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Factors Affecting Urinary Incontinence in Women and Its Effect on Quality of Life

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ABSTRACT
Objective: The objective of this study is to determine the risk factors of urinary incontinence in women and its effects on quality of life. **Materials and Methods:** The descriptive and cross-sectional study was conducted with 156 female patients who applied to the Gynecology and Obstetrics outpatient clinic of a university hospital. The data were collected by the researcher using a face-to-face questionnaire method. **Results:** The prevalence of urinary incontinence was found to be 51.3%, the most common being 53.8% was stress incontinence. It was observed that the severity of incontinence increased, and quality of life scores decreased in parallel with age and number of births. There was a statistically significant correlation between vaginal delivery and having gynecologic surgery and incontinence ($p<0.05$). **Conclusion:** Urinary incontinence, which is common in women, negatively affects the quality of life. Advanced age, vaginal delivery, high number of deliveries, and history of gynecologic surgery increase the risk of urinary incontinence.
Keywords: Urinary Incontinence, Risk Factors, Quality of Life, Urogynecology, Women's Health.

Kadınlarda İdrar Kaçırmayı Etkileyen Faktörler ve Yaşam Kalitesine Etkisi

ÖZ
Amaç: Kadınlarda idrar kaçırmanın risk faktörlerini ve yaşam kalitesine etkilerini belirlemektir**. Gereç ve Yöntem:** Tanımlayıcı ve kesitsel tipteki çalışma bir üniversite hastanesinin Kadın Hastalıkları ve Doğum polikliniğine başvuran 156 kadın hasta ile gerçekleştirildi. Veriler araştırmacı tarafından yüz yüze anket yöntemi kullanılarak toplandı. **Bulgular:** Üriner inkontinans görülme sıklığı %51,3 olarak saptandı, en sık görüleni ise %53,8 ile stres inkontinanstı. Yaş ve doğum sayısına paralel olarak idrar kaçırma şiddetinin arttığı ve yaşam kalitesi puanlarının azaldığı görüldü. Vajinal doğum yapmak ile jinekolojik cerrahi operasyon geçirmek ve inkontinans arasında istatistiksel olarak anlamlı bir ilişki vardı ($p<0,05$). **Sonuç:** Kadınlarda sık görülen idrar kaçırma yaşam kalitesini olumsuz etkilemektedir. İleri yaş, vajinal doğum, doğum sayısının fazla olması ve jinekolojik cerrahi öyküsü idrar kaçırma riskini arttırmaktadır.
Anahtar Kelimeler: İdrar Kaçırma, Risk Faktörleri, Yaşam Kalitesi, Ürojinekoloji, Kadın Sağlığı.

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INTRODUCTION

Incontinence is the inability to hold or control urine or feces. Urinary incontinence (UI) is the involuntary leakage of urine. This may be due to muscle weakness or loss of bladder control. UI is quite common in women (Vaughan & Markland, 2020).

It is estimated that about one in four women worldwide have experienced urinary incontinence at some point in their lives. This rate may be higher in older women. UI is particularly common among postmenopausal women (Vaughan & Markland, 2020). With age, factors such as hormonal changes in the body, muscle weakening, and prolapse of the pelvic organs increase the risk of urinary incontinence. During childbirth, women having a normal delivery are also more likely to experience urinary incontinence (Akkus & Pinar, 2016; Patel et al., 2022). Bladder infections, urinary tract infections, and some neurological diseases may also increase the risk of UI (Patel et al., 2022).

The severity of UI depends on how often and how severely a person experiences symptoms. UI can range from mild to severe and can significantly affect the quality of life (John Goforth, 2017). Mild UI can take the form of mild urinary incontinence during coughing, sneezing, or exercise. Moderate incontinence may cause a person to leak urine slightly more frequently and may limit daily activities. Severe UI is characterized by frequent and intense urinary incontinence and can significantly affect the quality of life (Haylen et al., 2010; Wood & Anger, 2014). Determining the severity of UI plays an important role in the selection of appropriate treatment modalities. In the case of mild incontinence, methods such as exercises to strengthen the pelvic floor muscles or bladder training may be useful, whereas severe incontinence may require surgical interventions or other advanced treatment options (Bostancı et al. 2015). A systematic review of the strength of the association between UI and quality of life concluded that UI is strongly associated with poor quality of life. (Pizzol et al., 2021). The literature shows that women with urinary incontinence have a significantly lower quality of life than women without urinary incontinence. Significant deteriorations in areas such as physical, emotional and social functioning, psychological well-being and general quality of life have been reported. The results of the studies show that urinary incontinence seriously affects the quality of life of women and this effect is more pronounced in untreated urinary incontinence (Åhlund et al., 2020; Magnani et al., 2019; Nygaard et al., 2018).

