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1.

「, 「, 「 가  
(Fultz & Herzog, 2001).

(home-bounding)

가

(room-bounding)

. ICS(International  
Continence Society, 1976)

(Kim, Kanagawa & Matsuzaki, 1999;  
Kim, 1999).

가

가

가

가

가

가

가

가

1995 1 163 , 65

65

가

(Wilson,

(Ouslander, Kane &  
Abrams, 1982. Tobin & Brocklehurst, 1986,  
Wetle et al, 1995).

Brown, Shin, Luc & Subak, 2001).

가

\*  
\*\*

2001 8 7

2001 9 12

2002 2 4

가

가

Kang(1996)

, Kim, G (1997)

가

1994

Lee, Seo Park (1994)

2

60

85.9%가 가

가

65

2000 7% (337 ) 가

2010 10%, 2020 13.2% (690 )

가

가 2025

(MOHW, 2000).

가

가

5

2.

10

(Kim, Kanagawa

& Nishimura, 1999; Kim, 2001).

1)

2)

가

3)

4)

1980

, Vetter,

Jones Victor(1988) 70

5)

14.0%,

5.0%

, Tomas, Plymat, Blannin

Meader (1980) 65

10%

3.

2

1/3

1)

:

60

C

Kim, Rhee, Kim

Chon(1997)

9.2%가 3

2)

:

, 60.3%

「

」

(ICS, International Continenence Society)

가 (1976).

1. 2) 1 가

가 가 1 가

2. Flaherty (2001)

3) (Keller, 1999)

6.01% C 24388(1999) , 가 5 가 6 0 가 1

가

60 2000 6 8 2 C 2 5

4) Bristol (Jackson, 1996) 가

298

3. 5) 15 4 가 . 4 「 「, 「가 「, 「 「, 「 가 Bristol (Jackson, 1996)

(Kim Y.H. personal communication, May 9, 2000).

4. 1)

SPSS Win 10.0 (64%) 107 (36%)  
 58.0kg 1.97  
 1) Kim(2001) 1.75  
 6 25.7%  
 2) 5.23  
 1.4(KNSO, 2000)  
 3) 가 9 가  
 14.6% 가 2  
 t-test, <sup>2</sup> - 37.7% 가  
 Circadian rhythm  
 가  
 가 6  
 가 1/4 가

<Table 1>

60 93  
 71.4 가 191

<Table 1> Demographic and Urinary Characteristics N = 298

Item	Category	Total N (%)
Demographic characteristics		
Sex	Man	107 (36.0)
	Woman	191 (64.0)
Age	Mean ± SD	71.4 ± 7.7
Weight	Mean ± SD	58.0 ± 10.5
Comorbidity	Mean ± SD	1.97 ± 0.94
Parity (n = 186)	Mean ± SD	5.23 ± 2.22
Menopause age (n = 170)	Mean ± SD	48.93 ± 4.59
Sleep time (hrs)		
	below 4	13 (4.3)
	5 x<6	64 (21.4)
	6 x<8	83 (27.8)
	8 x<10	111 (37.1)
	10 x	20 (6.7)
Urinary characteristics		
Voiding Frequency during day time †		
	under 3 times	47 (15.9)
	4-8 times	205 (69.5)
	9 times & over	43 (14.6)
Nocturia †		
	under 2 times	182 (62.3)
	2 times & over	110 (37.7)

† No respondent was excluded.

2.  
 17% (52 ) ,  
 (14%)가 (3%) Vetter  
 (1988) 70  
 14.0% Diokono, Brock, Brown  
 Herzog(1986) 60 , 13,912  
 18.9%  
 가  
 <Table 2> (t = 7.84,  
 p = .000) , ( <sup>2</sup> = 9.47, p = .002), ( <sup>2</sup>  
 = 18.34, p = .000)  
 Roe & Doll (1999, 2000)  
 Gravira (2000)  
 가  
 ( <sup>2</sup> = 10.65, p = 0.001) ( <sup>2</sup> = 4.04,  
 p = 0.046)  
 Kim (1997)  
 Miller(1995)  
 가

<Table 2> Difference in the Incidence by Age, Sex, Voiding Pattern, & Chronic Health Status

