



RESEARCH ARTICLE

THE RELATIONSHIP BETWEEN URINARY INCONTINENCE, GERIATRIC DEPRESSION AND LONELINESS IN ELDERLY INDIVIDUALS

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ABSTRACT

Background and Aim: Nowadays, fact of agedness gradually increases. Urinary incontinence is seen as agedness problem can be considered to affect development of depression and loneliness in elderly individuals. This research is designed in descriptive way and it aims to determine relationship between urinary incontinence, geriatric depression and loneliness in elderly individuals.

Methods: This research was made in Geriatric Polyclinic of a hospital from Ankara between the date of November 2014 and February 2015. The sample of this research was formed 200 elderly individuals who applied to Geriatric Polyclinic. During the collection of data, Descriptive Data form, ICIQ-SF, GDS-K and UCLA-LS were used. The data obtained were analyzed by using number, percent, frequency, mean, median, standard deviation, Kruskal Wallis, Mann Whitney U test corrected by Bonferroni and spearman correlation test in SPSS 15 package program. The significance level was taken as $p < 0.05$.

Results: In elderly individuals, there is positively but weak relationship between geriatric depression and urinary incontinence ($r=0.215$; $p < 0.05$). In this research, in elderly individuals there is significantly positive relationship between geriatric depression and loneliness. %29, 5 of elderly individuals were between 77-82 age group. Social activity status, health perception, existence of chronic diseases and daily activity status were related with urinary incontinence ($p < 0.05$). Geriatric depression was affected by marital status, number of children, people living with the individual, social activity status, health perception, existence of chronic diseases and daily activity status ($p < 0.05$). Also number of children, people living with the individual, social activity status, health perception and daily activity status were related with loneliness ($p < 0.05$).

Conclusion: In researching urinary incontinence problem of elderly individuals, geriatric depression and loneliness also should be considered. In protecting elderly individuals' health status and preventing diseases, individual should be dealt as a whole.

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INTRODUCTION

Senility is variation and transformation term, after reaching adulthood in terms of biological functions that is time frame from finishing reproduction period to death (Beğner and Yavuzer, 2012; Duyar *et al.*, 2008). Senility period is affected by individualistic and environmental factors. These factors include elderly individual's education status, income level, job, health status, social participation, loss of social status and attitude toward senility (Milli Eğitim Bakanlığı *et al.*, 2015; Konak *et al.*, 2005). In Turkey, the ratio of elderly population (ages of 65 and above) is 7.7 % in 2013. According to population indicators, this ratio is estimated to rise to 10.2% in 2023, 20.8% in 2050, and 27.7% in 2075. Depending on

increment of elderly population in Turkey and the world, health of elderly individuals come into prominence (Beğner and Yavuzer, 2012). Elderly health is sophisticated concept with physical, mental and social features. Senility is a process when diseases related cellular atrophy and recessions in functions develop and also psychological and social dimensions of senility can be evaluated (Psikososyal açıdan yaşlılık, 2009). According to this, negative changes in physical health of elderly individual can affect his/her mental health (Psikososyal açıdan yaşlılık, 2009; Kılınç, 2011). According to previous researches, it is stated that the one of the most common physical complains is urinary incontinence (UI) (Kılınç, 2011; Ateşkan *et al.*, 2000; Pamela *et al.*, 2013). Urinary incontinence is described as urinating involuntarily. According to researches related this topic, although incident of urinary incontinence passes 50% in elderly individuals, behavior of seeking help ratio is found quite low (Ateşkan *et al.*, 2000; Doğan, 2009).

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Although urinary incontinence is widespread among elderly individuals, they cannot express this because of sense of shame (Ateşkan *et al.*, 2000; Doğan, 2009; Özcan and Kapucu, 2014). Thus, it is considered that elderly individuals who have this problem can hide this and try to cope with by itself. Because elderly individuals evaluate urinary incontinence as a natural result of senility, detection of this problem get difficult. Among health care personnel, because nurses spend time with elderly individuals further, they can determine this problem more easily. So, in society, about identification, evaluation and observation of urinary incontinence and protecting from urinary incontinence, nurses have important responsibilities. Determining urinary incontinence in early period and handling this problem with enabling sufficient consultancy contribute to the development of healthy aging. Elderly individuals' complaints like urinary incontinence with some mental problems cause negative feelings. According to a research made in Canada, the rate of urinary incontinence is higher in women than men and it is related with negative feelings like loneliness (Pamela *et al.*, 2013). Elderly individuals' these negative experiences are arranged like loneliness, anxiety, despair, hopelessness, reluctance and fear.