In line with these findings, it was aimed to contribute to the literature by determining the risk factors of UI in women and their effects on quality of life.

Research questions

- Is there a relationship between some characteristics of women and urinary incontinence?
- Is there a relationship between the severity of urinary incontinence and quality of life?

MATERIALS AND METHODS

Type of research

It is a descriptive cross-sectional study.

The research was conducted at the Gynecology and Obstetrics Polyclinic of a university hospital between September 2022 and February 2023, after receiving ethics committee approval and institutional permission.

Population and sample

The polyclinic where the study was conducted operates on weekdays and during working hours. The population of the study consisted of patients over the age of 18 who applied to the Gynecology and Obstetrics Polyclinic, and the sample consisted of 156 patients who met the study criteria.

Research inclusion criteria

- Being over 18 years of age
- No Turkish speaking or hearing impairment
- Volunteering to participate in the study

Research exclusion criteria

- Mentally retarded
- Turkish speaking and hearing impaired

Data collection tools

***Personal Information Form*:** By reviewing the relevant literature on the subject (Batmani et al., 2022; İlçioğlu et al., 2018; Karaca & Demir, 2019; Ninomiya et al., 2018; Suhr & Lahmann, 2018; Vaughan & Markland, 2020) the personal information form prepared by the researcher consisted of a total of 13 questions inquiring about socio-demographic characteristics (age, gender, BMI, marital status, educational status, number, and type of births, smoking status, etc.) and disease-related characteristics (history of surgery, presence and type of UI, treatment status, etc.).

Incontinence Severity Index (ISI): Developed by Sandvik et al. and applied to women with urinary incontinence, the "ISI" is a universally accepted, easily applied, short, and simple index. (Sandvik et al., 1993). Turkish validity and reliability were conducted by Hazar Uyar and Şirin in 2008. (Hazar & Şirin, 2008). This index is a multiplicative score (A×B) based on 2 items. A: How often do you have urinary incontinence (less than once a month=1; several times a month=2; several times a week=3; every day and/or every night=4 points)? B: How much urine do you leak each time (drops=1; small spots=2; more=3 points)? The total score ranges from 1 to 12, with a higher score indicating a more severe UI. According to the Hazar and Şirin Cronbach alpha reliability analysis, the reliability coefficient was found to be=0.67, and in our study, α=0.73.

***The Incontinence Quality of Life Scale* (I-QOL):** Incontinence quality of life scale consists of 28 questions. The first form was developed by Wagner et al. in 1996 in the USA to determine the quality of life in patients with UI. (Wagner et al., 1996).

However, the scale was revised by Patrick, Martin, Bushnell, Yalcın, Wagner, and Buesching in 1999 and the number of questions was reduced to 22 by removing six questions with the evaluation of psychometric measurements during the creation of the European versions. (Patrick et al., 1999). Validity and reliability studies of the scale were conducted by Özerdoğan and Kızılkaya. (Özerdoğan & Kızılkaya, 2003). The Incontinence Quality of Life Scale consists of three sub-domain scales, which are limitations of behaviors, psychosocial impact, and social isolation. In the 22-item Incontinence Quality of Life Scale (I-QOL), all items are evaluated on a five-category Likert-type scale (1= very much, 2= quite a bit, 3= moderately, 4= a little, 5= not at all). When calculating the scores for the sub-dimensions and the overall scale, the sum of the items in each dimension is taken. The maximum score for the total score is 110, the maximum score for the subscale measuring restriction of behaviors is 40, the maximum score for the psychosocial impact subscale is 45, and the maximum score for the social isolation subscale is 25. A low score indicates poorer quality of life, and a high score indicates better quality of life. According to the Cronbach alpha reliability analysis of the scale, the reliability coefficient was found to be = 0.97. In our study, α=0.93.