Variables	Categories	Continent (n = 247) N (%)	Incontinent (n = 52) N (%)	t or $\chi^2$	p	
Age	Mean $\pm$ SD	71.1 $\pm$ 8.0	71.5 $\pm$ 7.5	7.84	.000	
Weight	Mean $\pm$ SD	62.8 $\pm$ 10.6	55.4 $\pm$ 8.8	1.19	.200	
Sex	Man	98(33.0)	9(3.0)	9.47	.002	
	Woman	148(50.0)	43(14.0)			
Voiding pattern	Fx during day time			18.34	.001	
	under 3 times	45(15.0)	2( 1.0)			
	4-8 times	171(57.0)	34(11.0)			
Chronic Disease	9 times	27( 9.0)	16( 5.0)	0.22	.784	
	DM	present 41(13.7) not 206(68.9)	8( 2.7) 44(14.7)			
	RA	present	116(38.8)	28( 9.3)	1.69	.304
		not	131(43.8)	24( 8.0)		
	CVA	present	15( 5.0)	4( 1.3)	0.29	.702
		not	232(77.6)	48(16.0)		
	HT	present	92(30.8)	12( 4.0)	4.04	.046
		not	155(51.8)	40(13.6)		
	Heart Dz	present	41(13.7)	19( 6.3)	10.65	.001
		not	206(68.9)	33(11.0)		
	Fracture	present	58(19.4)	15( 5.0)	1.13	.478
		not	189(63.2)	37(12.3)		
	Prostate hypertrophy	present	23( 7.7)	3( 1.0)	0.77	.399
		not	224(74.9)	49(16.4)		
	Kidney Dz	present	24( 8.1)	6( 2.0)	0.29	.751
		not	221(74.4)	46(15.5)		
	Eye pain	present	87(29.1)	25( 8.4)	2.47	.087
		not	160(53.5)	27( 9.0)		
	Ear pain	present	26( 8.7)	10( 3.3)	2.70	.083
		not	221(73.9)	42(14.0)		
Head pain	present	78(26.1)	20( 6.7)	1.60	.408	
	not	169(56.5)	32(10.7)			
Leg pain	present	137(46.0)	33(11.0)	1.61	.446	
	not	109(36.6)	19( 6.4)			
Lumbar pain	present	132(44.1)	35(11.7)	3.79	.057	
	not	115(38.5)	17( 5.7)			
Chronic Symptom	Respiration difficulty	present 36(12.0) not 211(70.6)	18( 6.0) 34(11.4)	9.67	.002	
	Digestive disorder	present 67(22.5) not 179(60.1)	14( 4.7) 38(12.8)			
Fatigue	present	117(39.4)	30(10.2)	2.43	.298	
	not	128(43.1)	22( 7.4)			
Constipation	present	61(20.4)	19( 6.3)	3.77	.052	
	not	186(62.2)	33(11.0)			
Sleep disorder	present	55(18.4)	16( 5.3)	2.35	.125	
	not	192(64.2)	36(12.0)			

가 (  $\chi^2=9.67$ , p=0.002) 가 (  $\chi^2=12.02$ , p=0.000), 가 (  $\chi^2=6.55$ , p=0.010), 가 (  $\chi^2=6.69$ , p=0.010)

가  
 (  $\chi^2 = 25.09$ ,  $p = 0.000$ ), (  $\chi^2 = 24.69$ ,  $p = 0.000$ ), (  $\chi^2 = 19.89$ ,  $p = 0.000$ ), (  $\chi^2 = 3.41$ ,  $p = 0.042$ )  
 가  
 2.2% 가  
 25.5% 가  
 10% 가  
 가  
 가 20%

<Table 3>

가  
 3.  
 4.  
 1)  
 4.55(±1.55)  
 45% 가  
 Keller(1999) 가

<Table 4>

<Table 3> Knowledge concerning Urinary Incontinence N = 278

Items	Correct Answer N (%)
1. UI occurs also in young person	6( 2.2)
2. UI occurs when sneezing, coughing or running	19( 6.8)
3. UI can be treated	50(18.0)
4. UI can be prevented	57(20.5)
5. UI occurs only in the elderly	71(25.5)
6. To improve the symptom of UI, it is better to drink 1500 Ml and over of water	43(15.5)
7. If urine loss occurs before arrive the rest room, it is also UI	26( 9.4)
8. If voiding at out of chamber stool due to functional disability, it is also UI	6( 2.2)

