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IDENTIFICATION OF URINARY INCONTINENCE IN PEOPLE AGED 65 AND OVER: A TURKEY SAMPLE

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ABSTRACT
Objective: This study aims to identify urinary incontinence and its prevalence in people aged 65 and over.
Methods: This descriptive study was conducted between April and June, 2017. It was conducted with 1527 volunteer people aged 65 and over who applied to A Family Health Centre. Data were collected through face-to-face interviews, using Personal Identification Form and International Consultation on Incontinence Questionnaire- Short Form (ICIQ-SF).
Results: Of all the participants, 50.7% were male, and 78.8% were aged between 65 and 74. Besides, 31.2% of them had urinary incontinence, and ICIQ-SF mean score was found 11.44 ± 5.01. The most prevalent incontinence type was found to be urge urinary incontinence. ICIQ-SF total scores of elderly people with urinary incontinence were higher in those who were aged 85 and over, who were illiterate, who did not have health insurance, and who had more than one chronic disease and multiple medicine use.
Conclusion: Urinary incontinence is a health problem which maintains its importance in people aged 65 and over. People in this age group do not express this problem because they feel shy; therefore, their quality of life deteriorates.

Keywords: Elderly, Prevalence, Urinary Incontinence

INTRODUCTION

Ageing is a change and transformation process which starts in mother's womb and continues until death. Ageing process is affected mostly by healthy lifestyle. World population has been progressively ageing thanks to the technological developments in health field, the importance given to protective health services, and the positive developments in personal lifestyle perceptions. Ageing of the population is expressed with the increase in the people aged 65 and over in the total population (Özcan & Kapucu, 2014).

The World Health Organization predicts that approximately 1.2 million people will be 60 and over in the year 2025, and this number will reach up to 2 million in 2050; and 80% of the elderly population will live in the developing countries (WHO, 2002). Our country is among the developing countries where ageing process is fast. Proportion of elderly population in Turkey was reported to be 8%, which included 43.6% males and 56.4% females. Population projections report that elderly population will increase to 10.12% in 2023, 20.8% in 2050, and 27.7% in

2075. These proportions indicate that the elderly population in our country has been increasing gradually (Beğer & Yavuzer, 2012; Institute, 2014).

Age-related physiological changes in the body system bring problems in relation to this period. Ageing brings along many problems, primarily chronic diseases, which could affect daily life activities in a negative way. Urinary incontinence problem is among the most common ones. People who assimilate urinary incontinence with ageing try to overcome this problem with personal precautions. Urinary incontinence causes various skin lesions ranging from maceration and irritation to pressure ulcer; it could also make the person become dependant by causing depression, disorders in walking functions, falling, and social isolation (Cankurtaran, Soyuer, & Akin; Kim, Yoshida, & Suzuki, 2011).

Urinary incontinence is defined by the International Continence Society (ICS) as involuntary loss of urine that is objectively demonstrable and causes social or hygienic problems (Abrams et al., 2002). Although urinary incontinence is not accepted as part of ageing, its prevalence is higher among elderly people. Studies on elderly people report urinary incontinence prevalence between 8% to 34% worldwide, this proportion reaches up to 70% in elderly people in nursing centres (Abrams et al., 2002; Ilçe & Ayhan, 2011). The number of people with urinary incontinence among elderly is not known exactly in our country, which indicates that this problem cannot be expressed. In addition, it is important to note that there is little research about elderly population in FHCs (Family Health Centres), which provide primary preventive health services. An analysis of the studies on incontinence also indicates lack of studies for men (Yaycı, 2010).

Identification of incontinence is a social, psychological and hygienic problem which involves not only the people at all ages but also those around them; and primary preventive health services, where elderly people apply most frequently, should be the units to be applied for treatment.

Various studies conducted at local level reported prevalence of incontinence between 20% and 40 %, which is based on health survey results rather than patient complaints (Dursun et al., 2014; Onur, Deveci, Rahman, Sevindik, & Acik, 2009). Studies show that despite its prevalence and serious complications especially in terms of elderly people, urinary incontinence is a problem, which is neglected especially in the units providing primary preventive health services. Health policies of our country adopt a preventive health approach. Through surveying people who apply to health institutions, it is very important to identify and report the increasing prevalence of urinary incontinence among elderly people in our country so that awareness can be raised about the issue. This study aims to identify urinary incontinence and its prevalence in people aged 65 and over who apply to FHCs.