Experiences like hopelessness, despair, reluctance and not enjoying life which are related with elderly individuals' complaints can precipitate widespread mental diseases like depression. When examining literature, it is determined that the number of research which searches relationship urinary incontinence and mental problems is limited (Pamela *et al.*, 2013). Depression is one of the most common problem experienced by elderly individuals. Depression is described as a disease causes plenty of disturbances in feelings, thoughts and behaviors of individuals characterized with profound sadness (Dinç, 2014; Öztürk and Uluşahin, 2011; Köknel, 2005; Yüksel, 2012). Depression has generally similar features in society but in elderly individuals, it can indicate different symptoms. That's why, geriatric depression is described as peculiar to senility and its features are determined. Geriatric depression is leading disease among widespread mental diseases in elderly individuals (Bektaş and Şahin, 2009; Demet *et al.*, 2002; Ünal and Bilge, 2005). With resembling young and middle age depression, geriatric depression differs from others with some features. In geriatric depression, although depressive feeling state is occasional, physical complaints and cognitive symptoms are seen as more densely. There are some limitations related expression of feelings and thoughts among elderly individuals. Demet and colleagues found that the rate of depression is 36% among elderly individuals who stay nursing home (Demet *et al.*, 2002).

In the research of Çınar and Kartal, generally 53.2% of elderly individuals indicates depressive sign, 10.3% of them shows depressive sign in severe level (Çınar and Kartal, 2008). The other research determined that 10-25% percent of elderly individuals whose ages are 65 and above have depression in significant level (Bektaş and Şahin, 2009). In elderly individuals, factors like loss of spouse, loss of job, dependency on others in daily life, cognitive disturbances, minority of communication skills, behavioral problems, vascular defects, financial problems and natural process of aging, medical diseases, alimentation disorders, medicines, psychosocial and genetic agents cause development of depression (Bektaş and Şahin, 2009; Hacıhasanoğlu and Yıldırım, 2009). Elderly

individuals can have difficulties to find common ways with people from environment, they can think that people from their environment do not share their interests and thoughts. This situation causes corruption in compliance to society and becoming distant from society. As a result of this, elderly individuals can experience loneliness. Loneliness is a sophisticated concept which is experienced in the situation of both qualitative and quantitative deterioration of communication with individual's social environment.

As considering a subjective concept, loneliness is described as emotional expression of feeling empty and self-surrender (Öz, 2010; Cukanoviç *et al.*, 2015). In senility period, elderly individuals have tendency to focus negative expectations and thoughts by oneself rather than positive expectations (Pamela *et al.*, 2013; Ünal and Bilge, 2005; Arslantaş and Ergin, 2011). In 9 health care center region in city center of Aydın, with 390 individuals between 50 and 65 ages, a cross-sectional study was made and it was found that there is strong positively significant relationship between loneliness and depressive symptoms (Arslantaş and Ergin, 2011). Loneliness can affect physical and mental health of elderly individuals. In evaluation and protection of elderly individuals' health, health care personnel have important responsibilities. So, nurses should evaluate elderly individual as a physical, cultural, psychological and social whole. When analyzed previous researches, there are limited researches related relationship between an important physical complaint like urinary incontinence and loneliness and depression and it is observed that further researches related this topic are needed. This research was made to determine relationship between urinary incontinence, geriatric depression and loneliness.

