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Obstacles to Providing Urinary Incontinence Care Among Nurses in Turkey: A Descriptive Study

Nurcan Caliskan, PhD; Emel Gulnar, RN, PhD; Sinan Aydogan, MD, RN; Sule Biyik Bayram, RN, PhD; and Nilay Yagci, PhD, RN

ABSTRACT

Nurses play an important role in identifying, evaluating, monitoring, and managing patients with urinary incontinence (UI). **PURPOSE:** This study was conducted to determine nurses' knowledge, attitudes, practices, and obstacles to managing patients' UI. **METHODS:** A descriptive study was conducted between September 2017 and February 2018 at 2 university hospitals, 2 private hospitals, and 4 state hospitals in a metropolitan city in Turkey. All registered nurses present at the times of data collection were eligible to participate. After providing informed consent, they were asked to complete a 25-item demographic characteristic questionnaire, a 7-item UI assessment and care implementation form, a 12-item form assessing obstacles faced during UI care provision, a 24-item UI knowledge questionnaire (higher scores indicated more knowledge; a score of 70% correct was considered adequate), and the Urinary Incontinence Attitude Scale. The latter comprised 15 Likert-type questions that measures attitudes toward UI symptoms, treatment, and prevention (maximum score of 60; higher scores infer positive attitude). Data were collected and entered into a software program for statistical analysis including Mann Whitney U, chi-square, and correlation tests. Incomplete forms were excluded. **RESULTS:** Of the 475 potential participants, 254 nurses completed all forms; 228 (89.8%) were women, 177 (69.7%) had a bachelor's degree, 146 (57.5%) worked in a state hospital, and 105 (41.3%) worked for 2 to 3 years. The mean score for UI knowledge was 15.22 ± 3.43 (range 0–24), and the mean attitude score was 46.40 ± 5.50 (range 15–60). The major nurse- or hospital-related obstacles to providing UI care were a lack of systems for patient follow-up (67.7%) and lack of patient education materials (60.2%). A weak positive correlation was noted between UI knowledge level and attitude ($r = 0.263$; $P = .000$). **CONCLUSION:** Although nurses had a positive attitude toward UI, UI knowledge scores were low. Lack of patient follow-up systems and patient education materials were important obstacles to nurses providing UI care. In addition to addressing these obstacles, postgraduation evidence-based UI education for nurses is needed to optimize care.

KEYWORDS: study, nursing, attitude, knowledge, urinary incontinence

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POTENTIAL CONFLICTS OF INTEREST: none disclosed

Urinary incontinence (UI) can be experienced by any individual at any age.^{1–3} A cross-sectional, community-based study³ (N = 305 women) showed that because UI can cause emotional problems, it may limit the physical and social lives of individuals.^{1–3} According to cross-sectional and descriptive studies,^{4,5} UI impairs the patient's quality of life despite not being a life-threatening health prob-

lem; a cross-sectional study⁶ has shown individuals with UI are generally embarrassed about their condition and may avoid seeking treatment.

Nurses are known to play an important role in identifying, evaluating, monitoring, and preventing patients from experiencing UI. A descriptive study⁷ conducted among 756 health care providers showed their knowledge, attitudes, and

practices, as well as their competency in this field, are of high importance to improving patients' quality of life. Nurses are known to play an active role in providing cost-efficient, conservative treatment that entails bladder training and pelvic floor exercises and have been shown to play a more predominant role in UI treatment than other health care professionals.^{8,9} Conservative treatment

Dr. Caliskan is an Associate Professor, Gazi University, Faculty of Health Sciences, Department of Nursing, Ankara, Turkey. Dr. Gulnar is an Assistant Professor, Kırıkkale University, Faculty of Health Sciences, Department of Nursing, Kırıkkale, Turkey. Dr. Aydogan is a research assistant, Mehmet Akif Ersoy University, Faculty of Health Sciences, Department of Nursing, Burdur, Turkey. Dr. Bayram is a lecturer, Gazi University, Ankara, Turkey. Dr. Yagci is a research assistant, Nevşehir Hacı Bektaş Veli University, Semra and Vefa Küçük School of Health, Department of Nursing, Nevşehir, Turkey. Please address correspondence to: Sule Biyik Bayram, RN, PhD, Gazi University, Ankara, Turkey; email: sulebiyik@gmail.com.