METHODS

Research Design

This study, which is descriptive in nature, aims to identify urinary incontinence in people aged 65 and over. It was conducted between April 2017 and June 2017.

Target Population and the Participants

The study was conducted in 7 FHCs which provided primary health service in Ağrı city centre. The participants were 1527 (out of 1547) volunteer people who were aged 65 and over and who applied to these FHCs between the aforementioned dates. Exclusion criteria of the sample: Elderly people who have neurological problems such as dementia and Alzheimer, bladder cancer, paralysed, have communication problems were not involved in the study.

Data Collection

Data were collected through face-to-face interviews conducted by the researcher, using Descriptive Information Form and International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF). Descriptive Information Form: The form was prepared by the researchers in line with the related literature. Descriptive Information Form has 21 questions which aim to collect

data about gender, age, marital status, education level, fertility features, presence of chronic diseases, medicine use, presence of urinary incontinence, and issues about consulting a doctor and receiving treatment. International Consultation on Inconti-nence Questionnaire Short Form (ICIQ-SF): This form was first developed by Avery et al. (2004), and Cronbach's alpha value was found 0.95 (Avery et al., 2004). Turkish validity and reliability was performed by Çetinel et al. (2004), and Cronbach's alpha value was found 0.71 (Çetinel, Özkan, & Can, 2004). The present study found the Cronbach's alpha value as 0.77. ICIQ-SF, which is used for the identification of urinary incontinence, included 4 questions which aim to collect data about the degree, frequency, and type of incontinence within the last 4 weeks as well as the effects on quality of life. ICIQ-SF total score is obtained through Visual Analogue Scale type questions which examine the frequency and amount of incontinence and its effect on quality of life. Type of urinary incontinence was separately identified with a question which asks about the cases when urinary incontinence happens.

Data Analysis

Data were analysed in SPSS statistical programming, using descriptive statistics, Shapiro Wilk, Mann-Whitney U, Kruskal-Wallis and Spearman Correlation Tests.

Ethical Considerations

Prior to the study, necessary permissions were obtained from City Directorate of Public Health, and ethical committee approval was obtained (27/04/2017-E.10477). The participants were informed about the study, and verbal consent was obtained from those who accepted to participate in the study.

RESULTS

Of all the participants, 50.7% were male, 78.8% were aged between 65 and 74, 72.3% were married, and 56.3% were illiterate. 60.4% had medium financial level. 57.6% had a chronic disease and 32.5 % of them had more than one chronic disease, 57.6 % used medicine that should be taken regularly and 32.5% used multiple medicines (see Table 1).

Table 1 Descriptive Features of the Participants (N=1527)

Variables		S	%
Gender	Female	753	49.3
	Male	774	50.7
Age	65 to 74	1204	78.8
	75 to 84	234	15.3
	85 and over	89	5.8
Marital Status	Married	1104	72.3
	Single/Widow(er)	423	27.7
Education Level	Illiterate	859	56.3
	Literate/Primary school	468	30.6
	Secondary School	91	6.0
	High School	79	5.2
	University	30	2.0
Presence of Health Insurance	Yes	1040	68.1
	No	487	31.9
Financial Situation	Good	327	21.4
	Medium	923	60.4
	Bad	277	18.1
Presence of a Chronic Disease	Yes	879	57.6
	No	648	42.4
Chronic Disease	Hypertension	234	26.6
	Diabetes	113	12.9
	Heart Disease	53	6.0
	Cancer	20	2.3
	COPD	112	12.7
	Prostatic Hypertrophy	37	4.2

Variables		S	%
	Osteoporosis	24	2.7
	More than one chronic disease	286	32.5
Regular Medicine Use	Yes	879	57.6
	No	648	42.4
Medicine Group	Tension	234	26.6
	Diabetes	113	12.9
	Heart	53	6.0
	Cancer	20	2.3
	COPD	112	12.7
	Prostate	37	4.2
	Osteoporosis	24	2.7
	Multiple Medicine Use	286	32.5

Table 2 Distribution of Elderly Women's ICIQ-SF Total Mean Scores According to Their Fertility Features (N=753)