Statistical analysis

The data obtained were evaluated in SPSS 22 package program. Kolmogorov Smirnov test was performed to check the conformity of continuous variables to normal distribution. It was observed that the data of the study were suitable for normal distribution. Mean, standard deviation, percentage, the "Independent Sample-t" test (t-table value) was used to compare the measurement values of two independent groups, and the "ANOVA" test (F-table value) method was used to compare the measurement values of three or more independent groups. Bonferroni Correction was used to find from which group the significant difference originated. The results were evaluated at a 95% confidence interval and significance was evaluated at $p<0.05$ level.

Ethical considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. Approval as received from a University Non-Interventional Clinical Practices Ethics Committee (Date 13.05.2022, Approval no:31). The patients, who constituted the sample group of the study, were informed about the purpose, scope, duration and expectations of the study, and their written consent was obtained to participate in the study in the light of the principle of volunteering and voluntarism.

RESULTS

The mean age of the participants was 35±16 years (min=18, max=84), 67.9% were married and 24.3% were literate. The number of children was 33.1% with 2 children and 63.1% had a normal delivery. At the time of hospital admission, 17.9% had a prediagnosis of metrorrhagia and 51.3% were smokers. 43% of the participants had a history of surgery and the most common type of surgery was gynecologic surgery with 46.3% (Table 1).

In Table 2, the characteristics of the participants regarding incontinence and their treatment status were analyzed. Incontinence problems were experienced by 51.3% of the participants and the most common type of incontinence was stress incontinence with a rate of 53.8%. Thirty-five percent of the participants received treatment for incontinence and the most common treatment was medication with a rate of 32.1% (Table 2).

In Table 3, the demographic characteristics of the participants with incontinence were compared with incontinence severity and incontinence quality of life scores. Incontinence severity increased and quality of life scores decreased with increasing age and number of births (p=0.00, p=0.01, respectively). Being married, having a history of gynecologic surgery, having a normal delivery, and having a low level of education were factors that increased the severity of incontinence (p=0.02, p=0.02, p=0.04, p=0.05, respectively) (Table 3).

Table 3 compares the mean incontinence severity and quality of life scores of the participants with the type of incontinence and the treatment they received. A statistically significant relationship was found between incontinence type and mean incontinence severity and quality of life scores (t=4.47, p=0.01, t=-4.60, p=0.01, respectively). The highest mean incontinence severity score was found in mixed-type incontinence (8.2±8.6) and these participants had the lowest quality of life scores (51.6±17.6). A statistically significant relationship was found between the treatment received and the mean incontinence severity score and the mean quality of life score. While the incontinence severity score decreased in participants who received biofeedback treatment, quality of life was found to be lower in participants who did not receive treatment (t=3, p=0.03, t=-5.29 p=0.02, respectively) (Table 3).

When the incontinence quality of life and incontinence severity of participants with incontinence were evaluated, the most disturbing item in the limitation of behaviors sub-dimension was found to be "I am worried about not reaching the toilet on time" with 48.1%. In the sub-dimension of psychological impact, 33.8% of the participants said: "My incontinence problem makes me feel helpless". In the sub-dimension of straining social life, 32.5% said: "I am worried that my urinary problem will get worse as I get older". The mean incontinence quality of life score was 61±19.8 (min=22, max=109) and the mean incontinence severity score was 5.1±3.4 (min=1, max=12) (Table 4).

Table 1. Examination of the demographic data of the participants (n=156).

Variables	n	%*
Educational status		
Illiterate	16	15.5
Literate	24	23.3
Primary education	18	17.5
High school	20	19.4
Undergraduate education	25	24.3
Job		
Officer	23	14.7
Health Worker (Doctor, Nurse, Psychologist)	18	11.5
Self-Employment	32	20.5
Housewife	75	48.2
Student	8	5.1
Marital status		
Single	50	32.1
Married	106	67.9
Mode of birth		
Caesarean section	24	23.3
Normal birth	65	63.1
Caesarean+normal delivery	14	13.6
Number of children		
1 child	25	24.3
2 children	34	33.1
3 children	21	20.4
4 children and above	23	22.2
Preliminary diagnosis		
Metrorrhagia	28	17.9
Cervix ca	11	7.1
Menopause	16	10.3
Vaginal bleeding	14	9
Control purpose	14	9
Vaginal infection	17	10.9
Thickening of the endometrium	3	1.8
Other (fibroids, polyps, ever cyst, cystocele)	53	34
Cigarette use		
Yes	72	51.3
No	84	48.7
Surgery history		
Yes	67	43
No	89	57
Type of surgery		
GIS	22	32.8
Gynecological	31	46.3
Endocrine	6	9
Other	8	11.9
Variables	**Mean± SD**	**Min-Max**
Age	35±16	18-84

*****Column percentage.

Table 2. Evaluation of the participants in terms of incontinence (n=80).