has proven successful in treating UI in 68% to 74% of cases.⁵

However, knowledge, attitudes, and practice obstacles have been found in cross-sectional and descriptive studies^{10,11} to affect how well nurses fulfill their responsibilities; the literature has shown nurses may have insufficient knowledge of UI management, treatment, prevention, and risk factors.¹⁰⁻¹² In their cross-sectional postal survey in Taiwan, Lin et al¹³ identified insufficiencies in knowledge, attitudes, and practices in UI among 195 nurses and 99 nurse assistants.

In Turkey, programs to improve incontinence care were initiated in the 2000s. Efficient fulfillment of diagnosis, treatment, and care services for individuals with incontinence was established in the 2011 Nursing Regulations as part of the duties of a stoma and wound care nurse,¹⁴ and professional organizations focused on continence.¹⁵ Because no certification programs for continence nursing in Turkey currently exist, general handle patients with UI.¹⁶ Some universities try to meet the need for certification by offering urogynecology nursing classes in postgraduate nursing programs.¹⁷ In their cross-sectional, descriptive study of the knowledge, attitudes, and behaviors of 304 health care professionals in Turkey with regard to implementing and teaching pelvic floor muscle exercises, Mamuk et al¹⁸ reported 56.6% of study participants were completely knowledgeable about the exercises, and 68.1% of them acquired that knowledge over the course of their education. As essential members of multidisciplinary teams, nurses, consultants, researchers, practitioners, coordinators, and trainers have been shown to have an important place in the incontinence field.¹⁹

In their systematic review of 12 randomized controlled studies on the role of nurses in continence care, DuMoulin et al⁵ reported nurses improved the results of care for patients with incontinence and achieved patient satisfaction. Nurses that admittedly lack UI knowledge may limit what questions patients ask.²⁰ Nurses should have sufficient knowledge of and positive

attitudes toward UI to prevent these negative consequences and encourage patients with UI complaints to seek assistance.^{20,21} Knowledge, attitudes, and practice are correlated and affect each other negatively or positively; confidence in the ability to help enhances interest and concern. Knowledge alone is not sufficient for developing positive behaviors; a positive attitude is necessary to put knowledge into practice.²² The literature¹⁰⁻¹³ notes that although nurses have positive attitudes regarding UI, there is a gap between knowledge and practice; practice falls short.

The literature in Turkey lacks sufficient studies of nurse knowledge, attitudes, and practices pertaining to UI and related obstacles. This study was conducted to rectify this gap and addressed the following research questions:

1. What is the level of UI knowledge among nurses?
2. What are nurses' attitudes toward UI?
3. What are nurses' practices concerning UI?
4. What obstacles do nurses experience/perceive when caring for a patient with UI?
5. Are there differences between nurses' demographic characteristics and knowledge of and attitudes toward UI?
6. Is there any correlation between nurses' UI knowledge and attitudes?

METHODS

Study design. This descriptive study was conducted between September 15, 2017, and February 15, 2018, to identify nurses' knowledge, attitudes, and practices pertaining to UI and related obstacles. The study sample comprised 475 nurses employed in intensive care units, urology, neurology, and neurosurgery inpatient services and urology, gynecology, and obstetrics outpatient clinics in 2 private, 4 state, and 2 university hospitals in a metropolitan city in Turkey.

Inclusion criteria stipulated participants must be registered nurses and agree to participate in the study. The recruited nurses were informed of the

KEYPOINTS

- Nurses play an important role in assessing the presence of urinary incontinence (UI) and implementing UI management strategies.
- Nurses from 8 hospitals in Turkey participated in a study to assess general nurses' knowledge about and attitude toward UI as well as common UI assessment and management practices.
- Most nurses had not received any postgraduate UI education, had a positive attitude toward UI and low overall knowledge scores, and cited several system obstacles to providing patient care.
- Nursing education and hospital system/resource improvements may help optimize UI care.

purpose and plan of the study, and written consent was obtained from all nurses.

