https://africanjournalofbiomedicalresearch.com/index.php/AJBR
Afr. J. Biomed. Res. Vol. 27 (September 2024); 408-416

Research Article

Prevalence and Risk Factors of Urinary Incontinence Among Adult Women in UAE

Dr. Laxmi Devi[1]*, Dr Rajendra K. Baxi[2]

*[1]*PhD Scholar, Parul Institute of Public Health, Parul University, Vadodara, India*
[2]Faculty at Parul Institute of Public Health, Parul University, Vadodara, India.

Abstract

Introduction: UI is a global problem prevalent in different cultures and presents itself as a major medical, social and financial burden to clients, families and health care systems. The aim of this study was to estimate the incidence and different types of UI as well as to define the risk factors within the UAE adult women.

Methods: In this investigation, a descriptive cross-sectional survey was used with women who were 18 years old and above, who visited the MOH PHCCs in the UAE. The assessment was conducted through administration of questionnaires which were self developed and validated through face to face interviews with the researcher. This approach sought to assess the proportion of the population affected by UI and factors related to it. Furthermore, to assess the effect of UI symptoms, there is a translation of the Incontinence Questionnaire in Arabic.

Results: Analyzing the results of our studies, the general rate of UI was revealed to be 42,6%. Differentiated by the type of urgency UI was reported by 31. 2% of participants, MUI – by 29,4%, SUI – by 11,2%. Some of the observed risk factors to UI included age over fifty years, parity greater than five, post-menopausal status, obesity and hypertension. Of the women surveyed 18. 6% described the effect that UI had on their QOL as mild while 2. 8% described it as severe. Significantly, only 6. 5% of the respondents consulted their doctors on their Urinary Incontinence problem.

Conclusion: Hence, urinary incontinence (UI) is a problem of growing concern to women in the UAE. Major risk factors for this condition are age, multiple births, obesity and hypertension. UI implicates that the majority of affected women do not seek medical advice. The present investigation will therefore endeavour to inform strategies on early identification and management of UI in the UAE. Based on the study findings, there is a need to develop a national women's health program focusing on women with UI and primary care clinicians.

Keywords: women Urinary incontinence (UI), UAE women's health, Age, Multiple pregnancies, Obesity, Hypertension, Medical consultation, Early detection

**Author for correspondence: Email: laxmi.laxmidevi@gmail.com*

Receiving Date: 10/07/2024 Acceptance Date: 20/08/2024

DOI: https://doi.org/10.53555/AJBR.v27i3.2061

INTRODUCTION

The phenomenon of the global population's rapid aging is a major demographic factor based on the factors affecting fertility and mortality rates [1]. Urinary incontinence (UI) has been recognized as a global problem that affects multi cultural and multi ethnic populations by the International Consultation of Urinary Incontinence and the WHO [2]. UI is, as a result, considered a 'silent epidemic,' impacting about 250 million adults globally [3, 4]. The condition is asymptomatic in most instances and is often unreported, as numerous patients do not inform their doctors. Some of the patients refuse to use UI because they think it is a normal process of aging or because they are ashamed [5].

According to the ICS, UI is defined as 'any involuntary loss of

urine' The above definition may include virtually anybody who would have at least one experience with UI in their lifetime. The ICS has suggested that UI should be described in greater detail based on its frequency, severity, risk factors, interference with social and hygiene matters, impact on the quality of life and whether the person consults others about the condition [6]. UI can be categorized into several types based on its underlying mechanisms: The major types include; stress urinary incontinence (SUI), urge urinary incontinence (UUI) as well as mixed urinary incontinence (MUI) [2].

UI is a common and disabling complaint, especially among women; the disease is often regarded as a routine occurrence in women's lives as they grow older and does not needs medical intervention. In contrast to the hypothesis that stipulates that it is a common problem among the elder population, UI is admitted across ages and cultures, which means that it is a global issue [7]. Even determining the correct rates of prevalence is not easy because the studies are very diverse in relation to methodology, definitions, and populations [8, 9]. Based on the findings of the systematic review of the studies conducted in 12 countries, the prevalence of UI in the community-dwelling older people ranged from 16. 2 % to 81. 9% [7]. The prevalence of depression in community-dwelling adult women ranges from 10% to 60% and the highest rate was in the age group of child-bearing (up to 40) years [25]. Some cultural factors and comparably poor awareness of the population in the Gulf countries might result in lower rates of UI as compared to the Western Europe and the USA. There is a scarcity of research about the UI prevalence and type in the women of the Gulf region and the above mentioned studies have exclusively included women attending health care centres and hospitals and the prevalence rates was reported to range between 20-41 % [12, 14, 15, 26]. SUI is most commonly reported by young people, while UI and MUI show increased incidence with age [27, 28]. In research, SUI is demonstrated to be the most common type of UI documented [29].

Potential reasons for UI include age, obesity (body mass index > 25 kg/m2), smoking, chronic diseases (diabetes and heart diseases), constipation, obstetrics and gynaecology history (multiple pregnancies, delivery methods, menopause, gynaecological surgeries), and certain medications (alpha blockers, diuretics) [11, 30-34]. Findings of studies on the effects of caffeine and fluid on the occurrence of UI are inconclusive [35].