Variables	n	%*
Presence of incontinence		
Yes	80	51.3
No	76	48.7
Incontinence type		
Urgency	14	17.5
Stress	43	53.8
Mixed	23	28.7
Incontinence treatment status		
Yes	28	35
No	52	65
Type of treatment received		
Medication Therapy	9	32.1
Kegel Exercise	8	28.6
Biofeedback	6	21.4
Acupuncture	5	17.9

*Column percentage.

Table 3. Comparison of demographic characteristics, incontinence severity and incontinence quality of life scores of participants with incontinence (n=80).

Variables	n	Incontinence Severity Total Score mean± SD	Significant Difference	Incontinence Quality of Life Total Score mean± SD	Significant Difference
Age					
Under 50 years old (1)	56	4.32±2.89	2>1	62.98±11.18	
Over 50 years old (2)	24	8.29±8.3		58.25±25.09	
		t=-3.17. **p=0.00***		t=-0.97. p=0.33*	
Marital Status					
Married (1)	51	6.37±6.2	1>2	59.54±19.5	
Single (2)	29	4±3		65.10±20.2	
		t=-1.20. **p=0.02***		t=-1.44. p=0.16*	
Cigarette Use					
Yes (1)	25	5.16±3.5		62.23±21.6	
No (2)	55	6.28±8.2		60±15.4	
		t=-0.85. **p=0.39***		t=-0.44. p=0.65*	
Number of Births					
Not given birth (1)	30	3.7±2.7		65.7±15.9	
1 birth (2)	14	5.5±3.5	4>5>3>2>1	56.6±23.9	4>5>2>1>3
2 births (3)	15	5.1±3.3		72.6±22.2	
3 births (4)	6	11.5±15.5		50.7±16.2	
4 or more births (5)	15	7±4		51.3±14.9	
		F=3.32 **p=0.01****		F=3.58. **p=0.01****	
Mode of Birth					
Not given birth (1)	30	3.7±2.7		65.7±15.9	
Caesarean Section (2)	16	4.8±2.9	3>4>2>1	60±20.5	
Normal Birth (3)	31	7.5±7.5		43±18.5	
Normal+Caesarean (4)	3	7±5.6		61.6±19.8	
		F=2.81. **p=0.04****		F=1.41. p=0.24**	
Education Status					
Illiterate (1)	8	7.87±3.2		56.3±12.9	
Literate (2)	12	5.5±3.6		56.9±22.9	
Primary Education (3)	12	9±11.4	3>1>2>4>5	58.3±19.7	
Secondary Education (4)	25	4.4±2.5		63.56±20.8	
Undergraduate (5)	23	4±3.4		65.4±19.6	
		F=2.46. **p=0.05****		F=0.65 p=0.62**	
History of surgery					
Yes (1)	41	6.9±6.9	1>2	61.7±22.8	
No (2)	39	4.1±2.7		61.4±16.4	
		F=5.46. **p=0.02****		F=0.00. p=0.94**	
Incontinence Type					
Urgency (1)	14	3.9±3.3	3>2>1	67.9±21.7	3>2>1
Stress (2)	43	4.6±2.8		64.9±18.7	
Mixed (3)	23	8.2±8.6		51.6±17.6	
		t=4.47. **p=0.01****		t=-4.60. **p=0.01****	
Treatment Received			2>3>1>5>4		
No treatment (1)	50	5±3.3		57.3±10.1	3>4>5>2>1
Medication (2)	9	10±12.7		61.7±32.8	
Kegel Exercise (3)	12	5.5±4.5		75.3±30.7	
Biofeedback (4)	3	2.3±0.6		71.7±21.5	
Acupuncture (5)	6	4.7±2.2		64.5±23	
		t=3. **p=0.03****		t=-5.29 **p=0.02****	

*Student's t-test, ** One Way ANOVA

Table 4. Evaluation of incontinence quality of life and incontinence severity in participants with incontinence (n=80).