Data collection. The data collection form comprised 4 sections covering demographic characteristics, implementation, knowledge, and obstacles to care (see Table 1). These sections were developed by the researchers based on the existing literature.^{6,7,10,12} The descriptive characteristics section contained 25 questions about nurses' age, experience, employment unit, postgraduate specialty training in UI, care offered to incontinence patients, and methods used for incontinence treatment. The implementation section contained 7 questions about using an assessment tool for UI and nursing interventions practiced. The obstacles section contained 12 items about the obstacles reported by nurses in offering care for UI patients; nurses were asked to respond *agree*, *disagree*, or *no idea*. No total score was used when evaluating the obstacle questions; evaluation was based on the answers to each item. The UI knowledge section was developed by the researchers based on the existing literature^{6,7,10,12} and included 24

TABLE 1. PARTICIPANT CHARACTERISTICS AND URINARY INCONTINENCE (UI) PRACTICES

CHARACTERISTICS	N (%)
GENDER	
FEMALE	228 (89.8)
MALE	26 (10.2)
EDUCATIONAL ATTAINMENT	
HIGH SCHOOL	34 (13.4)
ASSOCIATE'S DEGREE	27 (10.6)
BACHELOR'S DEGREE	177 (69.7)
MASTER'S DEGREE	15 (5.9)
DOCTORATE	1 (0.4)
WORKPLACE	
STATE HOSPITAL	146 (57.5)
UNIVERSITY HOSPITAL	81 (31.9)
PRIVATE HOSPITAL	27 (10.6)
DURATION OF EMPLOYMENT	
≤1 YEAR	83 (32.7)
2–3 YEARS	105 (41.3)
4–5 YEARS	50 (19.7)
6–10 YEARS	16 (6.3)
POSTGRADUATE EDUCATION ON UI^a	
YES	27 (10.6)
NO	227 (89.4)
EVALUATE PATIENTS FOR INCONTINENCE	
YES	135 (53.1)
NO	119 (46.9)
USE TOOLS TO EVALUATE UI^a	
YES	19 (7.5)
NO	235 (92.5)
PROVIDES NURSING INTERVENTION FOR UI PATIENTS	
YES	110 (43.3)
NO	144 (56.7)
WILLING TO SPECIALIZE IN INCONTINENCE CARE NURSING	
YES	78 (30.7)
NO	176 (69.3)

questions measuring nurses' knowledge of UI and UI types, which conditions lead to incontinence, the effects of UI on the individual, and treatment (see Table 2). The 24 questions comprised 12 true and 12 false statements to which participants responded *true*, *false*, and *I don't know* (*I don't know* responses were scored as false). Correct answers were given 1 point and incorrect answers were given 0 points, yielding a range of possible scores from 0–24 points. Participants who correctly answered 70% or more of the knowledge questions were considered by the authors to have sufficient knowledge; Cronbach's alpha was 0.70. Four (4) experts were consulted when preparing the data collection form, and it was finalized in line with their opinions. The content validity of the data collection form was 0.84.

Urinary Incontinence Attitude Scale (UIAS). This scale was developed by Yuan et al.²¹ and validity and reliability testing for use in Turkey was conducted by Ugurlucan et al.²³ The instrument comprises 15 questions on attitudes toward UI measured on a 4-item Likert-type scale. Items 1 through 4 measure attitudes toward lower urinary tract symptoms, item 5 measures attitude to prevention of urinary incontinence; items 6 through 10 measure attitude toward treatment, and items 11 through 15 measure attitude toward UI management. Scores range from 15 to 60 points; higher scores indicate a positive attitude. Yuan et al.²¹ determined the Cronbach's alpha values to be 0.65 for nurses and 0.70 for community members. In terms of the validity and reliability of the Turkish translation of the scale, the Cronbach's alpha value was 0.72.²³ In this study, the Cronbach's alpha value was 0.70 and considered acceptable.