UI is described in a socially taboo manner, has a direct impact on the individual's QOL, and is generally concealed from others. The disease results in physical, social, psychological, sexual and economic difficulties for women of all ages and may even lead to the dependence on caregivers as the situation deteriorates [41, 42, 43]. Regarding Muslim women, UI can disrupt Salah, which involves physical purity and certain movements [11, 14, 26]. This explains why the extent of UI might be underestimated as physicians do not always ask the patients about it and the patients themselves do not volunteer the information. This could lead to improved health behaviours among the women with UI due to raised awareness among heath care providers on the condition and its management. The objectives of this study are to determine the magnitude of UI in women of the UAE, compare and contrast the risk factors related to the different types of UI, and describe health seeking behavior and perception among women attending PHCCs in the UAE.

Methods

The current study is a cross sectional descriptive, multi center study which intends to assess the prevalence and risk factors for UI among adult female attendees of the various PHC facilities in the UAE.

Study setting and Duration

The present work is a descriptive, cross-sectional, multicenter research conducted in the PHCCs managed by the MOH in the UAE. These centers located in different parts of the city provide free services without prior appointments and attend to the majority of the population's primary health care needs. In this research, a sample of 20 PHCCs was selected where by the study used a sample of patients from the selected 20 PHCCs. Sampling technique followed in this study was Multistage random sampling for that, out of five sectors North, South, Middle, East and West, four centers were selected randomly from each sector.

Sampling technique

Postpartum women who were 18 years and above who presented at the selected PHCCs in the UAE for any reason other than UI between October 1 and June 30, 2022, were eligible to participate in the study. The subjects were informed of the purpose of the study prior to the administration of the questionnaire, and written informed consent was obtained at the beginning of a face-to-face interview with the female researchers. Regarding the participants' rights, the participants were told that they can withdraw from the study at any given time and their identity will remain anonymous during the entire process of the research.

Inclusion criteria

All UAE women aged 18 years and above who agreed to participate in the study,

Exclusion criteria

The other exclusion criteria included pregnancy, within three months of childbirth, gynecological or lower urinary tract surgery within the last three months or refusal to participate in the study.

Sample size

The sample size was estimated by Epi Info TM statistical software Version 7 developed by centers for disease control and prevention Atlanta, GA, USA. Using the prevalence rate of 34% for UI, and comparing it with a previous survey conducted among the UAE women where the prevalence ranged 34%, power calculation indicated that with 5% margin of error and 95% confidence level, the least sample size was 340 women.

Ethical considerations

Concerning the permission to conduct the survey, the approval from the Research board of the directorate of PHCCs, ministry of health, UAE was sought from the director.

Data collection With the patient's permission, the participant

underwent a face-to-face interview assessment. This assessment involved the use of a standardised questionnaire as well as the I-QOL translated into Arabic language. They all indicate that the data collection was done by the "researcher".

Survey Design

Categories and Definitions

Definition of 'urinary incontinence': The 4th International Consultation on Incontinence defined urinary incontinence (UI) as 'the involuntary loss of urine' [2]. However, for this particular work, the definition was further refined to include only cases of leakage that had happened in the last one year.

Definitions used for the types of UI, All the classification for Stress Urinary Incontinence (SUI), Urgency Urinary Incontinence (UUI) and Mixed Urinary Incontinence (MUI) have been done according to International Continence Society definitions.

Stress Urinary Incontinence (SUI): This condition is characterised by the inability to control the passage of urine during certain activities that elevates the abdominal pressure such as exercises, or during episodes of coughing and sneezing.

Urgency Urinary Incontinence (UUI): This type is defined by the occurrence of involuntary voiding of urine in combination with a strong desire to urinate.

Mixed Urinary Incontinence (MUI): This encompasses situations where one experiences a loss of bladder control and this results in urine leakage when the person has a full bladder, when involved in certain activities/positions or even during procedures such as sneezing or coughing.

In accordance to the Centers for Disease Control and Prevention

"Body Mass Index (BMI)" was determined using the formula kg/m² and classified as follows:

Body Mass Index (BMI) was determined using the formula kg/m² and classified as follows:

Normal weight was determined as having a BMI of between 18. 5 and 24. 99 kg/m².

A BMI in a range of 25–29. 99 kg/m² was considered as overweight.

A body mass index of equal to or greater than 30 kg/m² was identified as an obese patient.

The Questionnaire

The literature to be used in this study was gathered from previous work that focused on user interfaces (UI) from published articles [14, 10-12, 26, 27]. Finally, the adopted questionnaire was developed, and the tool was translated into Arabic for the Arabic-speaking respondents. To minimize ambiguity an independent agent was used to back translate the questionnaire. To obtain an estimate of the time needed for completion, a pilot version was mailed to 25 women fulfilling the inclusion criteria and attending PHCCs. Under this learning, modifications were made to improve the questionnaire and the final improved version used in the pilot phase. The questionnaire took about 15-20 minutes of the respondents' time to fill out.

