

Research Article

Knowledge and Prevalence of Urinary incontinence Among Women Attending a Tertiary Care Hospital in UAE: Cross-Sectional Study

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ABSTRACT

Background: Many physiological and psychological changes happens to women during the time of urinary incontinence. The symptoms differ according to the individual, culture and ethnicity. As the women pass through various stages of urinary incontinence, the prevalence of symptoms also varies. This study aimed to assess the knowledge of urinary incontinence health problems among the women above 45 years old and to identify the prevalence of symptoms in urinary incontinence life.

Methods: A cross-sectional study was conducted in a private hospital in UAE, UAE among women aged 45 years and above with a validated self-administered questionnaire. Ethics approval was obtained before the study. Data were coded, entered, and analyzed using SPSS version 24. Chi-square tests and descriptive statistics like frequency tables and crosstabs were used.

Results: The mean age of women participants was 50.7 years. The results showed that 50.2% of the women had moderate knowledge about urinary incontinence health problems, while 37% and 12.8% had excellent and poor knowledge, respectively. Prevalence of urinary incontinence symptoms among women were hot flushes (55.1%), dry skin (54.7%), muscle pain (54.5%), joint pain (52.9%), and weight gain (51%). Women suffered from at least one of the urinary incontinence symptoms. Hot flushes, dry skin, muscle pain, and weight gain were significantly associated with the menopausal status ($p < 0.05$).

Conclusions: Urinary incontinence symptoms hot flushes, dry skin, and muscle pain were significantly associated with a perimenopausal or urinary incontinence state. Women must be made aware of these symptoms and their causes and treatments as well.

Keywords: Knowledge, Urinary incontinence, Prevalence

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INTRODUCTION

Urinary incontinence is defined as occurring 12 months after a female's last urinary incontinence and it usually occurs in the female's late 40s or early 50s. The most common age range for urinary incontinence is 48 to 55 years. The mean age for urinary incontinence is found 47.6 ± 4.45 years amongst Iranian females.^{1,2} Urinary incontinences doesn't happen all of a sudden; rather it takes place slowly. Low estrogen and progesterone levels are associated with vaginal dryness, and

loss of vaginal walls elasticity which leads to painful or uncomfortable sexual intercourse, thus leading to a decrease in the female's sexual drive. The female will also experience night sweats, skin flushing, and insomnia (sleeping problems).⁵ A study conducted in Malaysia to assess the knowledge of women and their perception of menopausal health problems showed a good understanding of the definition of urinary incontinence but were lacking knowledge of the symptoms associated with urinary incontinence.⁶

Different studies showed varying knowledge levels about the problems and symptoms. About 80% of the women had previous knowledge, while 46% were aware of the health effects, according to a study done in Pakistan, while only 12.1% had appropriate knowledge from a study conducted in India.^{7,8} After urinary incontinence females are more susceptible to diseases and they struggle with a lot of physical changes, some of which are bearable and others, if not taken care of, could prove life-threatening. These complications include: wrinkling, dryness, loss of skin's elasticity and vascular nature, poor wound healing, pigment changes, acne and unwanted hair growth, loss of scalp, leg, pubic and axillary hair, Dry mouth and desquamative gingivitis, include vaginal and vulval dryness, dyspareunia (painful sexual intercourse), post-coital bleeding (bleeding directly after sexual intercourse) or spotting and thinning of the labia, urinary frequency, incontinence, and cystitis, osteoarthritis and osteoporosis, and increased gain of body and belly fat.⁵ A cross-sectional study conducted to find out the frequency of self-reported sexual symptoms in different parts of Italy showed that 45.1% suffered from vaginal dryness, 29.8% experienced pain during sexual intercourse, 45.9% had reduced sexual pleasure.⁹ A study among Thai women showed that the most three prevalent urinary incontinence symptoms that women suffer from were, joint and muscle pain, poor memory and change in libido.¹⁰ Arab women living in Sydney showed a higher prevalence rate of symptoms than in the other countries of the world.¹¹ The related literature showed that there is a lack of knowledge among middle-aged women about UI health problems. Also, in the UAE, studies have been done rarely on this problem. Hence, the present study aimed to evaluate the knowledge of urinary incontinence health problems among women above 45 years old and to identify the prevalence of symptoms of urinary incontinence life.