Ethical considerations. Approval for the study was obtained from the Clinical Studies Ethical Board (Approval No. 02, dated 10.02.2017), and consent was obtained from the respective institutions for the study. The nurses were informed of

the purpose of the study and the study plan, and their informed consent was obtained before starting the study. The participants were asked not to write their names on the data collection forms, and confidentiality was maintained by assigning a number to each form.

Data collection/procedure. The researchers consulted with nurses in charge of the clinics and arranged suitable hours to reach all nurses for appointments. At the predetermined times, the study purpose was explained to the study volunteers, and persons who agreed to participate provided their written informed consent and completed the data collection forms. Completion of the questionnaires took an average of 15 to 20 minutes.

Data analysis. Data were input directly from the study instruments into SPSS, version 21 (IBM Corp, Armonk, NY), and analyzed by 2 researchers. The third researcher controlled the data and removed surveys from the analysis if 2 or more items of data were missing. The knowledge scores of the participants were obtained by summing the point scores for 24 items, and the attitude scores were calculated using the score obtained for the 4-item Likert-type scale, ranging between 15 and 60 points. Higher scores reflected greater knowledge and more positive attitudes. Frequency, ratio, mean, and standard deviation values were calculated for the descriptive statistics. The Mann-Whitney *U* test and the Kruskal-Wallis test were used for independent samples for the knowledge questions and total UIAS scores according to the independent variables. Spearman's correlation was used to determine the correlation between knowledge and attitude scores. Statistical significance was accepted at $P < .05$.

RESULTS

Of the 475 potential nurse participants, 279 nurses participated and 254 returned completed surveys, a return rate 53.47%. Of these, 228 (89.8%) were women, 177 (69.7%) had a bachelor's degree, 146 (57.5%) worked in a state hospital, the majority (105; 41.3%) worked for 2 to 3 years, 27 (10.6%) received postgraduate specialty training in UI, 135

TABLE 2. URINARY INCONTINENCE KNOWLEDGE QUESTIONNAIRE

	INFORMATION	TRUE	FALSE	NOT KNOW
1	Urinary tract infection may cause urinary incontinence.			
2	Urinary incontinence is a part of normal life over 65 years. (Incontinence is a normal part of aging).			
3	Antihypertensive drugs, anxiety or sleep medications can cause urinary incontinence.			
4	Urinary incontinence may occur after prostate surgery.			
5	Diseases such as diabetes mellitus, stroke, Parkinson's can cause urinary incontinence.			
6	Urinary incontinence may be caused by coughing, sneezing, or running.			
7	Perianal sutures may cause urinary incontinence.			
8	Involuntary urinary incontinence is called urinary incontinence.			
9	Involuntary urinary incontinence is called stress urinary incontinence after a strong need to urinate.			
10	Mixed urinary incontinence is usually seen in immobilized patients.			
11	A 54-year-old female patient reported "very little urine leakage when exercising" and patient had urge incontinence.			
12	Urinary incontinence is most common in men			
13	Urinary incontinence can only be treated by surgical intervention.			
14	Urinary incontinence is not related to a person's weight.			
15	Regarding urinary continence and bladder health, regulation of fluid intake, smoking cessation, weight loss, and constipation prevention are important.			
16	Pelvic floor muscle exercise should be included in urinary incontinence treatment.			
17	Drug therapy is not effective in the treatment of urinary incontinence.			
18	Prevention is a secondary method used in the treatment of urinary incontinence.			
19	Conservative treatment is only effective in the prevention process if it is provided before urinary incontinence occurs.			
20	If fluid intake is restricted, incontinence decreases.			
21	Urinary incontinence limits the individual's social life.			
22	Urinary incontinence limits the individual's daily life activities and sexual life.			
23	Urinary incontinence does not cause an individual to become irritable, anxious and depressed.			
24	Urinary incontinence affects the quality of life of individuals.			

(53.1%) reported they evaluated patients for incontinence, and 19 (7.5%) used tools while evaluating the patient for incontinence (see Table 1).