It was composed of socio-demographic data, risk factors for incontinence, habits, gynecological history, incontinence history and its intensity, behaviors regarding medical advice, and incontinence's interference with activities. Socio-demographic variables included age, marital status, educational level, income, occupation and BMI. Information on gynecological history encompassed parity, abortion history, assisted or cesarean section, menopausal status and hormone replacement therapy usage, prior gynecological surgery and incontinence surgery. Thus, the questionnaire also considered other diseases and factors associated with incontinence and care needs, including hypertension, diabetes, asthma, stroke history, chronic cough, constipation, thyroid disorders, smoking, exercise frequency, and caffeine intake

The questionnaire aimed at identifying the participants' perceptions about UI as being related to aging, the available management approaches and from whom to seek help in cases of UI. The second part of the questionnaire consisted of questions that started with the screening question for urinary incontinence. Among the respondents, those who answered the affirmation were further queried on further questions so as to determine the definite kind of UI. Other signs documented included the number of times the patient urinated per day (more than 8 time a day or more often than every 2 hours), the need to wake up at night to urinate (more than once), use of pads/protectors/devices and how often they had to change them (once-twice, thrice-four times, or more than four times within a day).

Severity of UI Symptoms based on UI Short form The Incontinence Questionnaire is a short version of the tool developed by the International Continence Society (ICS) to measure UI. In this study, we employed the ICIQ-SF translated to Arabic to assess the kinds of UI, their frequency, and severity [37]. The questionnaire includes three components: There are three types of questions that point toward the UI episodes: (1) how often the patient experiences them (options: never, once per week, two or three times per week, daily, several times a day, or always); (2) how much leakage occurs (options: none, small, moderate, or large); and (3) to what extent the leakage interferes with the patient's life (scale: 0 [not Scores are summed to give a total, thus making total ICIQ-UI SF higher represent more severe symptoms with the range 0-21. The self-diagnostic question itself was not scored.

UI interference with daily activities

This part of the questionnaire was meant to determine the nature of the activities that were interfered with by urinary leakage such as, daily chores and social interaction (such as 8alat, shopping, going out of home, climbing up or down stairs, interruption of work, visiting friends, sexual activity), necessity to wear a pad or protective clothing (never, daily, weekly, monthly, few times).

Attitudes towards seeking help for UI

Specific questions asked were whether the women with UI have discussed their condition with friends or family and whether they have sought any medical advice. If they had not consult a medical advise, the survey also asked their reasons for this

decision. Although 16 respondents out of the 52 were negative, over half of the respondents availed out that they sought help hence they were classified as treatment seekers.

Data analysis and statistical methods

Marital status, age at first intercourse, age at first birth, and parity were described using numbers and percentages of the various categories. Categorical variables such as age, weight, height, BMI and ICIQ scores concerning continuous variables were expressed in mean ± standard deviation. To compare continent and non-continent women, Chi-square or Fisher's exact test was used depending on the expected counts of the cells. The analysis was done using a backward elimination stepwise method, and binary or multiple logistic regression was used to determine the most influential predictors or risk factors among the continent women. The level of significance was set at 0. 05 alpha level, to test the null hypotheses. Statistical data analysis was carried out using SPSS software with versions that includes22

Results

Out of 340 women interviewed, 145 (42. 6%; 95% CI: Amid them, 37. 1-47. 9% of the respondents claimed they had UI within the last year. The breakdown of UI types was as follows: "Stress UI was said by 38 women (11. 2%; 95% CI: 7. 9-14. 4), Urgency UI was present in 106 women (31. 2%; 95% CI: 26. 2-36. 2), Mixed UI was observed in 100 women (29. 4%; 95% CI: 24. 7-34. 1)".

Table 1 Sodium Characteristics and potential risk factors for urinary incontinence among study participants. The average age was 36 years (range: With regards to age: mean age = 37 years; median age = 35 years; mode = 18-72 years; standard deviation = 12. 46 years. The median number of children was 4 (range: 0-15 and median of normal vaginal delivery was 3 (range 0-13). The median BMI was 27. 5 (mean: Males also reported higher mean values on the total score of the HRQoL (mean: 28. 74; SD: 6. 53). Of the participants 135 of them (39. 7%) had any chronic illness including Diabetes, Hypertension, Thyroid, or asthma. The age, parity, menopause status and the history of chronic diseases did not significantly differ between the incontinent and continent women. Table 2 depicts the risk factors in continent and incontinent women so as to understand their comparison. These disparities were recorded in the aspect of age, BMI, parity, menopause, history of gynecological surgeries and hypertension. Women with less than 3 years of schooling were significantly more likely to report UI (P < 0. 003) although the difference was not as profound as the aforementioned categories. Similarly, there was no difference in the prevalence of UI among women with abdominal surgery excluding LSCS, asthmatic women, or women who consumed regular coffee (Table 2).