Variables		S (%)	Urinary Incontinence		ICIQ-SF $\overline{X}$ ±SD	U/KW
			Yes S (%)	No S (%)		
Type of Delivery	Caesarean section	6 (0.7)	0	6 (100)	-	KW:2.606
	Normal spontaneous vaginal delivery	662 (87.9)	264 (39.9)	398 (60.1)	12.04±5.15	
	Both	62 (8.2)	20 (32.3)	42 (67.7)	10.40±4.50	
	Never had delivery	23 (3.05)	7 (30.4)	16 (69.6)	10.57±6.21	
Hysterectomy	Yes	87 (11.6)	42 (43.3)	55 (56.7)	12.07±5.14	U:5179.5
	No	666 (88.4)	249 (38.0)	407 (62.0)	11.86±5.15	
	$\overline{X}$ ±SD				**ICIQ-SF Total Score** $\overline{X}$ ±SD	
Number of Pregnancies	8.14±3.27 (min.1, max. 21)	**r**			**.194***	
Number of Deliveries	7.68±2.97 (min.1, max. 21)	**r**			**.210****	

***p<0.01 | **p<0.001**

Average number of pregnancies was found 8.14±3.27, and average number of deliveries was 7.68±2.97. Of all the women who had delivery, 90.7% were found to have normal spontaneous vaginal delivery. 11.6% of the women were found to have undergone hysterectomy. An analysis of urinary incontinence according to delivery type showed that urinary incontinence existed in 39.9% of the women who had normal spontaneous vaginal delivery, in 32.3% of the women who had both types of delivery, and in 30.4% of the women who never had delivery. It was found that those who had caesarean section did not have urinary incontinence. Urinary incontinence was found to exist in 47.1% of the women who underwent hysterectomy and 37.8% of those who did not. No significant differences were found between the groups in terms of ICIQ-SF total scores; however, a significant, positive relationship was detected between the number of pregnancies and deliveries and ICIQ-SF total scores (see Table 2).

It was 31.2% of the elderly participants were found to have urinary incontinence, 54.4 % of them consulted a doctor, and 47% of those who did not consult a doctor were found to do so because they felt embarrassed. 39.1% of the participants with urinary incontinence received treatment; the treatment type was medicine for 82.8%; and 55.9% of those who received treatment was found to benefit from it. It was also found that 70% of the participants with urinary incontinence problem were not willing to receive any training about this issue (see Table 3).

Findings show that ICIQ-SF mean score of elderly people participating in the study was 11.44 ± 5.01, and the scores ranged from 0 to 22. The most common urinary incontinence type was urge type incontinence (37%) and mixed type incontinence (36.1%) (see Table 4).

An analysis of some socio-demographic and disease-related features of the elderly people with urinary incontinence and the distribution of ICIQ-SF total scores showed that scores were significantly higher in women who were aged 85 and over, who were illiterate, who had more than one chronic disease, and who used multiple medicines (see Table 5).

Table 3 Knowledge of Elderly People about Urinary Incontinence

Variables		S	%
Presence of Urinary Incontinence	Yes	476	31.2
	No	1051	68.8
Experience of consulting a doctor	Yes	259	54.4
	No	217	45.6
Reason for not consulting a doctor	Embarrassment	102	47.0
	Perceiving it normal	85	39.2
	Other	30	13.8
Having had a treatment before	Yes	186	39.1
	No	290	60.9
Type of Treatment	Exercise	9	4.8
	Medicine	154	82.8
	Surgery	23	12.4
Having benefitted from the treatment	Yes	104	55.9
	No	82	44.1
Willingness to receive training about Urinary Incontinence	Yes	143	30.0
	No	333	70.0

Table 4 Type of Urinary Incontinence and ICIQ-SF Total Mean Scores

Type of Urinary Incontinence	N	%
I never have incontinence	8	1.7
Urge Type incontinence	176	37.0
Stress Type incontinence	71	14.9
Mixed Type incontinence	172	36.1
Nocturnal Type incontinence	14	2.9
I have incontinence without any apparent reason	5	1.1
I always have incontinence	30	6.3
	$\overline{X}$ **±SD**	
ICIQ-SF	11.44 ± 5.01 (min.0, max. 22)	

Table 5 Descriptive Features of the Participants who have Urinary Incontinence and Distribution of ICIQ-SF Total Mean Scores (N=476)