When seeking to help UI patients, nurses reported the following obstacles: lack of patient follow-up systems (67.7%), patients failing to perform tasks such as pelvic floor muscle exercise at home (66.9%), patients' lack of interest (61%), and lack of training/educational material for patients (60.2%) (see Table 3).

The nurses' mean score for UI knowledge was 15.22 ± 3.43 . Their total mean score for attitudes toward UI was 46.40

± 5.50 . Their mean scores on the subdimensions of this scale were 12.86 ± 2.32 for attitudes toward lower urinary tract symptoms, 3.03 ± 0.89 for prevention, 14.59 ± 2.11 for treatment, and 15.90 ± 2.95 for management (see Table 4).

Nonparametric tests were applied because the total scores for nurse knowledge levels and attitudes were not normally distributed. The mean rank scores for female nurses' knowledge were significantly higher than those of male nurses ($P = .077$). The mean rank scores for knowledge level and overall attitude were significantly higher among persons who evaluated patients

for UI, undertook nursing interventions, and were willing to specialize in UI than others who were not willing to specialize ($P < .0001$). No statistical difference was found between the knowledge levels and total attitude scores of the nurses based on educational level ($P = .242$) or work experience ($P = .258$; see Table 5).

A weak positive correlation was found between knowledge levels and attitudes of the nurses concerning UI ($r = 0.26$, $P = .001$), a very weak positive correlation was found between nurse UI knowledge levels and prevention ($r = 0.13$; $P = .026$), and a weak positive correlation

TABLE 3. OBSTACLES TO URINARY INCONTINENCE (UI) CARE

OBSTACLES ^a	N (%)
LACK OF SYSTEMS FOR PATIENT FOLLOW-UP	172 (67.7)
PATIENT NOT COMPLETING UI TREATMENT TASKS AT HOME	170 (66.9)
PATIENT LACK OF INTEREST	155 (61.0)
LACK OF PATIENT EDUCATION MATERIALS	153 (60.2)
LACK OF THE PHYSICAL SPACE IN THE HOSPITAL TO EVALUATE AND TRAIN PATIENTS	146 (57.5)
UI PATIENTS NOT BEING REFERRED TO NURSES IN OUTPATIENT CLINICS	140 (55.1)
LACK OF PATIENT STANDARD RECORD FORMS	130 (51.2)
LACK OF UI TRAINING FOR NURSES	127 (50.0)
TREATMENT BEING RENDERED BY PHYSICIANS	86 (33.9)
UI TREATMENT IN LONG-TERM NURSING CARE	76 (29.9)
NURSES NOT BEING ASSIGNED TO PROVIDE UI CARE	44 (17.3)

^aPercentage based on n because of multiple answers

TABLE 4. KNOWLEDGE AND ATTITUDE SCORES

CHARACTERISTICS (NUMBER OF QUESTIONS)		SCORE RANGE ACHIEVED	MEAN±SD
KNOWLEDGE LEVEL TOTAL SCORE		0–24	15.22±3.43
ATTITUDE LEVEL TOTAL		15–60	46.40±5.50
ATTITUDE SUBDIMENSIONS	Attitudes toward lower urinary tract symptoms (4)	4–16	12.86±2.32
	Prevention (1)	1–4	3.03±.89
	Treatment (5)	5–20	14.59±2.11
	Management (5)	5–20	15.90±2.95

was noted between nurse knowledge levels in relation to UI and management ($r = 0.28$, $P = .001$) (see Table 6).

