

Enhancing Knowledge of Women on Urinary Incontinence- A Pre and Post Interventional Study

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ABSTRACT

Introduction: Urinary Incontinence (UI) is highly prevalent among women and has a significant impact on physical and psychological health. Several women fail to seek help or treatment as this problem is a cause of significant embarrassment among women. UI is an important social problem that affects more than 50% of postmenopausal women.

Aim: To explore awareness level amongst women about UI and determine the effectiveness of an educational intervention to commensurate their awareness towards the same.

Materials and Methods: A descriptive study design was adopted. Postmenopausal rural women of the community in Mangalore were selected by the door to door household survey from April 2018 till March 2019. Data was collected

from 60 women using demographic proforma and structured knowledge questionnaire on UI.

Results: The response rate for the questionnaire was 100%. In the pretest, 53 (88%) women had poor knowledge, and 7 (12%) had average knowledge regarding UI. In the post-test, knowledge of women enhanced amongst 52 (87%) of women; however, 8 (13%) women were in the poor knowledge category. The mean pretest knowledge score (\bar{X} =5.38) had significantly enhanced in the post-test (\bar{X} =11.73, $p<0.001$).

Conclusion: Women have limited access to information and knowledge regarding UI. Nurses play a significant role in promoting targeted awareness in the community towards this condition. The present study created awareness among women and encouraged them to seek timely help for a better Quality of Life (QoL).

Keywords: Awareness, Intervention, Postmenopausal women, Urinary disorder

INTRODUCTION

The Urinary incontinence (UI)/or loss of bladder control is a common and often embarrassing problem. The complication results in leakage of urine that occurs on sudden cough or sneeze [1]. UI is a problem that creates both physical and psychological distress among women [2]. Millions of women all over the world have suffered, in silence, embarrassment, and social isolation due to this condition [3].

It is a common problem with widespread human and social implications, causing discomfort, shame and loss of self-confidence [2]. It generally affects more women than men until the age of 80 [1]. The prevalence of UI is 1.5% to 5% in men and 10%-25% in adult women under the age of 65 years. It is estimated that more than 15 billion/year were spent on managing patients with incontinence [4]. UI affects 23% to 55% of women; the most common types are stress, urge, and mixed UI. The study done by Guin G et al., showed that out of 418 women enrolled, 77 (18.4%) cases were found to have stress UI [5].

Previous studies report that UI increases with age. It is a common social or hygienic problem amongst adults living in the community [6]. Worldwide 70-80% of women suffer from UI due to urinary system diseases. It was estimated that 25-45% of women have involuntary urine loss in the different age groups, and approximately 9-39% of women report daily urine leakage over 60 years of age.

The current UI peaks at 50-54 years of age and decreases the QoL and interrupts daily routines [7]. The exasperating symptoms of UI adversely affect the holistic wellbeing of women [8]. The World health organisation has classified UI as a social disease, since it affects more than 5% of the general population. UI is an important social problem that affects more than 50% of postmenopausal women [9]. The results of the study by Dellu MC et al., shows that women had a mean age of 51.9 years, most were in menopause (59.4%) and the prevalence of UI was 20.4% [10]. It was estimated that 30-60% of peri-menopausal and postmenopausal women report UI at some point in their

lifetime, and nearly 50% of women in the fifth to eight decades of life usually manifest it [11,12].

Study results of Fante JF et al., revealed that UI was the most prevalent pelvic disorder investigated, and the most important risk factor associated with the lack of knowledge on pelvic floor exercise [13]. Multifaceted interventions appear to be useful in some settings for UI management in older women, but the quality of the evidence was poor and unclear. There was insufficient evidence to determine whether any of the combination of components is superior to others in improving UI symptoms [14]. Majority of women perceive that, UI as a significant health problem negatively affects the QoL, social relation, and occupational activities [15]. Majority of them do not seek treatment for UI, which is a matter of great concern. Generating awareness regarding UI may help to improve health-seeking behaviour and QoL [16]. Hence, the present study aimed to find out the awareness level amongst women about UI and determine the effectiveness of an educational intervention to commensurate their awareness towards the same.