Variables		S (%)		U/KW
Gender	Female	291 (61.1)	11.89±5.14	***U*:23869.0***
	Male	185 (38.9)	10.71±4.72	
Age	65 to 74	342 (71.8)	11.22±4.93	***KW*:7.088***
	75 to 84	88 (18.5)	11.30±5.25	
	85 and over	46 (9.7)	13.30±4.80	
Marital Status	Married	320 (67.2)	11.24±5.04	*U*:23339.5
	Single/Widow(er)	156 (32.8)	11.83±4.93	
Education Level	Illiterate	320 (67.2)	11.90±5.19	***KW*:10.656***
	Literate/Primary school	117 (24.6)	10.94±4.36	
	Secondary School	24 (5.0)	9.54±4.05	
	High School	15 (3.1)	8.53±5.46	
Health Insurance	Yes	307 (64.5)	11.03±4.91	***U*:22589.0***
	No	169 (35.5)	12.19±5.10	
Financial Situation	Good	85 (17.9)	10.78±5.24	*KW*:2.581
	Medium	268 (56.3)	11.44±4.99	
	Bad	123 (25.8)	11.89±4.87	
Presence of a chronic disease	Yes	361 (75.8)	11.66±5.10	*U*:18722.5
	No	115 (24.2)	10.76±4.65	
Chronic Disease	Hypertension	78 (16.4)	11.85±5.08	***KW*:16.403***
	Diabetes	34 (7.1)	10.24±4.74	
	Heart Disease	16 (3.4)	9.13±3.28	
	Cancer	8 (1.7)	12.13±5.44	
	COPD	44 (9.2)	9.93±5.14	
	Prostatic Hypertrophy	23 (4.8)	11.65±5.30	
	osteoporosis	12 (2.5)	12.33±4.66	
	More than one chronic disease	146 (30.7)	12.61±5.15	
Regular Medicine Use	Yes	361 (75.8)	11.66±5.10	*U*:18722.5
	No	115 (24.2)	10.76±4.65	
Medicine Group	Tension	78 (16.4)	11.85±5.08	***KW*:16.403***
	Diabetis	34 (7.1)	10.24±4.74	
	Heart	16 (3.4)	9.13±3.28	
	Cancer	8 (1.7)	12.13±5.44	
	COPD	44 (9.2)	9.93±5.14	
	Prostate	23 (4.8)	11.65±5.30	
	Osteoporosis	12 (2.5)	12.33±4.66	
	Multiple Medicine Use	146 (30.7)	12.61±5.15	

***p<0.05**

DISCUSSION

An analysis of the studies about elderly people shows that urinary incontinence is a common problem which affects quality of life. In their study conducted with people aged 65 and over, Burti et al. found that 38.4% of the participants had urinary incontinence (Burti, Santos, Pereira, Zambon, & Marques, 2012). Similarly, studies about elderly people living in the USA reported urinary incontinence in 15% to 30% of elderly people living in their homes and 50% of elderly people living in nursing homes (Adedokun & Wilson, 2004; Adelmann, 2004). A study conducted with

elderly people living in nursing homes in our country found that 30% of women had urinary incontinence (Arıkan, Özcan, Bardak, & Ktenci, 2002). Another study conducted with people aged over 65 found that 32.9% of men and 54.5% of women had urinary incontinence (H. Dogan, 2009). In a similar vein, in their study conducted with elderly people living in nursing homes, Cankurtaran et al. found that 36.7% of women and 32.7% of men had urinary incontinence, which caused serious effects on their quality of life (Cankurtaran et al.). Ateşkan et al. reported that 57.1% of women and 21.5% of men had urinary incontinence (Ateşkan, Mas, Doruk, & Kutlu, 2000). In their study conducted with women aged 65 and over, Kaşıkçı et al. reported that 51.6% of the participants had urinary incontinence (Kaşıkçı, Kılıç, Avşar, & Şirin, 2015). The present study found that 31.2% of the elderly people had urinary incontinence at various degrees, and 61.1 % were female. Similar to the findings of our study, prevalence of urinary incontinence was high among females. This higher prevalence can be explained with urethral length differences, pelvic floor anatomy, pregnancies, number of deliveries, and hormonal activities (Burti et al., 2012; İnci & Ergen, 2009).