DISCUSSION

The knowledge, attitudes, practices, and competencies of nurses who play an active role in UI management affect patient care quality and satisfaction and improve the chances of patients benefiting from cost-effective treatment.¹⁰ In this study, nurses answered 63.41% of the knowledge questions about UI correctly, indicating a less-than-optimal knowledge level. Moreover, nurses who evaluated UI and implemented appropriate nursing care measures had

high knowledge level scores compared with other nurses in this study. In their cross-sectional descriptive study of 756 health care providers in Korea, Jang et al⁷ reported a mean score for UI knowledge of 14.6 according to an accuracy rate of 81%. In their cross-sectional study of 100 nurses in China, Yuan et al¹² reported scores of 7 ± 3.5 points out of a possible 30 points on UI knowledge questions and considered this result to represent poor knowledge; the authors also reported that the nurses acquired their knowledge during their basic nursing training. A descriptive study by Henderson et al²⁴ conducted among 126 nurses in Texas reported the nurses'

average UI knowledge score was 17.4 out of 24 points. In a cross-sectional descriptive study involving 304 health care professionals in Turkey that addressed knowledge, attitudes, and behaviors with regard to the implementation and teaching of pelvic floor muscle exercises, Mamuk et al¹⁸ found nurses had the lowest level of knowledge of UI among health care professionals and that they acquired their knowledge in nursing school.

Licensed nurses offering UI treatment based on training after nursing school education have been found in a 6-month randomized controlled trial²⁵ ($N = 295$) conducted in the United Kingdom to significantly reduce the frequency of incontinent episodes. These results are similar to those obtained in other countries. In this study, the fact that nurses do not have the desired levels of knowledge suggests they are not able to provide sufficient care for UI patients. Nurses must have sufficient knowledge, as required by their roles as consultants and trainers in various fields of practice.¹⁰

In the current study, the nurses who had positive attitudes toward persons with UI and who evaluated patients for UI and implemented nursing interventions had higher attitude scores ($P < .05$). Henderson et al²⁴ reported nurses' attitude scores of 89.3 out of 120 points, belief scores of 96.3 out of 138 points, and a UI practice scale of 42.4 out of 72 points, similar to the current study. In a cross-sectional survey of 535 health care personnel in Norway, Vinsnes et al²⁰ reported that nursing assistants had more positive attitudes toward UI than registered nurses. In a study conducted with focus groups and one-on-one semi-structured interviews with 17 nurses in Scotland, Dingwall and McLafferty²² reported nurses provided insufficient care because of their negative attitudes concerning UI; the authors also detected a lack of follow-up in the UI program. In the cross-sectional study conducted by Yuan et al,²¹ nurses scored 44.64 ± 2.84 points out of 60 on the UIAS, results that parallel those of the current study.

Most of the nurses in the current study had a positive attitude toward UI treatment and management. Maintaining a

TABLE 5. DISTRIBUTION OF KNOWLEDGE AND ATTITUDE SCORES BY NURSE CHARACTERISTICS

CHARACTERISTICS	N (%)	KNOWLEDGE MEAN RANK	DIFFERENCE	ATTITUDE (MEAN RANK)	DIFFERENCE
GENDER					
FEMALE	228 (89.8)	131.22	$U^a=2116$	130.25	$U^a=2337$
MALE	26 (10.2)	94.88	$P=.016$	103.38	$P=.077$
EDUCATION					
HIGH SCHOOL	34 (13.4)	122.43	$\chi^2b=4.454$	128.57	$\chi^2b=5.477$
ASSOCIATE DEGREE	27 (10.6)	135.72	$P=.348$	115.67	$P=.242$
BACHELOR'S DEGREE	177 (69.7)	125.08		125.81	
MASTER'S DEGREE	15 (5.9)	144.43		159.77	
DOCTORATE DEGREE	1 (0.4)	253.00		225.00	
WORK-EXPERIENCE					
≤1 YEAR	83 (32.7)	126.52	$\chi^2b = 2.752$	136.77	$\chi^2b=4.036$
2-5 YEARS	105 (41.3)	122.66	$P = .431$	118.06	$P=.258$
6-10 YEARS	50 (19.7)	130.65		126.22	
≥11 YEARS	16 (6.3)	154.50		145.41	
EVALUATE PATIENTS FOR INCONTINENCE					
YES	135 (53.1)	147.45	$U^a=5339.5$	145.05	$U^a=5663.5$
NO	119 (46.9)	104.87	$P < .0001$	107.59	$P < .0001$
PROVIDES NURSING INTERVENTION FOR PATIENTS WITH INCONTINENCE					
YES	110 (43.3)	141.70	$U^a=6358.5$	149.51	$U^a=5499$
NO	144 (56.7)	116.66	$P=.007$	110.69	$P < .0001$
WILLING TO SPECIALIZE					
YES	78 (30.7)	148.51	$U^a=5225.5$	153.79	$U^a=4813.5$
NO	176 (69.3)	118.19	$P=.002$	115.85	$P < .0001$