RESULTS

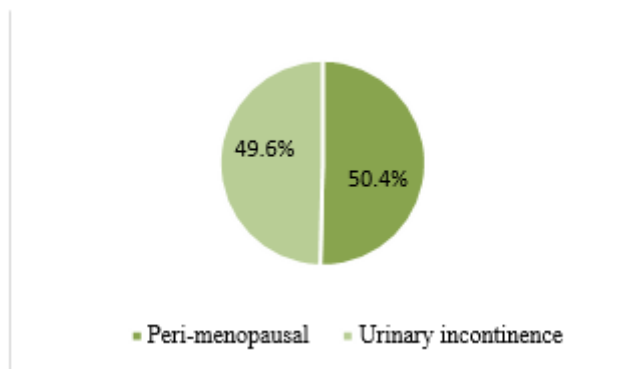
The demographic and social features of the females who participated in the study were presented in Table 1. About 50% were found to be between age 45-48, Eastern Mediterranean (58.5%), married (84.8%), and having two children (32.4%).

METHODS

This study followed a cross-sectional design. The research was conducted in a tertiary care hospital in UAE, UAE. The duration of the study was six months (from July 2023 to December 2023). The women above the age of 45 years from any nationality, social and economic background, and gave the informed consent were included in the study. Females below the age of 45, those who refused to give informed consent and illiterate were excluded from this study. The total sample size was calculated as 468, including the non-response rate. A Convenience sampling technique was used. Data were collected using a self-administered questionnaire that identified the prevalence of different urinary incontinence health problems and knowledge among the study population. The questionnaire was first drafted in English, after which it was translated in the local language (Arabic), followed by back translation, by experts in both languages. It was then validated and finalized by experts through a consensus, after which a pilot study was conducted. The research investigators were present for the whole time during the collection of data in the most focused and oriented manner. This also ensured no loss of data/questionnaires. All indications of any conflict of interest are thoroughly scrutinized so that no bias is involved. Furthermore, the research investigators did not indulge in extra or unnecessary interactions with the participants. An approval from the Institutional Review Board was obtained to proceed with the research. Confidentiality, anonymity and privacy of the participants were ensured.

Statistical analysis

Statistical analyses were performed using SPSS software version 24. The results were presented in tables and figures. Descriptive statistics such as the median was calculated. Inferential statistics like the Chi-square test was used to find out associations. The scoring technique was used to assess the knowledge of the participants. This was done using eight questions, for which 1 mark was given for the right answer. Based on the scores, they were assessed as excellent, moderate and poor knowledge. A P-value of less than 0.05 was considered significant.



About 40% were in the normal BMI range. The respondents are almost equally distributed as peri and urinary incontinence women (Figure 1).

Table 1: Distribution of demographic and social features of subjects.

Factors	No.	Percentage (%)
Age	45-48	244 53
	49-55	127 27.6
	>55	89 19.3
Nationality	African	4 9
	East Mediterranean	269 58.5
	Southeast Asian	130 28.3
	West Pacific	25 5.4
	America	5 1.1
	European	27 5.9
Employment Status	Unemployed	263 57.2
	Employed	178 42.8
Marital Status	Single	31 6.7
	Married	390 84.8
	Divorced	17 3.7
	Widowed	22 4.8
Number of children	No children	30 6.5
	1	55 12
	2	149 32.4
	3	102 22.2
	>4	124 27
BMI	<18.5	35 7.6
	18.5-24.9	184 40
	24.9-29.9	134 29.1
	>30	98 21.3

Table 2: Distribution of knowledge about the urinary incontinence status.

Knowledge questions	Response
Risk of developing health problems	71.7
Cause of urinary incontinence	82.1
Age at urinary incontinence	39.8
Urinary incontinence affects hormone levels Miss periods for 12 months for considering urinary incontinence	73.9
	36

Table 3: Distribution of knowledge level according to the Socio-demographic factors.