MATERIALS AND METHODS

This research was designed as descriptive study to determine relationship between urinary incontinence, geriatric depression and loneliness. This research was performed in Geriatric Polyclinic of one hospital in Ankara between November 2014 and February 2015. This research was implemented with 200 elderly individuals whose ages are 65 and above, have no sensual problem which prevents communication like hearing, applied GATA Geriatric Polyclinic, accepted to participate this research voluntarily and did not take Alzheimer dementia diagnosis. For applicability of research, approval of ethical committee was received by Gülhane Military Medical Academy Ethical Committee (19.08.2014, 1511-2913) (Appendix-6). In participation of research, voluntarism is based and it is paid attention to individuals who participate to this research are willing. Elderly individuals who accepted to participate this research were explained aim of the research, utilities of the research, time to spend interview and necessities before interview and approvals of voluntary participation forms which developed by researchers were collected (Appendix-1).

Data Collection Instruments

In research, Descriptive Data Form (Appendix-2), ICIQ-SF (International Consultation Incontinence Questionnaire Short Form (Appendix-5), UCLA Loneliness Scale (UCLA-LS) (Appendix-4) and Geriatric Depression Scale Short Form (GDS-K) (Appendix-3) were used.

Descriptive Data Form

Descriptive data form was developed researches accordingly literature (Çınar and Kartal, 2008; Kurt, 2014; Genç and Dalkılıç, 2013) and it was formed by 13 questions. Questions numbered 1, 2, 3, 4, 5 were used to determine descriptive features of elderly individuals and questions numbered 6, 7, 8, 9, 10, 11, 12, 13 were used to determine features about life of elderly individuals.

ICIQ-Short Form (ICIQ-SF)

This form's validity for Turkey was made by Çetinel and colleagues in 2004 and it was used to examine complaints of urinary incontinence and life quality. This form researches intensity, frequency, type and life quality of urinary incontinence. ICIQ-SF contains visual analog scale type questions. The scale has scores from 0 to 10 points. The higher score obtained from scale (0: never, 10: always) indicates worse life quality. For measuring internal consistency, Çetinel made a research among 43 facts and Cronbach alpha value was found 0.71 (Çetinel *et al.*, 2004). This research's Cronbach alpha value was found 0.73.

Geriatric Depression Scale Short Form (GDS-SF)

To evaluate depressive symptoms of elderly individuals, GDS-SF which was developed by Yesavage was used and it contains 15 questions (Appendix-3). 5 questions (1, 5, 7, 11 and 13) were constructed as positive and the others were constructed as negative. In evaluating scale, for positive questions, answers as "No" pair 1 point and for negative questions, answers as "Yes" pair 1 point. Total 6 or above point from scale is significant for depression diagnosis (26). In Turkey, validity and reliability of GDS-SF were made by two different groups (Ertan and colleagues, 1997 and Sağduyu, 1997). In this research, the scale whose reliability and validity were made by Ertan and Eker (1997) was used. This scale's internal consistency Cronbach alpha value was found 0.92. In this research, Cronbach alpha value was found 0.86.

UCLA Loneliness Scale (UCLA-LS)

UCLA-LS is a Likert type and self-evaluation scale used to determine individual's general loneliness level. The highest score can be taken is 80 and the lowest score can be taken is 20. The higher points obtained the scale indicates that individual experiences more loneliness. In Turkey, researches related reliability and validity of this scale was made by Demir (1989). In Demir's study, internal consistency Cronbach alpha value was found 0.96. The scale's test-retest reliability was found 0.94 with 5 weeks period (28). In this research, internal consistency Cronbach alpha value was found 0.81.

Research Data Analysis

Data obtained from this research were analyzed using SPSS (Statistical Package for Social Sciences for Windows 15.0). In this research, data's convenience for normal distribution was evaluated with Kolmogorov-Simimov Test and it was found that data were not convenient to normal distribution. Because of not supplying normal distribution, statistical analysis was made with the help of Mann Whitney U test. In more than two

groups, researching numerical value differences, Kruskal Wallis test was used ($p < 0.05$). Because of impracticality of parametric test hypotheses, multiple comparisons were made with Bonferroni correction Mann Whitney U test and differences were determined.