<Table 4> The Incontinence types and Urologic Characteristics in Incontinent

Variables	Category	N	Percentage
Incontinence type	Stress UI	17	33.0
	Urgent UI	23	45.0
	Mixed UI	11	22.0
Voiding pattern	below 4 times	2	2.1
	4-8 times/day	34	69.6
Wet Episodes	9 & over times/day	16	28.3
	one & more/day	19	41.0
	one & more/week	22	48.0
	one & more/month	5	11.0
	day time only	22	48.0
	night time only	8	17.0
	day & night all	16	35.0

(Kitagawa, 1993). 「가 28.6% 가 , 4-8 , 69.6% 「 , 「 가 94% 가 , 「 가 9 28.3% 30%, 「가 , 「 가 24% < 5> , 「 가 1 41.0% , 가 1 1 48.0% , 가 48% 가 35.0%, 가 가 17.0% 52%가 3) 52 가 <Table 6> 가 2) 「 가 83.7%가 < 5> , 「 가 (65.0%) 「

<Table 5> The Provoking and Triggering Factors of UI n = 33

Item	N	Valid Percentage
Provoking factors	delivery	9 (25.7)
	uterus problem	2 (5.7)
	old age	10 (28.6)
	common cold	6 (17.1)
	muscle weakness	1 (2.9)
	arthritis	1 (2.9)
	others	4 (11.4)
Triggering factors*	light running	8 (24.0)
	sneezing & coughing	31 (94.0)
	lifting up heavy thing	8 (24.0)
	laughing loudly	10 (30.0)
	standing from the seat	8 (24.0)

\* items with multiple responses

<Table 6> The Specific Problems related to UI

Specific Problem	None	Sometimes	Often	Always	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
Urgent use of the rest room	7 (16.3)	18 (41.8)	12 (27.9)	6 (14.0)	36 (83.7)
Residual urine	15 (35.0)	18 (41.9)	8 (18.6)	2 (4.5)	28 (65.0)
Leakage before arriving	16 (36.4)	18 (40.9)	8 (18.2)	2 (4.5)	28 (63.6)
Pain at lower abdomen	19 (45.2)	19 (45.2)	3 (7.1)	1 (2.4)	23 (54.8)
Weak urine stream	24 (55.8)	9 (20.9)	3 (7.0)	7 (16.3)	19 (44.2)
Strain to continue	25 (58.1)	8 (18.6)	5 (11.6)	5 (11.6)	18 (41.9)
Lost urine to change the wear	26 (66.7)	6 (15.4)	6 (15.4)	1 (2.5)	13 (33.3)
Intermitted during voiding	29 (67.4)	8 (18.6)	3 (7.0)	3 (7.0)	14 (32.6)
Strain to start	31 (72.1)	8 (18.6)	1 (2.3)	3 (7.0)	12 (27.9)

Respondents with no answer was excluded.

가 (63.6%) 가 (GP) (Roe, Doll & Wilson, 1999).  
 가 45.2%

4)

5.

가 7.5%가 가  
 가 42.5%, 가  
 가 40% 가  
 가 92.1%, 가  
 가 7.9% 가  
 가 38.4%, 가 2-3 가 34.6% 가  
 가 88.6% 가  
 가 85%, 가  
 가 33.4%, 가  
 가 82.9%, 가  
 가 2.6% 가 78.6% 가  
 가 40.5% 가 37.5%

2)

<Table 8>  
 가 가 가 가 가  
 가 가 가 가 가  
 Gravira (2000)

<Table 7> Specific Discomforts related to Urologic Characteristics in Incontinent

Discomforts	Nothing N (%)	A little N (%)	Moderate N (%)	Severe N (%)	Total N (%)
Provoking conditions to loss	4 (11.4)	17 (48.6)	8 (22.9)	6 (17.1)	31 (88.6)
Urgent use of the rest room	6 (15.0)	24 (60.0)	3 ( 7.5)	7 (17.5)	34 (85.0)
Lost at outside	6 (15.0)	21 (52.5)	8 (20.0)	5 (12.5)	34 (85.0)
Wet wears	6 (17.1)	17 (48.6)	7 (20.0)	5 (14.3)	29 (82.9)
Nocturia	9 (21.4)	13 (31.0)	15 (35.7)	5 (11.9)	33 (78.6)
Frequent cope to UI	7 (19.4)	17 (47.2)	9 (25.0)	3 ( 8.3)	29 (71.6)
Wet pants before arriving	11 (30.6)	13 (36.1)	7 (19.4)	5 (13.9)	25 (69.4)
Present urinary conditions	15 (34.9)	14 (32.5)	11 (25.6)	3 ( 7.0)	28 (65.1)
lower abdominal pain	12 (42.9)	12 (42.9)	2 ( 7.1)	2 ( 7.1)	16 (57.1)
Incomplete emptying	15 (44.1)	10 (29.4)	9 (26.5)	0	19 (55.9)
Change wears	20 (62.5)	4 (12.5)	5 (15.6)	3 ( 9.4)	12 (37.5)
Weak urine stream	25 (69.4)	5 (13.9)	2 ( 5.6)	4 (11.1)	11 (30.6)
Strain to start	23 (69.7)	7 (21.2)	2 ( 6.1)	1 ( 3.0)	10 (30.3)
Strain to continue	22 (71.0)	2 ( 6.5)	6 (19.4)	1 ( 3.1)	9 (29.0)
Intermittency during voiding	26 (78.8)	3 ( 9.1)	2 ( 6.1)	2 ( 6.1)	7 (21.2)