From the 340 women, 41. 8% perceived UI as a natural inevitable process while 52. 6% stated they did not know the treatments for UI. When asked about preferred specialists for UI, 83. 8% preferred a urologist for the complaints followed by gynecologist at 7. 4%, family/internal medicine specialist 3% and 1. 5% surgery. In the current year, 21. 2% women had urge to pass urine more than eight times a day, 22. 4% passed urine every 2 hours and 27. 6 % woke up once or more during the night to pass urine. Out of 145 women with the complaint of urinary incontinence, according to the ICIQ-SF, the degree of interference of it with activities was mild in 18. 6%, and severe in 2. 8%. A majority of them said that their condition caused low or considerable impact on social functioning; 10% experienced limitations, 8. 6% were impacted on sexual life, and 6. 2% were impacted on religious practices. Majority (86. 5%) of the respondents did not wear protective garments or used pads. Out of the surveyed women, only 22 requested medical consultation (6. 5%), and 12. 4% of the women said that UI impacted their mental health or resulted in depression. Approximately 10. 6% said that they talked with a relative or friend about the issue, and 93. 5% of the respondents never consulted with a doctor regarding the problem. Multivariate logistic regression analysis (Table 5) revealed that older women were 2. 2 times more likely to report UI compared to younger women (95% CI: , women with parity 1. 1 to 4. 4 were significantly at higher risk of reporting UI compared with women with parity 0, 0. 7 (95% CI 0. 4-1. 4; P = 0. 013) and women with parity of 5 or more were 1. 7 times more likely to report UI compared with women with parity 0, 0. 1 (95% CI

Table 1: The age, gender distribution, and clinical manifestations of the patient population (n = 340)

Characteristics	**description**	**N (n%)**
Age	< 45	243 (71.5%)
	>= 45	97 (28.5%)
Marital Status	Married	289 (85.0%)
	Single	30 (8.8%)
	Divorced	13 (3.8%)
	widow	8 (2.4%)
Educational Level	Illiterate	38 (11.2%)
	Basic literacy	9 (2.6%)
	"Primary school"	22 (6.5%)
	"Secondary school"	42 (12.4%)
	"High school"	92 (27.1%)
	"University"	123 (36.2%)
	"Higher education"	14 (4.1%)
Occupation	Employed	81 (23.8%)
	Unemployed	232 (68.2%)

	Other	27 (7.9%)
Parity	< 5	190 (60.9%)
	> 5	122 (39.1%)
History of caesarean delivery	No	230 (67.6%)
	Yes	110 (32.4%)
"History of Normal spontaneous delivery"	No	96 (28.2 %)
	Yes	244 (71.8 %)
Menopausal	No	289 (85.0%)
	Yes	51 (15.0%)
"History of surgery for urinary incontinence"	No	338 (99.4%)
	Yes	2 (0.6%)
"History of vaginal gynaecologic surgery"	No	314 (92.4%)
	Yes	26 (7.6%)
History of abdominal gynaecologic surgery	No	334 (98.2 %)
	Yes	6 (1.8%)
Chronic disease	No	205 (60.3%)
	Yes	135 (39.7%)
Regular exercise	No	253 (74.4%)
	Yes	87 (25.6%)
Smoking	No	334 (98.2%)
	Yes	6.0 (1.8%)
"Caffeine intake (tea/coffee)"	No	77 (22.6%)
	Yes	263 (77.4%)

Table 2: Comparison of the characteristics of the studies between continent and incontinent women

Characteristics		**"Non-Continent women (n =145) (42.6%)"**	**"Continent women (n =195)** (57.4%)"	**"OR [95 % C.I]"**	**"p. value"**
Age Group	>= 45	61 (42.1%)	36 (18.5%)	3.21 [1.966 - 5.233]	* < 0.001
	< 45	84 (57.9%)	159 (81.5%)		
BMI Group	< 18.5 (Underweight)	4 (2.8%)	2 (1.0%)	0.37 [0.066 - 2.022]	0.086
	18.5 - 24.99 (Normal Weight)	29 (20%)	68 (34.9%)	2.14 [1.296 - 3.539]	0.062
	25 - 29.99 (Over Weight)	48 (33.1%)	64 (32.8%)	0.99 [0.625 - 1.559]	0.586
	>= 30 (Obese)	64 (44.1%)	61 (31.3%)	0.58 [0.369 - 0.9]	* 0.013
parity	>= 5	71 (51.1%)	51 (29.5%)	2.498 [1.567 - 3.981]	* < 0.001
	< 5	68 (48.9%)	122 (70.5%)		
Menopausal	Yes	33 (22.8%)	18 (9.2%)	2.9 [1.557 - 5.392]	* < 0.001
	No	112 (77.2%)	177 (90.8%)		
History of vaginal gynaecologic surgery	Yes	17 (11.7%)	9 (4.6%)	2.74 [1.186 - 6.35]	* 0.033
	No	128 (88.3%)	186 (95.4%)		
History of abdominalgynaecologic surgery	Yes	40 (27.6%)	38 (19.5%)	1.57 [0.947 - 2.616]	0.855
	No	105 (72.4%)	157 (80.5%)		
OM	Yes	31 (21.4%)	26 (13.3%)	1.77 [0.997 - 3.134]	0.636
	No	114 (78.6%)	169 (86.7%)		
HTN	Yes	32 (22.1%)	19 (9.7%)	2.62 [1.418 - 4.851]	* 0.015
	No	113 (77.9%)	176 (90.3%)		
BA	Yes	12 (8.3%)	15 (7.7%)	1.08 [0.491 - 2.389]	0.432
	No	133 (91.7%)	180 (92.3%)		
Chronic Cough	Yes	8 (5.5%)	3 (1.5%)	3.74 [0.974 - 14.343]	0.367
	No	137 (94.5%)	192 (98.5%)		
Chronic Constipation	Yes	15 (11.7%)	12 (6.2%)	2.03 [0.935 - 4.386]	0.178
	No	128 (88.3%)	183 (93.8%)		
Orink Coffee or Tea	Yes	115 (79.3%)	148 (75.9%)	1.22 [0.725 - 2.045]	0.745
	No	30 (20.7%)	47 (24.1%)		

Abbreviation: BMI means body mass index and it is arrived at by dividing weight in kilogram by height in meter square.