RESULTS

As seen in Table 1, 59.5% of participants are women, 29.5% of participants are in 77-82 age group and 69.5% of participants are married individuals. 96% of participants have health insurance. 57.5% of participants have 1 to 3 children. 67% of participants live with his/her spouse.

Table 1. Distribution of elderly individuals according to their descriptive features (n=200)

Features	n	%
Sex		
Man	81	40.5
Woman	119	59.5
Mean Age		
60 – 65	16	8
66 – 70	47	23.5
71 – 76	53	26.5
77 – 82	59	29.5
83 and above	25	12.5
Marital Status		
Married	139	69.5
Divorced	61	30.5
Health Insurance Status		
Have health insurance	8	4
Have not health insurance	192	96
Number of child	n	%
1 – 3	115	57.5
4 – 6	77	38.5
7 – 10	8	4
Individuals who live together		
Lonely	32	16
With spouse	134	67
With children	25	12.5
With relatives	9	4.5
Social Activity Condition		
Sufficient	142	71
Insufficient	58	29
Health Perception		
Good	61	30.5
Poor	28	14
Average	111	55.5
Chronic Disease Condition		
Absent	53	26.5
Available	147	73.5
Daily Activity Condition		
Affect	61	30.5
Do not affect	139	69.5

Also, it is expressed that 71% of participants attend sufficient social activity and 55.5% of participants have average health level. 73.5% of participants express that they have chronic disease and 69.5% of participants who have chronic illness state that this chronic disease has any effect to daily activities.

Table 2. Total average points of ICIQ-SF, GDS-SF and UCLA-LS in elderly individuals (n=200)

	Median Min-max	$\bar{X} \pm SS$
ICIQ-SF	5 (0-21)	6.52± 6.26
GDS-K	3 (0-15)	4.66±4.21
UCLA-LS	39(27-71)	41.14±10.70

Elderly individuals' who participate this study ICIQ-SF total average point is 5, the lowest score obtained from scale is 0 and the highest score obtained from scale is 21. In GDS-SF, the lowest score was found as 0, the highest score was found 15 and the total average point was found as 3. In UCLA-LS, total average point was found as 39, the lowest score was found as 27 and the highest score was found as 71 (Table 2).

Table 3. The relationship between ICIQ-SF, GDS-SF and UCLA-LS in elderly individuals (n=200)

		ICIQ-SF	GDS-K	UCLA-LS
ICIQ-SF	R	1.000	0.215**	0.107
	P	0.000	0.002	0.133
GDS-K	R		1.000	
	P		0.000	
UCLA-LS	R		0.601**	1,000
	P		0.000	0,000

In Spearman Correlation Analysis, it was found that there is very poor positively significant relationship between ICIQ-SF and GDS-SF ($r=0.215$; $p=0,002<0.05$). There is mean positively significant relationship between UCLA-LS and GDS-SF ($r=0.601$; $p=0,000<0.05$). There is no statistically significant relationship between other variables ($p>0.05$).

Table 4. Distribution of elderly individuals according to urinary incontinence type (n=200)

Urinary incontinence type	N	%
Stress type urinary incontinence	81	40.5
Press type urinary incontinence	101	50.5
Mixed type urinary incontinence	60	30

Table 5. Comparison of total average points of ICIQ-SF, GDS-SF and UCLA-LS according to elderly individuals' features (n=200)