Socio-demographic factors	Knowledge level			P value	
	Poor % (No.)	Moderate % (No)	Excellent % (No)		
Nationality	Arab	9.3 (25)	56.1 (151)	34.6 (93)	>0.05
	Non-Arab	17.8 (34)	41.9 (80)	40.3 (77)	
Status of Employment	Unemployed	14.4 (38)	54.4 (143)	31.2 (82)	>0.05
	Employed	11.2 (21)	43.6 (82)	45.2 (85)	
Marital Status	Single	22.6 (7)	51.6 (16)	25.8 (8)	NS
	Married	12.1 (52)	50.1 (215)	37.8 (162)	
Age in years	45-48	15.6 (38)	49.6 (121)	34.8 (85)	NS
	49-55	7.9 (10)	46.5 (59)	45.7 (58)	
	>55	12.4 (11)	57.3 (51)	30.3 (27)	

The respondents were also asked about the questions on menopausal age, such as urinary incontinence affects hormone levels, about the menopausal effect on missed periods, etc. More than 70% of the women knew that there would be a risk of developing health problems during urinary incontinence

life, the exact cause of urinary incontinence and it affects hormonal levels. It was seen that only 39.8% of the females knew about the exact age at urinary incontinence and 36% knew about the definition of urinary incontinence (Table 2).

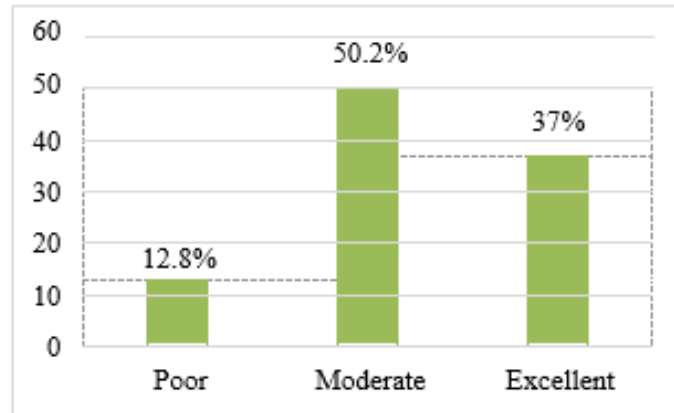


Figure 2: Distribution of knowledge level according to the respondents.

Table 4: Association between menstrual status and knowledge level.

Menstrual status	Knowledge level			P value
	Poor (No)	Moderate % (No.)	Excellent % (No.)	
Peri-menopausal	13.4 (31)	50.4 (117)	36.2 (84)	NS
Post-Menopausal	12.3 (28)	50 (114)	37.7 (86)	

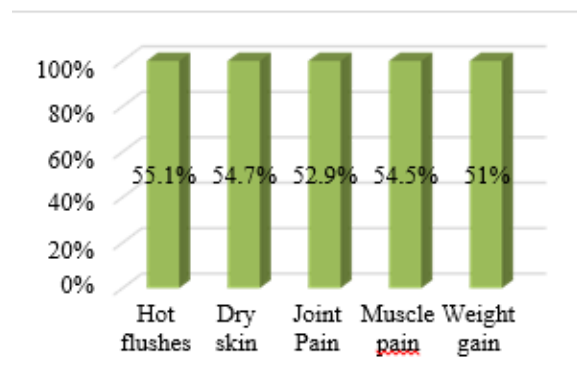


Figure 3: Prevalence of top five symptoms after age 40.

Table 3 gives the association between the socio-demographic factors and the level of knowledge on urinary incontinence among participants. The nationality and employment status showed a significant association with the knowledge of the target sample. Non-Arabs had significant excellent knowledge(40.3%) when compared to their counterparts. Also, employed women had significantly good knowledge (45.2%) than unemployed women. However, the married women had excellent knowledge (37.8%), marital status and age of women

showed no significant association with the level of knowledge. About 50% of the women in both periurinary incontinence and menopausal stage had moderate knowledge about urinary incontinence health problems. The knowledge level did not show significant differences among the women; however, peri-menopausal women have slightly poor knowledge than their counterparts.