Table 3: "The distribution of the types of VI according to; the frequency and amount of leakage, the interference of urinary leakage witheveryday life, the ICIQ-SF score, and treatment-seeking behavior, in 145 women with VI"

		UI (n = 145)	SUI (n = 38)	UUI (n = 106)	MUI (n = 100)
Interference with leakage	No Leakage	94 (64.8%)	23 (60.5%)	71 (67.0%)	60 (60.0%)
	1 – 3	27 (18.6%)	4 (10.5%)	19 (17.9%)	20 (20.0%)
	4 – 6	17 (11.7%)	8 (21.1%)	11 (10.4%)	15 (15.0%)
	7 – 9	4 (2.8%)	2 (5.3%)	2 (1.9%)	4 (4.0%)
	10	3 (2.1%)	1 (2.6%)	3 (2.8%)	1 (1.0%)
ICIQ score	<= 10	135 (93.1%)	36 (94.7%)	98 (92.5%)	94 (94%)
	11-15	10 (6.9%)	2 (5.3%)	8 (7.5%)	6 (6.0%)
	16-21	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
How often do you leak urine	Never	2 (1.4%)	1 (2.6%)	1 (.9%)	1 (1.0%)
	<=1 time/week	32 (22.1%)	11 (28.9%)	21 (19.8%)	20 (20.0%)
	2-3 times/ week	60 (41.4%)	13 (34.2%)	41 (38.7%)	42 (42.0%)
	once/day	43 (29.7%)	12 (31.6%)	37 (34.9%)	29 (29.0%)
	Several times/day	3 (2.1%)	0 (.0%)	3 (2.8%)	3 (3.0%)
	All the time	5 (3.4%)	1 (2.6%)	3 (2.8%)	5 (5.0%)
How much urine do you usually Leak	None	13 (9.0%)	2 (5.3%)	4 (3.8%)	7 (7.0%)
	Small amount	122 (84.1%)	34 (89.5%)	94 (88.7%)	86 (86%)
	Moderate amount	10 (6.9%)	2 (5.3%)	8 (7.5%)	7 (7.0%)
	Large amount	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
"Did you share this problem (urinary incontinence) witha family member/friend?"	No	101 (73.7%)	21 (58.3%)	80 (76.9%)	70 (72.2%)
	Yes	36 (26.3%)	15 (41.7%)	24 (23.1%)	27 (27.8%)
Did you seek medical advice for urinary incontinence?	No	113 (83.7%)	27 (77.1%)	85 (81.7%)	81 (85.3%)
	Yes	22 (16.3%)	8 (22.9%)	19 (18.3%)	14 (14.7%)

A Values are given as no.

Table 4: "Impact of Urinary incontinence on different aspect of daily and social life"

Routine activity	Description	UI 145
For the past one year, did you have to use pads or protective garments because of urinary incontinence	N	294 (86.5%)
	Y	46 (13.5%)
Does urinary incontinence limit you to do prayers	N	124 (85.5%)
	Y	"21 (14.4%)"
The following questions help in diagnosing the possible effects that urinary incontinence has on your daily lives;	N	111 (76.5%)
	Y	"34 (23.4%)"
Has UI affected your mental health or made feel depressed?	N	103 (71%)
	Y	"42(29%)"
To the extent that it is relevant, does the problem affect the marital or sexual relationship with the spouse?	N	116 (80 %)
	Y	29.00 (20 %)

Table 5: Multiple Logistic Regression Analysis & Independent risk factors for urinary incontinence

Characteristics	OR	95% C.I	P-value
'Age'	2.299	1.190 - 4.443	.013
'Parity'	1.758	1.005 - 3.078	.048
'Chronic disease'	.543	.291 - 1.016	.056
'HTN'	1.981	.879 - 4.464	.099
'Chronic constipation'	2.249	.978 - 5.173	.057

Table 6: Help-seeking behaviour concerning 145 women with urinary incontinence

Urinary Incontinence is normal with advancing in age	No 120 (35.3%) Yes 142 (41.8%) I don't know 78 (22.9%) No
Do you know that there are treatments for urinary incontinence	179 (52.6%) Yes 84 (24.7%) I don't know 77
Who should be seen for the UI problem	(22.6%) Family Physician/GP 12 (3.5%) Internal Medicine 13 (3.8%) Surgery 5 (1.5%) Urologist 285 (83.8%) OBS/GYN 25 (7.4%)

Table 7: Barriers to consulting a healthcare professional among 145 women with urinary incontinence (UI).