MATERIALS AND METHODS

A descriptive study design was adopted for the study. The study population comprised of 60 postmenopausal rural women of a selected Natekal community in Mangalore. Door to door household survey was carried out from April 2018 till March 2019 to select the subjects for the study. Women who had attained menopause were included and health care professionals were excluded from the study. The sample size estimation was done based on the previous study [17]. Demographic proforma and structured knowledge questionnaire on UI were the tools utilised for the study. The validity and reliability of the tool was obtained and the cronbach alpha value was found to be 0.82. The ethical clearance was given by the Institutional ethics committee ref no. NUINS/CON/NU/IEC/2018-19 dated 20-4-2018. The written permission was obtained from the concerned Primary Health Centre (PHC). The purpose

and objectives of the study were explained to the subjects, and informed consent was obtained. The demographic details and pretest knowledge was obtained by using a structured knowledge Questionnaire which was in local language (Kannada) comprising of 20 items on UI and its management. The knowledge score was classified arbitrary into good (14-20 score), average (7-13 score), and poor (0-6 score) [Annexure-1]. A training module regarding information about UI which comprised causes, risk factors, and management of UI was administered to the postmenopausal women after the assessment of the pretest knowledge. The post-test was carried out on seventh day by using the same knowledge questionnaire.

RESULTS

The mean age of the women was 54±4.2 years, 53 (88%) were multiparous, majority 33 (55%) belonged to the nuclear families. Most of the subjects 20 (33.3%) had only high school education; majority 34 (56.7%) were homemakers. Most of the women 41 (68.3%) belonged to a monthly income category of less than Rs 10000. Majority of the women, 55 (92%), did not have any previous information regarding UI [Table/Fig-1].

Demographic characteristics (N=60)		Frequency (F)	Percentage (%)
Age (years)	<40	4	6.7
	41-50	19	31.7
	51-60	32	53.3
	>60	5	8.3
Number of children	1 Child	3	5
	2-5 Children	45	75
	>5 Children	8	13.3
	None	4	6.7
Family	Nuclear	33	55
	Joint	22	36.7
	Extended	5	8.3
Education	Primary school	17	28.3
	High school	20	33.3
	Higher secondary	9	15
	Degree/diploma/above	3	5
	No formal education	11	18.3
Occupation	Home maker	34	56.7
	Daily wages	8	13.3
	Self-employee	18	30
Monthly income (Rs)	<10000	41	68.3
	10001-20000	14	23.3
	20001-50000	5	8.3
Previous knowledge on UI	Yes	5	8
	No	55	92

[Table/Fig-1]: Demographic characteristics.
UI: Urinary incontinence

In the pretest, 53 (88%) women had poor knowledge, and 7 (12%) had average knowledge. In the post-test, we observed that the knowledge of women regarding UI was enhanced among 52 (87%) women, and 8 (13%) were categorised as women with poor knowledge of UI [Table/Fig-2].

The mean pretest knowledge score (\bar{X} =5.38) had significantly enhanced in the post-test (\bar{X} =11.73, $p<0.001$) [Table/Fig-3].

DISCUSSION

The prevalence of UI in the developing world varies and factors influencing prevalent rates are a key area of interest, and knowledge of these would provide appropriate planning for primary and

Level of knowledge n=60	Pretest knowledge		Post-test knowledge	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
Poor (0-6)	53	88	8	13
Average (7-13)	7	12	42	70
Good (14-20)	0	0	10	17

[Table/Fig-2]: Distribution of women based on knowledge level.

Knowledge	Mean±SD	t-value	p-value
Pretest knowledge	5.38±1.75	14.578	<0.001*
Post-test knowledge	11.73±2.91		

[Table/Fig-3]: Pre and Post test Knowledge of women with Urinary Incontinence (UI).
*Level of significance

secondary health care programs [18]. This study provides us with an opportunity to identify the level of awareness of UI among postmenopausal women. The present study findings reveal that majority of the postmenopausal women were in the mean age group of 54±4.2 years. The findings of the study conducted in Estonian postmenopausal women showed the mean age group of 53.3 years [19]. Another study by Taylor DW et al., revealed that the mean age was 51.53 years [20]. In the present study majority of the subjects, 53 (88%) were multiparous. Similar findings were observed by Oliveira C et al., where a majority of the women were multipara [21]. The present study comprised of 20 (33.3%) women with high school education, 17 (28.3%) with primary education, and 11 (18.3%) with no formal education. A similar study was conducted by Khan S et al., where majority of the women were illiterates [22]. Mandimika CL conducted a study with 45.7% of samples having collegiate education [23]. The current study revealed 41 (68.3%) women in the income group of less than Rs 10000.

