. Aoki Y, Brown HW, Brubaker L, Cornu JN, Daly JO, Cartwright R. Urinary incontinence in women. Nat Rev Dis Prim. 2017;3(1):1-20.
6. Sönmez TG, Uğraş E, Şahin EG, Fidanci I, Aksoy H, Başer DA. The prevalence of incontinence and its impact on quality of life. Medicine. 2024;103(52):e41108.
7. Nitti VW. The prevalence of urinary incontinence. Rev Urol. 2001;3(Suppl 1):S2.
8. Mostafaei H, Sadeghi-Bazargani H, Hajebrahimi S, Salehi-Pourmehr H, Ghojazadeh M, Onur R, et al. Prevalence of female urinary incontinence in the developing world: a systematic review and meta-analysis- a report from the Developing World Committee of the International Continence Society and Iranian Research Center for Evidence Based Medicine. Neurourol Urodynam. 2020;39(4):1063-86.
9. Minassian VA, Drutz HP, Al-Badr A. Urinary incontinence as a worldwide problem. Int J Gynecol Obstet. 2003;82(3):327-38.
10. Altman D, Lapitan MC, Nelson R, Sillen U, Thom D. Epidemiology of Urinary (UI) and Faecal (FI) Incontinence and Pelvic Organ Prolapse (POP). Available from: https://ics-eus.org/Publications/ICI_4/files-book/comite-1.pdf. Accessed on 11 April 2026.
11. Shamliyan TA, Wyman JF, Ping R, Wilt TJ, Kane RL. Male urinary incontinence: prevalence, risk factors, and preventive interventions. Rev Urol. 2009;11(3):145.
12. Leslie SW, Tran LN, Puckett Y. Urinary Incontinence. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2026.
13. Kirillovich M, Rajabali S, Wagg A. Exploring the priorities of older adults in managing urinary incontinence: a patient-oriented research approach. Can Geriatr J. 2024;27(4):473.
14. Adidravid A, Jadhav T, Jerome A. To determine the awareness and attitude towards urinary incontinence in male diabetics. Int J Health Sci Res. 2024;14(4).
15. Garg P, Goyal LD, Goyal S, Verma M. Utility of opportunistic screening to assess the impact of urinary incontinence on quality of life and barriers to seeking treatment among women attending a tertiary healthcare centre in North India. BMC Urol. 2024;24(1):50.
16. Eysenbach G. Improving the quality of web surveys: the checklist for reporting results of internet e-surveys (CHERRIES). J Med Internet Res. 2004;6(3):e34.
17. Skorupska K, Kamińska A. Advantages and disadvantages of commonly used urinary incontinence questionnaires- how to correctly choose questionnaire in urinary incontinence diagnosis? J Clin Med. 2025;14(22):8196.
18. Avery K, Donovan J, Peters TJ, Shaw C, Gotoh M, Abrams P. ICIQ: a brief and robust measure for evaluating the symptoms and impact of urinary incontinence. Neurourol Urodynam. 2004;23(4):322-30.
19. Klovning A, Avery K, Sandvik H, Hunskaar S. Comparison of two questionnaires for assessing the severity of urinary incontinence: the ICIQ-UI SF versus the incontinence severity index. Neurourol Urodynam. 2009;28(5):411-5.
20. Soni R, Bindra S. Prevalence of urinary incontinence in women. Int J Community Med Public Health. 2023;10:2185-91.
21. Singh U, Agarwal P, Verma ML, Dalela D, Singh N, Shankhwar P. Prevalence and risk factors of urinary incontinence in Indian women: a hospital-based survey. Indian J Urol. 2013;29(1):31-6.
22. Yang X, Wang X, Gao Z, Li L, Lin H, Wang Het al. The anatomical pathogenesis of stress urinary incontinence in women. Medicina. 2022;59(1):5.
23. Trost L, Elliott DS. Male stress urinary incontinence: a review of surgical treatment options and outcomes. Adv Urol. 2012;2012(1):287489.
24. Cheng MC, Liu SP, Chuang YC, Hsu KC, Chow PM. Prevalence and impacts of male urinary incontinence on quality of life, mental health, work limitation, and health care seeking in China, Taiwan, and South Korea (LUTS Asia): Results from a cross-sectional, population-based study. Investig Clin Urol. 2021;63(1):71.
25. Mahishale A, Ambre P, Kantanavar KA. Prevalence of urinary incontinence in males with type 2 diabetes mellitus. Diabetes Metab Syndr Clin Res Rev. 2019;13(5):2953-6.

26. Nandy S, Ranganathan S. Urge incontinence. In:StatPearls. StatPearls Publishing; 2022.
27. Verhovsky G, Baberashvili I, Rappaport YH, Zilberman DE, Neheman A, Gal J, et al. Bladder oversensitivity is associated with bladder outlet obstruction in men. J Personalized Med. 2022;12(10):1675.

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