I did not think that incontinence was a significant problem.	N	10.0 (8.1%)
	Y	113 (91.9%)
Did not know treatment is available	N	121 (98.4%)
	Y	2.0 (1.6%)
Embarrassment	N	122 (99.2%)
	Y	1.0 (0.8%)
Did not want to see a male physician	N	122 (99.2%)
	Y	1.0 (0.8%)
Thought is/was Normal	N	0.0 (0.0%)
	Y	0.0 (0.0%)

Discussion

"Urinary incontinence" seems to be one of the growing public UI affects individuals, their families and the health care system in many medical, social and financial ways. International studies have also pointed towards the importance of this matter. The results of our investigation uncovered a very high proportion of UI among the female participants within the UAE sample (42. 6%). This figure is higher than that recorded in the recent studies, which ranged between 21 – 29% and dissimilar to the rates recorded in other Middle Eastern countries such as Qatar and Kuwait 20. 3%, 20. 6%, and 49. 3% respectively. However, the range of UI in western countries is very much higher starting from 45% in USA and between

These variations in prevalence can be explained by differences in the study participants, number of participants in the study, and how they define UI. For instance, the study of Egyptian complained of any UI and the present study included any UI occurred in 1 year preceding the study. Likewise, the Qatari study defined UI as the occurrence of urine loss over the past 12 months while the UAE study asked about any urinary leakage in the past year regardless of the degree of bother.

The current study established that 29. 7% of the women experienced daily urine leakage as against 21. 7% in the UAE and 8. 4% in the Egyptian study. Therefore, in the group of incontinent females, the prevalence of urge UI was the highest (31. 2%), while mixed UI (29. 4%) and stress UI (11. 2%) was less prevalent. These findings are in concordance with the studies conducted in Jordan, but contradict with the other studies where high prevalence of stress UI or mixed UI was observed.

According to the degree of UI by age, the rate of 54% in women, aged 18-39 is observed, while other studies describe higher prevalence in other age groups. This could be due to our study mean age of 36 years. This review studied the influence of the social factors including early marriage and child-bearing before the age of 35 years are possible causes of UI via PFM and prolapse.

One of the important findings of the study is the very low level of help seeking; a mere 6. 5% of the women sought medical help and only 10. 6% discussed the problem with their family and friends. This low rate is however in concordance with other UAE studies but less than those found in Jeddat and other UAE studies. There may be cultural reasons such as conservative or patriarchal cultures that may affect these figures.

A vast majority of the women (41. 8%) considered UI as a natural and inevitable process in women of their age, which shows their poor knowledge about the condition. This is compounded by those who do not seek treatment, hold this view.

It should also be noted that parity and the type of delivery can be considered as traditional risk indicators for the development of UI. Our research supports the earlier findings and suggests that women with multiple births or those who had vaginal deliveries are at a higher risk, probably because of the damage of the pelvic floor muscles during child birth. Moreover, higher BMI level has been found to be significantly related to UI, attributed to obesity's impact on the intra-abdominal pressure and the support for the pelvic organs. Hypertension also has a direct correlation with UI, which could be as a result of the side effects of drugs administered in the treatment of hypertension.

Our study did not identify any risk factors associated with abdominal surgery, asthma, chronic cough, smoking or caffeine with UI prevalence, though several previous investigations have made such associations.

However, as noted earlier, UI has a weak association with QOL in this study. Only 9. 7% expressed the restrictions in the sphere

of social contacts, 8. 6% in sexual contacts, and 6. 2% in religious ones. These results could be explained by the fact that most women with mild UI did not use any assistance and our QoL evaluation was standardized and might be different from measures used in other studies which identified higher effects.

Conclusion and Recommendations

On the effects of the study, it is evident that Urinary incontinence is prevalent among women in UAE. Some of the common antecedent factors include age, parity, obesity, and hypertension as they increase the chances of developing this condition. One of the striking discoveries is that a large number of women with urinary incontinence rarely seek professional assistance, thus exposing a major deficiency in the health care delivery system. These findings highlight how primary care management of urinary incontinence should be underlined in the UAE. This work can be of interest to healthcare systems dealing with this problem and can help in raising awareness of the problem among patients and healthcare workers as well as informing them of the available early diagnosis and treatment interventions.

Thus, to avoid occurrence of the urinary incontinence, proper education should be given to women and an increased public awareness of the pelvic floor exercises especially during and after pregnancy should be enhanced. Also, assessing the knowledge, perception and attitude of the healthcare workers towards urinary incontinence is essential. Future studies should consider evaluating the extent of the knowledge as well as the attitude of the primary care providers because this will reflect on the standards of care offered to patients. To promote seeking treatment of incontinence symptoms, the public especially women and the health care professionals should be educated on some of the factors that may hinder them from seeking treatment and some of the available treatment options. Specific and general interventions such as policies and early diagnosis strategies should be implemented to improve women's health at different stages of the lifecourse. It is therefore recommended to have a well-structured national health program that addresses women particularly the ones with urinary incontinence; and general practitioners.

Limitations

There are some research limitations within this study. Firstly, it was a cross sectional study, with no follow up data. Secondly, urinary incontinence was evaluated by questionnaires and not by clinical gynecological examination, urodynamic examination or other similar tests. Third, generalization of the results might be a limitation since the study was conducted in one city only and all the participants were women; rural women might have different experiences. Finally, the use of questionnaire self-administered data through personal interviews results into some bias whereby participants are likely to respond in a way they feel is expected of them by the interviewer.

References

Ezeh AC, Bongaarts J, Mberu B. Global populationtrends and policy options. The Lancet. 2022;380(9837):142-8.