The present study showed that in the pretest, 53 (88%) women had poor knowledge, and 7 (12%) had average knowledge. In the post-test, knowledge of women was enhanced among 52 (87%) of women. The study by Mary RD et al., indicated that participants had poor knowledge of UI, principally concerning risk, prevention, treatment, and management factors [24]. It was supported by the study conducted by Thanga SGJ, in which the result revealed that 19 (64%) women between the age group of 35-65 years had inadequate experience and 23 (76.7%) had negative attitudes regarding UI [25]. The study conducted by Yuan H and Williams B revealed that older people above 60 years had poor knowledge of the management of UI [26]. A similar finding by Wischniter L et al., showed that in 323 women, knowledge about UI was found to be moderate (mean=7.37±3.6) [27]. The study by Luo Y et al., supported the above finding and divulged that overall UI knowledge was poor (49.9%) [28].

The present study finding shows that the mean pretest knowledge score (\bar{X} =5.38) had significantly enhanced in the post-test (\bar{X} =11.73, $p<0.001$). Another study by Townsend MK et al., also supports our findings that there is considerable opportunity to improve women's QoL by increasing health education about UI and its treatment [29].

The study conducted by Gnanajothi R et al., also supported the present study findings in which that mean and standard deviation of pretest knowledge of patients was 11.6±3.16 whereas the mean and standard deviation of post-test knowledge of patients after structured teaching program was enhanced to 22.6±4.0 [17].

Limitation(s)

This study was limited to postmenopausal women between the age group of 38-65 years. There was no standardised tool available to assess the knowledge of postmenopausal women on UI. The sample size was small limiting its scope for generalisation. The study had no control group so as to assess the effectiveness of the training module. Various modalities of training could be adopted and its effectiveness could be further explored in the area of empowering women with UI.

CONCLUSION(S)

UI is a very distressing problem and is a matter of great concern among women as majority of them fail to seek treatment, though they are at high risk of developing the problem. Hence, generating awareness regarding UI may help to improve health-seeking behaviour and QoL of postmenopausal women with UI. Simple tools like a questionnaire can estimate the knowledge of UI and a structured well informed training module can help postmenopausal women in combating the problem.