^aMann-Whitney U test; ^bchi-square test

positive attitude is an important factor in identifying nurses' care behaviors for UI. Exhibiting a positive attitude toward UI and willingness to improve knowledge levels, as well as using resources efficiently and deploying a multidisciplinary approach, are important for creating a positive impact.^{22,24} In the current study, even though the nurses had positive attitudes concerning UI, a weak positive correlation was noted between their knowledge levels and attitudes, despite their knowledge not being at the desired level. In the study conducted by Henderson et al²⁴ among 126 nurses in Texas, the authors determined that nurses' knowledge levels concerning UI practices had

a positive impact on their attitudes and beliefs, showing knowledge, attitudes, and practices are correlated and can affect each other negatively or positively.^{22,24} Therefore, improving nurses' knowledge levels will positively affect their attitudes and practices. In the current study, persons who were willing to specialize in UI had higher knowledge levels and total attitude scores ($P < .05$).

In the current study, 53.1% of the nurses reported they evaluated patients' urinary practices. Moreover, 10.6% of the nurses received inservice training on UI, and 7.5% reported they used tools in evaluating UI patients. Studies^{5,20,25,26} have determined most nurses do not receive

any training in UI other than basic training and indicate that UI is underreported by nurses and frequently ignored.²⁰

In the current study, nurses reported a lack of patient monitoring/follow-up systems (67.7%), training materials (60.2%), and physical space for evaluating and treating the patient (57.5%) as obstacles experienced/perceived when seeking to help UI patients. No extant studies on obstacles faced by nurses in treating UI were found in the literature, even though it is necessary for nurses to have a high level of knowledge and a positive attitude and for health care providers to eliminate obstacles, enabling nurses to play a more efficient role in

TABLE 6. RELATIONSHIP BETWEEN KNOWLEDGE LEVELS AND ATTITUDE SCORES

CONCEPT (N QUESTIONS)	ATTITUDES TOWARD LOWER URINARY TRACT SYMPTOMS (4)	PREVENTION (1)	TREATMENT (5)	MANAGEMENT (5)	URINARY INCONTINENCE ATTITUDE SCALE SCORE (15)
KNOWLEDGE LEVEL	$r^a=.10$	$r^a=.13$	$r^a=.11$	$r^a=.28$	$r^a=.26$
TOTAL SCORE (24)	$P=.112$	$P=.026$	$P=.058$	$P=.001$	$P=.001$

^aSpearman's correlation coefficient

preventing and treating UI.^{22,24} Nurses who had postgraduate UI education can change patient' negative attitudes, provide instruction for bladder training and pelvic floor exercises, and present a positive attitude toward patients with UI.

LIMITATIONS

This study recruited nurses working in 2 university hospitals, 2 private hospitals, and 4 state hospitals in a metropolitan city in Turkey. Nurses with limited experience (a year or less) made up a large proportion of the sample (32.7%). This may have affected knowledge score, attitude score, and UI practice. Therefore, more experienced nurses must be included in future studies.

CONCLUSION

This study was conducted to identify nurse knowledge, attitude, and practices concerning UI as well as to determine the obstacles nurses encounter when treating UI. Although the results suggest nurses have a positive attitude toward UI, their knowledge is not at a desired level. Lack of patient monitoring/ follow-up systems and patient education materials were the most commonly cited hospital- and/or nurse-related obstacles faced by the nurses providing UI care. It is suggested that nurses attend regular evidence-based training on UI and that they also are informed on how to prepare patient educational materials. According to the results of this study, nurses need considerably better education about UI. ■

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