Abrams P, Lowry SK, Wein AJ, Bump R. Assessment and treatment of urinary incontinence. The Lancet. 2021; 355(9221):2153. D

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. Neurourology and urodynamics. 2024; 23(4):322-30.

Hunskaar S, Arnold EP, Burgio KE, Diokno AC, Herzog AR, Mallett VT, *et al*. Epidemiology andnatural history of urinary incontinence. International Urogynecology Journal. 2022; 11(5):301-19. International Urogynecology Journal. 2023; 11(5):301- 19.

Shakhatreh FM. Epidemiology of urinary incontinence in Jordanian women. Saudi medical journal. 2021; 26(5):830-5.

Abrams P, Andersson KE, Birder L, Brubaker L, Cardozo L, Chapple C, *et al*. Fourth International Consultation on Incontinence Recommendations of the International Scientific Committee: Evaluation andtreatment of urinary incontinence, pelvic organ prolapse, and fecal incontinence. Neurourology and urodynamics. 2020; 29(1):213-40.

Sensoy N, Dogan N, Ozek B, Karaaslan L. Urinaryincontinence in women: prevalence rates, risk factors and impact on quality of life. Pakistan journal of medical sciences. 2021; 29(3):818.

Buckley BS, Lapitan MCM. Epidemiology Committee of the Fourth International Consultation on Incontinence, Paris, 2023: Prevalence of urinary incontinence in men, women, and children current evidence: findings of the Fourth International Consultation on Incontinence. Urology. 2020; 76:265- 271.

Milsom I, Altman D, Lapitan MC. Epidemiology ofurinary (UI) and faecal (FI) in- continence and pelvic organ prolapse (POP); in Abrams P, Cardozo L, KhouryS (eds): In- continence, ed 4. Paris, International Con- sultation on Incontinence, 2022.

Al-Sayegh NA. Urinary Incontinence in Kuwait: Prevalence and Risk Factors of Men and Women Nowall A Al-Sayegh1, Al-Batool Leri 2, Amna Al-Qallaf 3, Hanan Al- Fadhli 4 & Shouq Al-Sharrah5. International Journal of Health Sciences. 2021; 2(4):47-57

Altaweel W, Alharbi M. Urinary incontinence.Prevalence, risk factors, and impact on health related quality of life in Saudi women. Neurourol Urodyn. 2021; 31:642-5.

Rizk DE, Shaheen H, Thomas L, Dunn E, Hassan MY. The prevalence of health care-seeking behavior for urinary incontinence in United Arab Emirates women.Int Urogynecol J Pelvic Floor Dysfunct. 2022; 10:160- 5. D

Bani-Issa W, Fakhry R, Al Momani F. Urinary incontinence in Emirati women with diabetes mellitus type 2. Prevalence, risk factors and impact on life. JClin Nurs. 2021; 2(21-22):3084-94. D

Al-Badr A, Brasha H, Al-Raddadi R, Noorwali F, Ross S. Prevalence of urinary incontinence among Saudi women. Int J Gynaecol Obstet. 2021; 117:160-3.

El-Azab A, Mohammed E, Sabra H. The prevalenceand risk factors of urinary incontinence and its influence on the quality of life among Egyptian women. Neurourol Urodyn. 2023; 26:783-8. D

[16] Melville JL, Katon W, Delaney K, Newton K.Urinary inconti- nence in US women. Arch Intern Med. 2022; 165:537-42. D

Hunskaar S, Lose G, Sykes D, Voss S. The prevalence of urinary incontinence in women in four Europeancountries. BJU Int. 2022; 93:324-30.

Kocak I, Okyay P, Dundar M, Erol H, Beser E. Female urinary incontinence in the west of Turkey: prevalence, risk factors and impact on quality of life. Eur Urol2022; 48:634-41. D

Hannestad YS, Rortveit G, Sandvik H, Hunskaar S.Norwegian EPINCONT Study. Epidemiology ofIncontinence in the County of Nord-Trandelag. J Clin Epidemiol 2023; 53:1150-7. D

Filiz TM, Uludag C, Cinar N, Gorpelioglu S, Topsever P. Risk factors for urinary incontinence in Turkish women. A cross-sectional study. Saudi Med J. 2022; 27:1688-1692. D

Kocak i, Okyay P, Dundar M, Erol H, Beser E. Female urinary incontinence in west Turkey: prevalence, risk factors and impact on the quality of life. Eur Urol 2022;48:634-641. D

Jeter KF, Wagner DB. Incontinence in the American home. Journal of the American Geriatrics Society. 2022; 38(3):379-83.

Gasquet I, Tcherny-Lessenot S, Gaudebout P, Bosio Le Goux B, Klein P, Haab F, *et al*. Influence of the severity of stress urinary incontinence on quality of life,health care seeking, and treatment: a national cross-sectional survey. Eur Urol. 2022; 50:818-25.

Basak T, Kok G, Guvenc G. Prevalence, risk factorsand quality of life in Turkish women with urinary incontinence: a synthesis of the literature. Nursing review. 2021; 60(4):448-60.

Bakarman MA, Al-Ghamdi SS. The Effect of Urinary Incontinence on Quality of Life of Women at Childbearing Age in Jeddah, Saudi Arabia. Global journal of health science. 2021; 8(2):281.