REFERENCES

- [1] Mohan FD, Sanders JK, Neighbors M. Medical-surgical nursing Health and illness perspective. 8th ed. New Delhi: Mosby Elsevier publication; 2007.
- [2] Singh U, Agarwal P, Verma ML, Dalea D, Singh N, Shankhwar P. Prevalence and risk factors of urinary incontinence in Indian women: A hospital-based survey. *Indian J of Urol.* 2013;29(1):31-36.
- [3] Tanagho EA, McAninch JW. *Smiths General Urology.* 17th ed. Tata Magraw Hill Education Private limited: New Delhi; 2011. Pp. 473.
- [4] Bodhare TN, Valsangkar S, Bele SD. An epidemiological study of urinary incontinence and its impact on the Quality of life among women aged 35 years and above in a rural area. *Indian J Urol.* 2010;26(3):353-58.
- [5] Guin G, Choudhary A, Dadhick R. Prevalence of SUI and its associated risk factors among females attending tertiary referral center. *Int J reprod Contracept Obstet Gynecol.* 2018;7(6):2115-19.
- [6] Aoki Y, Brown HW, Brubaker L, Cornu J, Daly JV, Cartwright R. Urinary incontinence in women. *Nat Rev Dis Primers.* 2017;3:17042.
- [7] Priscilla L, Karen BM. *Medical-Surgical Nursing Critical thinking in client care.* 2nd ed. Upper Saddle River: New Jersey publication; 2000.
- [8] Ganapathy T. Impact of UI on Quality of life among rural women. *Muller J Med Sci Res.* 2018;9:71-77.
- [9] Kolodyńska G, Zalewski M, Rożek-Piechura K. Urinary incontinence in postmenopausal women causes, symptoms, treatment. *Prz Menopauzalny.* 2019;18(1):46-50.
- [10] Dellu MC, Schmitt AC, Cardoso MR, Pereira WM, Pereira EC, Vasconcelos Éda S, et al. Prevalence and factors associated with urinary incontinence in climacteric. *Rev Assoc Med Bras.* 2016;62:441-46.
- [11] Wu JM, Stinnett S, Jackson RA, Jacoby A, Learman LA, Kuppermann M, et al. Prevalence and incidence of urinary incontinence in a diverse population of women with noncancerous gynecologic conditions. *Female Pelvic Med Reconstr Surg.* 2010;16(5):284-89.
- [12] Serati M, Ghezzi F. The epidemiology of urinary incontinence: A case still open. *Ann Transl Med.* 2016;4:123.
- [13] Fante JF, Silva TD, Mateus-Vasconcelos ECL, Ferreira CHJ, Brito LGO. Do women have adequate knowledge about pelvic floor dysfunctions, a systematic review. *Rev Bras Ginecol Obstet.* 2019;41(8):508-19.
- [14] Fu Y, Nelson EA, McGowan L. Multifaceted self-management interventions for older women with urinary incontinence: A systematic review and narrative synthesis. *BMJ Open.* 2019;9(8):e028626.
- [15] Chourasia SV. Prevalence of urinary incontinence in Type 2 diabetic females aged 20-45 years: A cross-sectional study. *Int J Recent Sci Res.* 2018;9(5):26490-94.
- [16] Biswas B, Bhattacharyya A, Dasgupta A, Karmakar A, Mallick N, Sembiah S. Urinary incontinence, its risk factors, and quality of life: A study among women aged 50 years and above in a rural health facility of West Bengal. *J Midlife Health.* 2017;8(3):130-36.
- [17] Gnanajothi R, Mathew KE, Minitha M, Devadarsini S, Akila P. Assessment on effectiveness of structured teaching programme on urinary incontinence among patients at selected tertiary hospital Coimbatore. *International Journal of Research and Review.* 2020;7(5):142-60.
- [18] Mostafaei H, Sadeghi-Bazargani H, Hajebrahimi S, Salehi-Pourmehr H, Ghojzadeh 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 Urodyn.* 2020;39(4):1063-86.
- [19] Buchsbaum GM, Chin M, Glantz C, Guzick D. Prevalence of urinary incontinence and associated risk factors in a cohort of nuns. *Obstetrics & Gynecology.* 2002;100(2):226-29.
- [20] Taylor DW, Weir M, Cahill JJ, Rizk DE. The self-reported prevalence and knowledge of urinary incontinence and barriers to health care-seeking in a community sample of Canadian women. *American Journal of Medicine and Medical Sciences.* 2013;3(5):97-102.
- [21] Oliveira C, Selma M, Cansi PF, Consentio RF, Kumakura FY, Moreira GA, et al. Urinary incontinence and its relation with socio-demographic variable and quality of life. *Rev Assoc Med Bras.* 2013;59(5):460-66.
- [22] Khan S, Ansari M, Vasenwala SM, Mohsin Z. The influence of menopause on urinary incontinence in the women of the community: A cross-sectional study from North India. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology.* 2017;6(3):911-18.
- [23] Mandimika CL. Knowledge of Urinary Incontinence and Pelvic Organ prolapse In Community-Dwelling Women". 2014. Yale Medicine Thesis Digital Library. 1902.
- [24] Mary RD, Patricia LW, Loughran S, O'Sullivan E. Community-dwelling women's knowledge of urinary incontinence. *Br J Community Nurs.* 2014;19(11):534-38.
- [25] Thanga SGJ. Assess the knowledge and attitude on urinary incontinence and demonstration of kegel exercise as primary prevention among women in the rural community. *International Journal of Nursing Education and Research.* 2015;3(2):149-52.
- [26] Yuan H, Williams B. Knowledge of UI among Chinese community nurses and Community-Dwelling older people. *Health and Social Care in the Community.* 2009;18(1):82-90.
- [27] Wilschneider L, Cnaan T, Hochner H, Paltiel O. Self-reported prevalence of and knowledge about urinary incontinence among community-dwelling Israeli women of child-bearing age. *J Wound Ostomy Continence Nurs.* 2015;42(4):401-06.
- [28] Luo Y, Parry M, Huang YJ, Wang XH. Nursing students' knowledge and attitudes toward urinary incontinence: A cross-sectional survey. *Nurse Educ Today.* 2016;40:134-39.
- [29] Townsend MK, Curhan GC, Resnick NM, Grodstein F. Postmenopausal hormone therapy and incident urinary incontinence in middle-aged women. *American Journal of Obstetrics and Gynecology.* 2009;200(1):86.

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ANNEXURE -1

Structured Knowledge Questionnaire on Urinary incontinence and its Management
Total number of items- 20 .Each correct response was given a score of 1 and incorrect responses were scored as zero.

Maximum score- 20

Minimum score- 0

The scoring was classified arbitrary as follows:

Sl. No.	Classification	Score
1	Good	14-20
2	Average	7-13
3	Poor	0-6