Types of urinary incontinence was identified according to the responses; "I have incontinence while coughing, sneezing" and "I have incontinence while moving or exercising" responses indicate stress type incontinence, "I have incontinence while I finish peeing and button up" response indicates urge type incontinence. When the responses include both urge type incontinence and stress type incontinence, it indicates mixed type incontinence. Apart from these, "I have incontinence while sleeping" response indicates nocturnal incontinence (Ilçe & Ayhan, 2011). A study conducted by İlçe et al. reported 65.5% mixed type, 20% urge type and 12.7% stress type incontinence (Ilçe & Ayhan, 2011). Similarly, Arıkan et al. reported 72% stress type, 16% mixed type, and 8% urge type urinary incontinence (Arıkan et al., 2002). Doğan et al. reported 23.7% urge type, 6.3% stress type, and 8.8% mixed type urinary incontinence (Diokno, Estanol, Ibrahim, & Balasubramaniam, 2007). Kaşıkçı et al. reported 44.1 % urge type, 39.3% stress type, and 34.2% mixed type urinary incontinence (Kaşıkçı et al., 2015). The present study found 37% urge type, 36.1% mixed type, and 14.9% stress type incontinence. Higher urge type incontinence proportions in our study could be explained by the current chronic diseases that elderly people participating in the study have, which is regarded among risk factors.

Studies indicate that prevalence of urinary incontinence increases with the increase in age (Gunes, Gunes, & Pehlivan, 2000; Hawkins et al., 2011; Ilçe & Ayhan, 2011; Öztürk, Toprak, & Basa, 2012). The present study has also found that prevalence of incontinence increases as age increases. Prevalence of incontinence is affected by age-related factors such as limitations in movements and decrease in muscle control (Diokno et al., 2007; Öztürk et al., 2012). Results are in line with the related literature.

Studies report that urinary incontinence was more prevalent in groups with low education and socio-economic levels. Education and socio-economic level affects various processes such as an individual's need for applying health services, expectations from the health services provided, and assessment of the health service received (Burti et al., 2012; Z. Dogan et al., 2015; Hawkins et al., 2011). Similar results have been indicated in the present study, too.

Various studies indicate that prevalence of urinary incontinence increases with the increase in the number of pregnancies and deliveries (Gunes et al., 2000; Kaşıkçı et al., 2015; Kocaöz & Eroğlu, 2002). This result can be associated with the fact that pelvic floor muscles loosen in women who had delivery. Results of the present study are in line with the related literature.

Chronic diseases such as heart diseases, tension, diabetes, osteoporosis and prostate are associated with urinary incontinence (Hawkins et al., 2011; İnci & Ergen, 2009; Minassian, Stewart, & Wood, 2008). A number of studies found no relationships between urinary incontinence and diseases such as tension, diabetes, and heart diseases

(Ilçe & Ayhan, 2011; Öztürk et al., 2012). The present study also found that prevalence of urinary incontinence increases in people who have more than one chronic disease.

In their study conducted with women, Öztürk et al. found that 42.8% of women had urinary incontinence, but 69.8% of them never consulted a doctor about this complaint. When they were asked about the reason why they did not consult a doctor, 21% said "embarrassment", 64.5% said "disregard", and 15% said "other reasons" (Öztürk et al., 2012).

In their study conducted in nursing homes, Cankurtaran et al. found that although 34.5% of the participants were detected to have urinary incontinence problem, only 34.2% of them were diagnosed with urinary incontinence (Cankurtaran et al.). In a similar vein, Kök et al. found that patients who had had urinary incontinence for 8 years did not consider urinary incontinence as a health problem and thus did not apply to a health institution or receive any treatment due to this problem (Kök, Şenel, & Akyüz, 2006). 31.2% of the elderly people participating in this study had urinary incontinence, 45.6% of them did not consult a doctor, 47% of those who did not consult a doctor did so because of "embarrassment" and 39.2 % because they found this situation normal. This result could be associated with the factors that people do not perceive urinary incontinence as a life-threatening problem, they think that the problem is a natural consequence of aging, and it might cause worries about becoming socially isolated or being blamed. It could also be associated with the finding about majority of the participants' reluctance to receive training about urinary incontinence.

Urinary incontinence, as it is a health problem whose symptoms could be decreased to minimum with treatment, should be given importance particularly in FHCs, which provide primary preventive health services. Diagnosis and treatment records of elderly people should be kept regularly, and systematic monitoring should be performed with a view to increasing quality of life of this group of patients. Necessary precautions should be taken to give special training to healthcare personnel about this issue in order to improve their knowledge and skills.

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