Saleh N, Bener A, Khenyab N, Al-Mansori Z, Al Muraikhi A. Prevalence, awareness and determinants ofhealth care-seeking behaviour for urinary incontinence in Qatari women: a neglected problem? Maturitas. 2022; 50(1):58-65.

Simeonova Z, Milsom I, Kullendorff AM, Molander U, Bengtsson C. The prevalence of urinary incontinence and its influence on the quality of life in women from an urban Swedish population. Acta obstetricia et gynecologica Scandinavica. 2022; 78(6):546-51

Thom DH, HAAN MN, Van den Eeden SK. Medically recognized urinary incontinence and risks of hospitalization, nursing home admission and mortality. Age and Ageing. 2022; 26(5):367-74.

Form QS. The impact of urinary incontinence on quality of life among women in Hong Kong. Hong Kong Med J. 2022; 11(3):158-63.

Chin HY, Chen MC, Liu YH, Wang KH. Postpartum urinary incontinence: a comparison of vaginal delivery, elective, and emergent cesarean section. International Urogynecology Journal and Pelvic Floor Dysfunction. 2022; 17:631-635.

Tennstedt SL, Link CL, Steers WD, McKinlay JB. Prevalence of and risk factors for urine leakage in a racially and ethnically diverse population of adults: the Boston Area Community Health (BACH) Survey. American Journal of Epidemiology. 2023; 167:390- 399.

Dolan LM, Hilton P. Obstetric risk factors and pelvic floor dysfunction 20 years after first delivery. Int Urogynecol J Pelvic Floor Dysfunct. 2020; 21:535-544

Menezes M, Pereira M, Hextall A. Predictors of female urinary incontinence at midlife and beyond. Maturitas. 2020; 65:167-171

Correia S, Dinis P, Rolo F, Lunet N. Prevalence, treatment and known risk factors of urinary incontinence and overactive bladder in the non- institutionalized Portuguese population. Int Urogynecol J Pelvic Floor Dysfunct. 2022; 20:1481-1489

Gleason JL, Richter HE, Redden DT, Goode PS, 8urgio KL, Markland AD, *et al*. Caffeine and urinary incontinence in US women. Int Urogynecol J. 2021; 24(2):295-302. D

Al-Shaikh G, Al-8adr A, Al Maarik A, Cotterill N, Al- Mandeel HM. Reliability of Arabic ICIQ-UI short form in Saudi Arabia. Urology annals. 2021; 5(1):34.

Ghafouri A, Alnaimi AR, Alhothi HM, Alroubi I, Alrayashi M, Molhim NA, *et al*. Urinary incontinence in Qatar: A study of the prevalence, risk factors and impact on quality of life. Arab journal of urology. 2021;12(4):269-74.

8arghouti FF, Yasein NA, Jaber RM, Hatamleh LN,Takruri AH. Prevalence and risk factors of urinary incontinence among Jordanian women: impact on their life. Health Care Women Int. 2021; 34:1015-23.

Shakhatreh FM. Epidemiology of urinary incontinence in Jordanian women. Saudi Med J. 2022; 26:830-5.D

Melville JL, Katon W, Delaney K, Newton K. Urinary incontinence in US women. Arch Intern Med. 2022; 165:537-42. D

Grimby A, Milsom I, Molander U, Wiklund I, Ekelund P. The influence of urinary incontinence on the quality of life of elderly women. Age and ageing. 1993; 22(2):82-9

Abrams P, Kelleher CJ, Kerr LA, Rogers RG. Overactive bladder significantly affects quality of life. Am J Manag Care. 2023; 6(11):S580-90.

Solomon DH, LoCicero J, Rosenthal RA. New frontiers in geriatrics research: an agenda for surgical and relatedmedical specialties. American Geriatrics Society, 2023.

Chutka DS, Fleming KC, Evans MP, Evans JM, Andrews KL. Urinary incontinence in the elderly population. InMayo Clinic Proceedings. 2022; 71(1):93-101. Elsevier.

Minassian VA, Drutz HP, Al-8adr A. Urinary incontinence as a worldwide problem. Int J Gynecol Obstet. 2022; 82(3):327-38.

Manonai J, Poowapirom A, Kittipiboon S, Patrachai S, Udomsubpayakul U, Chittacharoen A, *et al*. Female urinary incontinence: a cross sectional study from aThai rural area. Int Urogynecol J Pelvic Floor Dysfunct.2022; 17(4):321-5.

Kinchen KS, Burgio K, Diokno AC, Fultz NH, Bump R, Obenchain R, *et al*. Factors associated with women's decisions to seek treatment for urinary incontinence. Journal of women's health. 2022; 12(7):687-98.

Perera J, Kirthinanda DS, Wijeratne S, Wickramarachchi TK. Descriptive cross sectional study on prevalence, perceptions, predisposing factors and health seeking behaviour of women with stress urinary incontinence. BMC women's health. 2021; 14(1):78.

Kirss F, Lang K, Toompere K, Veerus P: Prevalenceand risk factors of urinary incontinence among Estonianpostmenopausal women. Springer Plus. 2021; 2:524-10.1186/2193-1801-2-524.

Swanson JG, Kaczorowski J, Skelly J, Finkelstein M. Urinary incontinence: common problem among women over 45. Canadian Family Physician. 2022; 51(1):84-5.