This data was included with only respondent's answer.

<Table 8> The Effect of Incontinence on The Daily life

Effects	Frequency	Percentage
Frequent use of the rest room	30	66.7
Avoid the place not be able to access the rest room with ease	12	26.7
Drink with small amount	9	20.0
Depressed	6	13.3
Stop the current exercise	4	8.9
Sorrow	3	6.7
Dislike to meet others	1	2.2
Dislike to be with their spouse	0	0
Others	1	2.2

가 4) (  $\chi^2 = 10.65, p = 0.002$ ) (  $\chi^2 = 3.90, p = 0.034$ ) (  $\chi^2 = 9.67, p = 0.002$ )

가 Kim, Kanagawa Saito 가 가 40.9% 가 가 가 가 2.2% 가 10% 가 20% 가 25.5% 가 가 가 가 45%, 33%, 22% 가 41.0% 가 48.0% 가 48%, 가 17.0% 가 1) 9 88.6% 가 가 가 37.7% 가 14.6%, 2 가 가 85%, 가 2) 17% (52 ) , (14%)가 가 78.6% 가 37.5% 가 3) (t=7.84, p=.000) , (  $\chi^2 = 9.47, p = .002$ ), (  $\chi^2 = 18.34, p = .000$ )

1) 1, 3

가

2)

가

3)

가

4)

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- Abstract -

### Prevalence of Urinary Incontinence and Other Urologic Symptoms in a Community Residing Elderly People\*

Kim, Jeung-Im \*\*

**Purpose:** The purpose of this study was to measure the prevalence of urinary incontinence (UI), urologic symptoms, chronic health problems they have, and to explore whether the differences in incidence of UI were by age, sex, voiding pattern, and chronic health problems.

\* This research was supported by the Research Fund of Soonchunhyang University

\*\* Full time Instructor. Department of Nursing, Soonchunhyang University.

Method: 298 subject were selected, age range from 60 to 94 years residing in one city, in republic of Korea. Data was collected presence of UI, urologic symptoms, chronic health problems, knowledge, and the discomfort with incontinent. Collected data was analyzed with frequency, percentage, t-test, and  $\chi^2$ -test. Result: The results of this study are as follows: 1. Mean age was 71.4 years. Prevalent rate of UI was 17.0%, woman showed more than man. 2. UI incidence was significant in age ( $t=7.84$ ,  $p=.000$ ), sex ( $\chi^2=9.47$ ,  $p=.002$ ), and voiding frequency ( $\chi^2=18.34$ ,  $p=.000$ ). Also, UI incidence was significant relationship with chronic health problem of heart disease ( $\chi^2=10.65$ ,  $p=0.001$ ), hypertension ( $\chi^2=4.04$ ,  $p=0.046$ ) and respiratory problem ( $\chi^2=9.67$ ,  $p=0.002$ ). 3. The UI was grouped into urgent

incontinence (45%), stress incontinence (33%), and combined (22%). UI occurred during the daytime 48% and 17% at night. 4. Only 9.8 % of the UI seek advice and/or treatment for their symptoms, almost 90 % remained untreated due to lack of knowledge or improper information. 5. The discomforts due to their UI was no significant difference in their condition, the urgent use of the rest room, leaking urine, and nocturia. Conclusion: This study suggests that 1 year and 3 year follow-up study is needed to compare health status of UI. Also suggests intervention study for urologic discomfort of incontinent and behavioral education for the elderly are needed.

Key words : Urinary Incontinence, The Elderly