Variables	Too much n(%)	Quite A Lot n (%)	Moderate n(%)	A bit n(%)	Nothing n(%)
Limiting Behaviors Sub-dimension					
I worry about not making it to the toilet on time	38 (47.5)	18 (22.5)	15 (18.75)	5 (6.25)	4 (5)
I worry when I cough and sneeze	29 (36.25)	23 (28.75)	14 (17.5)	6 (7.5)	8 (10)
When standing up after sitting down, I must be careful	18 (22.5)	28 (35)	13 (16.25)	7 (8.75)	14 (17.5)
For the first time, I am worried about where the toilets are in the places I visit	17 (21.25)	21 (26.25)	17 (21.25)	11 (13.75)	14 (17.5)

Table 4. Evaluation of incontinence quality of life and incontinence severity in participants with incontinence (n=80).

Variables	Too much n(%)	Quite A Lot n (%)	Moderate n(%)	A bit n(%)	Nothing n(%)
Frequent trips to the toilet are necessary for me	15 (18.75)	22 (27.5)	17 (21.25)	15 (18.75)	11 (13.75)
Because of my incontinence, I must plan every detail in advance	24 (30)	15 (18.75)	14 (17.5)	11 (13.75)	16 (20)
I have difficulty sleeping well at night	14 (17.5)	18 (22.5)	19 (23.75)	11 (13.75)	18 (22.5)
I must watch what I drink	16 (20)	21 (26.25)	12 (15)	14 (17.5)	17 (21.25)
Psychological Impact I feel depressed (depressed)	14 (17.5)	17 (21.25)	14 (17.5)	21 (26.25)	14 (17.5)
I do not feel free to leave my home for long periods of time	16 (20)	15 (18.75)	17 (21.25)	17 (21.25)	15 (18.75)
I feel frustrated because my incontinence problem prevents me from doing what I want to do	12 (15)	21 (26.25)	15 (18.75)	15 (18.75)	17 (21.25)
I am constantly preoccupied with my incontinence	21 (26.25)	20 (25)	16 (20)	6 (7.5)	17 (21.25)
My incontinence gives me the feeling that I am not a healthy person	19 (23.75)	17 (21.25)	16 (20)	9 (11.25)	19 (23.75)
I enjoy life less because of my incontinence	13 (16.25)	20 (25)	23 (28.75)	10 (12.5)	14 (17.5)
My incontinence problem makes me feel helpless	27 (33.75)	17 (21.25)	14 (17.5)	8 (10)	14 (17.5)
My incontinence problem limits my choice of clothes	16 (20)	17 (21.25)	15 (18.75)	13 (16.25)	19 (23.75)
I am worried about having sexual intercourse	15 (18.75)	14 (17.5)	20 (25)	9 (11.25)	22 (27.5)
Social life Strain I worry that others will smell urine on me	22 (27.5)	14 (17.5)	16 (20)	8 (10)	20 (25)
I am worried that my urinary problem will get worse as I get older	26 (32.5)	10 (12.5)	12 (15)	19 (23.75)	13 (16.25)
I worry about being embarrassed or humiliated because of my incontinence	18 (22.5)	19 (23.75)	19 (23.75)	8 (10)	16 (20)
I worry about wetting my pants	24 (30)	25 (31.25)	12 (15)	4 (5)	15(18.75)
I feel like I can't control my bladder	21 (26.25)	15 (18.75)	22 (27.5)	8 (10)	14 (17.5)
Variables			**Mean± SD**		**Min-Max**
Incontinence Quality of Life Score			61.6±19.8		22-110
Incontinence Severity Score			5.5±5.4		1-12

DISCUSSION

UI in women negatively affects the quality of life and has a high prevalence. In our study, the prevalence of UI in women was found to be 51.3%. When the literature is examined, it is seen that UI studies are generally conducted with the elderly female population. Murukesu et al. found the prevalence of UI in elderly women to be 19% (Murukesu et al., 2019), İlçioğlu et al. 71.5% (İlçioğlu et al., 2018), and Aly et al. reported it as 80%. In a systematic meta-analysis study evaluating the prevalence of UI in elderly women, the score of 37.1% was found (Batmani et al., 2022). The rate in older women in the literature varies between 19% and 80% as seen. In the study, the prevalence of urinary incontinence was 51.3%, which is consistent with the literature considering the average age. Low level of education (24.3% were literate), number of children (33.1% with 2 children), mode of delivery (63.1% vaginal delivery), smoking (51.3% were smokers), and history of surgery (43%) were thought to be effective in this high prevalence. The fact that 43% of those with a history of surgery had gynecologic surgery increased the risk. When the literature is examined, in parallel with the study, gynecologic surgery history is seen as a risk factor for UI because it causes damage to the pelvic floor muscles and nerves. (Batmani et al., 2022; Hage-Fransen et al., 2021; İlçioğlu et al., 2018).