DISCUSSION

The problems related to the urinary incontinence knowledge and symptoms were studied among the women above 45 years, wherein about 50% each of the sample collected was in the peri-menopausal and urinary incontinence stage. A study done in Iran had a mean age similar to the result; 47.6 ± 4.45 .¹ The majority of the studied sample was from the Eastern Mediterranean regions. Most of them were unemployed (57.2%) which showed a somewhat similar rate in another study conducted in India (42.1%).⁸ The reason can be due to the older age of the participants. The majority of our participants had moderate knowledge regarding urinary incontinence health problems (50.2%). But it has to be noted that 12.8% of the women had poor knowledge, which agreed to the results of a study conducted in Bahrain in which 8% had poor knowledge. The level of knowledge was different in different parts of the world; in India, it was 12.1%.⁸ This could be explained due to the lower educational status of women, mainly from developing countries. The majority of them (71.7%) showed good knowledge about the higher risk of problems after the age of 40. Another study conducted by Pace et al. showed that 74.3% of women had a significant amount of knowledge about the overall menopausal phenomena, while 55.7% were aware of the symptoms that might be associated with urinary incontinence. Only 7% were aware of the many complications that may accompany urinary incontinence. In conclusion, females have different views regarding urinary incontinence; although the majority might see it as a medical condition that requires treatment, others will only view it as a normal transition in the lives.¹²

Another aspect was the knowledge of women about the exact time urinary incontinence starts, our results showed that most women (39.8%) think that the age when urinary incontinence starts is 45-50 years while only 4.8% think that it is 40 years and below. However, another study found out that, generally, Egyptian women don't seem to have good knowledge about health problems associated with urinary incontinence, excluding the fact that they are aware of an increased risk/incidence of osteoporosis. The study done in the UAE found that 65% of women correctly identified the exact age of urinary incontinence while 9.5% did not know the average age.¹³ A small percentage of women consider this as a natural phenomenon and were not concerned about the age of this transition. The participants were asked about the knowledge about the hormonal change due to urinary incontinence and 73.9% had a good knowledge of that. The study conducted in Pakistan showed that only 12.9% knew this aspect, while another study done in the UAE showed the knowledge as 21%.⁷ The reason for the knowledge would be because they receive information about aftereffects of hormonal change and treatment like Hormone Replacement Therapy from doctors, friends and also media. In the present study, most women (50.2%) from the total population had moderate knowledge about urinary incontinence, whereas 12.8% had poor knowledge and 37% had excellent knowledge. Another research was conducted in Kerala among the rural women,

aged 40-45, about urinary incontinence and their awareness of menopausal symptoms.

The research discussed their understanding of the UI phenomena and the consequential changes that come with that period of their lives. The results showed that 8% had inadequate knowledge, while 68% had adequate knowledge, and 38.5% scored slightly above average. The study found out that there is a strong connection between knowledge, attitude and economic condition. In conclusion, the knowledge of women about urinary incontinence aids a lot in promoting and developing programs about females' health status.¹⁴ Our research illustrates the most common symptoms women face after the age of 40 and it showed the distribution of the most occurring symptoms among peri and urinary incontinence women. Hot flushes were recorded as the most experienced symptom. The symptoms also include vaginal dryness, dry skin, weight gain, joint pain, reduced sexual desire, etc. A study conducted among Chinese women aged between 40 and 65 years revealed that many of them had good knowledge of urinary incontinence. The prevalence of symptoms was 16.1% among premenopausal women and 49.3% among peri and urinary incontinence women. Most of the symptoms reported were joint pain, fatigue, hot flushes, Insomnia.¹⁵ A study was done in Pakistan also showed a similar result.⁷ A similar study was conducted amongst 411 women in another part of the Middle East, Riyadh, Saudi Arabia where the prevalence of menopausal symptoms was also assessed. It was found that the most frequent and prevalent symptom they experienced was muscle and joint pain (83.9%), followed by mental and physical exhaustion (80.2%), heart diseases, (73.2%), sleeping problems (72.1%) and hot flushes (71%).¹⁶ The reason for this could be the immense hormonal changes in a woman during the menopausal transition and other causes common in the UAE's female population, such as hyperthyroidism, and the generally hot climate. Close proximity in the occurrence and frequency of the same symptoms such as hot flushes, muscle pain is noted. In Saudi Arabia, muscle and joint pain are the most frequent symptoms, and in the present study more than half of the total population experienced muscle pain as a symptom and the results were significant. The fact that these two countries are in the same region, and the women living here are brought up and live in similar socio-cultural environments, could pose as an explanation to the occurrence of similar menopausal symptoms, and the similarity in the frequency of these symptoms.¹⁶

Limitation

The main limitation of this study was that the sample taken was not the true representation of the entire female population of the UAE, as the study was conducted among women attending one private hospital. Therefore, the results cannot be generalized to the total females of UAE.