In addition, as in the study, vaginal delivery causes damage to pelvic support tissues and prolapse and is often reported to trigger stress-type UI. (Aşık & Serpil, 2021; Batmani et al., 2022; Hage-Fransen et al., 2021; İlçioğlu et al., 2018).

In a study conducted on women in the USA, stress type incontinence was reported to be the most common type with 45.9%,(Abufaraj et al., 2021), but there are studies in the literature reporting that mix type UI is the most common type of UI, followed by stress type UI. (Doğan et al., 2022; Karaca & Demir, 2019; Nygaard et al., 2018). In this study, the most common type of incontinence was found to be the stress-type incontinence (53.8%) and it was thought that it may have been the most common type of UI due to the normal delivery rate (63%).

The perception of urine odor by others in individuals with UI decreases the quality of life by causing embarrassment, isolation, and depression for those with urinary incontinence. (Boylu & Dağlar, 2019).

Among the participants in the study, participants with mixed type UI had the highest incontinence severity score average (8.2±8.6) and the lowest incontinence quality of life score average (51.6±17.6). In a study conducted by Nygaard et al., it was found that mix-type UI negatively affected the quality of life in individuals with UI (Nygaard et al., 2018), while Lim et al. stated that stress-type UI negatively affected the quality of life and quality of life worsened as the severity of incontinence increased (Lim et al., 2017). However, in another study, it was found that quality of life was affected worse in people with Urgency UI (İrer et al., 2018). In addition, studies are reporting that quality of life is similar in all types of incontinence (Kaya et al., 2015).

Although UI is not a life-threatening disease, it is a common health problem that affects women physically and negatively affects their quality of life. It is also a health problem that causes deterioration in women's social and interpersonal relationships and interferes with their work and educational activities (Altınboğa et al., 2016; Rüzgar et al., 2020). In this study, 48.1% of the participants stated that they were psychologically negatively affected by urinary incontinence by saying "I worry about not being able to reach the toilet on time", 32.5% said: "I worry that my urinary problem will get worse as I get older" and 33.8% said: "My urinary incontinence problem makes me feel helpless". In parallel with the results of the study, studies in the literature have reported that urinary incontinence is a health problem that requires changes in women's daily activity routines and restrictions in various social activities, and careful planning, and these conditions have been associated with psychological well-being, depressive symptoms and impaired quality of life. (Åhlund et al., 2020; Brown et al., 2015; Magnani et al., 2019). Regardless of its type, UI negatively affects the life of the individual. Treatment of UI in women can vary depending on the severity and cause of symptoms. The frequency of UI in women can be reduced by lifestyle changes, exercise, and other treatment options (Suhr & Lahmann, 2018). It should be recognized that urinary incontinence symptoms are not among inevitable and acceptable consequences of pregnancy and childbirth. As UI can hurt women's psychological health, it is important that women should have health care in such a situation.

Limitations and Strengths

Since the center where the study was conducted is a university hospital serving a large region, it strengthens our study in terms of patient diversity. However, since the study was conducted in a single center and over a period of 6 months, the data obtained from the study cannot be generalized. This is the limitation of our study.

CONCLUSION

UI, which women may encounter at any time in their lives, negatively affects their quality of life. This effect is related to the type and severity of UI. Since there are different results in the studies about which type of incontinence affects the quality of life more, it is clear that more studies are needed on this subject. Organizing trainings on the subject within the scope of public health education will increase awareness of UI.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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None.

Author Contributions

Plan, design: RA; **Material, methods and data collection:** RA, HS, DA; **Data analysis and comments:** RA, HS, DA; **Writing and corrections:** RA, HS, DA.

Ethical Approval

Institution: Çukurova University Faculty of Medicine Non-Interventional Clinical Research Ethics Committee
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