CONCLUSION

The study concluded that slightly over half of the total women had moderate knowledge of the health problems linked with the onset of urinary incontinence. Urinary incontinence

symptoms among females included hot flushes, dry skin, muscle pain, joint pain, and weight gain. Awareness programs should be done to increase women's knowledge about urinary incontinence health problems and encourage them to visit doctors around that period in their lives.

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Ethical approval: The study was approved by the Institutional Ethics Committee.

REFERENCES

Abdollahi AA, Qorbani M, Asayesh H, Rezapour A, Noroozi M, Mansourian M, et al. The menopausal age and associated factors in Gorgan, Iran. *Medical journal of the Islamic Republic of Iran.* 2023;27(2):50.

Melissa Conrad Stöppler C. Urinary incontinence: 9 Symptoms to Look for and Age of Transition. *eMedicineHealth.* 2022. Available at: <http://www.emedicinehealth.com/urinaryincontinence/articleem.htm>. Accessed on 25 January 2022.

Urinary incontinence: Medline ePlus Medical Encyclopedia. *Medlineplus.gov.* 2022. Available at: <https://medlineplus.gov/ency/article/000894.htm>. Accessed on 25 January 2022.

Your Guide Urinary incontinence *WebMD.* 2022. Available at: <http://www.webmd.com/urinary-incontinence/guide/urinary-incontinence-information>. Accessed on 25 January 2022.

Urinary incontinence and Body Changes *Urology Society of Australia.* *Urinaryincontinence.org.au.* 2022 Available at: <https://www.urinary-incontinence.org.au/for-women/information-sheets/33-urinary-incontinence-and-body-changes>. Accessed on 25 January 2022.

Wong LP, Nur Liyana AH. A survey of Knowledge and Perceptions of Urinary incontinence among Young to middle-aged women in Federal Territory, Kaula Lumpur, Malaysia. *JUMMEC.* 2022;10(2):22-30.

Khokhar S. Knowledge, Attitude and Experience of Urinary incontinence. *Pak J Med Res.* 2023;52(2):42-6.

More S, Sujatha P, Karthiga. Knowledge, Attitude and experiences of urinary incontinence in the urinary incontinence women at a tertiary care center: a cross-sectional study. *Int J Reprod Contracept Obstet Gynecol.* 2022;7(11):4758-61.

Thomas HM, Bryce CL, Ness RB, Hess R. NIH Public Access. Dyspareunia is Associated with Decreased Frequency of Intercourse in the Menopausal Transition. *Urinary incontinence (New York, NY).* 2024;18(2):152-7.

Peeyananjarassri K, Cheewadhanaraks S, Hubbard M, Zoa Manga R, Manocha R, Eden J. Menopausal symptoms in a hospital-based sample of women in southern Thailand. *Climacteric.* 2022;9(1):23-9.

Lu J, Liu MJ, Eden J. The experience of menopausal symptoms by Arabic women in Sydney. *Climacteric.* 2022;10(1):72-9.

Pace DT. The menopausal woman: The need for an individualized plan of care. *Nurse Pract.* 2022;42(12):43-9.

Hamid S, Al-Ghufli FR, Raeesi HA, Al-Dhufairi KM, Al Dhaheri NS, Al-Maskari F, et al. Women's Knowledge attitude and practice towards urinary incontinence and hormone replacement therapy: A Facility Based study in Al-Ain, United Arab Emirates. *J Ayub Med Coll Abbottabad.* 2024; 26(4):448-54.

Borker SA, Venugopalan PP, Bhat SN. Study of menopausal symptoms, and perceptions about urinary incontinence among women at a rural community in Kerala. *J Midlife Health.* 2023;4(3):182-7.

Jin F, Tao M, Teng Y, Shao H, Li C, Mills E. Knowledge and attitude towards urinary incontinence and hormone replacement therapy in Chinese women. *Gynecologic and Obstetric Investigation.* 2023; 79(1):40-5.

AlQuaiz AM, Tayel SA, Habib FA. Assessment of symptoms of urinary incontinence and their severity among Saudi women in Riyadh. *Annals Saudi Medic.* 2023; 33(1):63-7.