		n	ICIQ-SF		GDS-K		UCLA-LS	
			Median min-max	$\bar{X} \pm SS$	Median min-max	$\bar{X} \pm SS$	Median min-max	$\bar{X} \pm SS$
Marital status	Married	139	5 (0-21)	6.12±5.98	3 (0-18)	4.27±4.20	37 (27-71)	40.23±10.66
	Divorced	61	6 (0-21)	7.44±6.82	4 (0-15)	5.70±4.43	41 (29-95)	43.26±11.89
Number of children	1-3	115	5 (0-21)	6.06±5.95	3 (0-14)	3.85±3.75	37(28-65)	39.44±9.35
	4-6	77	5 (0-21)	7.12±6.84	5 (0-18)	5.77±4.80	39(27-95)	43.46±13.48
	7-10	8	7 (0-14)	7.25±4.49	5.5 (0-13)	6.75±4.46	45(41-55)	46.75±5.65
Individuals who live together	Alone	32	5 (0-20)	6.28±6.42	3 (0-11)	3.75±3.31	36.5(29-65)	39.56±9.74
	With spouse	134	5 (0-21)	6.03±5.94	3 (0-18)	4.25±4.21	37(27-71)	40.07±10.57
	With children	25	8 (0-21)	7.92±6.06	7 (0-15)	7.16±4.57	43(29-95)	46.28±13.90
	With relatives	9	15 (0-21)	10.77±9.35	10 (0-13)	8.11±4.85	50(32-65)	48.77±9.27
Social activity condition	Sufficient	142	5 (0-21)	5.65±5.70	2.5(0-18)	3.45±3.46	35(27-70)	37.64±8.60
	Insufficient	58	7 (0-21)	8.65±7.07	8 (0-15)	7.79±4.66	48.5(32-95)	49.72±11.91
Health perception	Good	61	4 (0-21)	4.67±5.59	2 (0-18)	3.29±3.80	32(27-70)	36.60± 8.80
	Average	111	6 (0-21)	6.97±6.26	3 (0-13)	4.31±3.66	39(27-66)	40.92±9.53
	Poor	28	8 (0-21)	8.78±6.76	11 (0-15)	9.35±4.77	51(32-95)	52.89±13.92
Chronic disease condition	Absent	53	5 (0-20)	4.54±4.40	2 (0-18)	3.47±3.85	38(28-71)	39.37±8.71
	Available	147	6 (0-21)	7.23±6.67	4 (0-15)	5.15±4.40	39(27-95)	41.81±11.82
Daily activity condition	Affect	61	7(0-21)	8.68±6.74	6(0-15)	7.09±4.47	44(29-95)	45.16±12.56
	Not affect	139	5(0-21)	5.57±5.81	3(0-18)	3.66±3.81	37(27-71)	39.39±9.95

It was determined that 40.5% of participants have stress type urinary incontinence, 50.5% of participants have urge type urinary incontinence and 30% of participants have mixed type urinary incontinence (Table 4).

DISCUSSION

As a result of the study, there is no significant relationship between total average points of ICIQ-SF and UCLA-LS ($p>0.05$), (Table 2). In literature, there are limited studies which examine relationship between urinary incontinence and

loneliness. According to Pamela L's research which was made in Canada, 34% of elderly men who have urinary incontinence live lonely and 53% of elderly women who have urinary incontinence live lonely (Pamela *et al.*, 2013). Because in our society, family and traditions are important and they enable social support to prevent loneliness in elderly individuals, there is no relationship between urinary incontinence and loneliness as a result of this study. In the research, it was found that there is very poor significant relationship between urinary incontinence and total point of Geriatric Depression Scale ($r=0.215$; $p=0.002<0.05$). In Benlioğlu's research, 34.9% of elderly individuals who have urinary incontinence report that urinary incontinence is shameful, 59.3% of them reported that they feel like nervous and angry, 25.3% of elderly individuals who have urinary incontinence use antidepressants (Benlioğlu, 2006). In Melville and colleagues' research about relationship between urinary incontinence and major depression, frequency of major depression was found 6.1% in individuals who have urinary incontinence and it was found 2.2% in individuals who have not urinary incontinence problem. The frequency of major depression has significantly different according to incontinence severity (2.1% light, 5.7% mean, 8.3% harsh) and incontinence type (4.7% stress, 6.6% urge/mixed) (Melville *et al.*, 2005). In this research, it was found that there is significant relationship between total points of geriatric depression and loneliness ($r=0.601$; $p=0.000<0.05$). In depression, harsh sadness and hopelessness can be seen and individuals have tendency to believe anybody cannot help them. Because of these feelings, they can blame themselves and they cannot enjoy daily activities. They can avoid to participate social activities and they can withdraw from family members and friends.

Akyüz found a significant relationship between depression and loneliness in the research made with participation of elderly individuals who live in nursing centers or own homes (Akyüz, 2004). According to Parlar Kılıç and colleagues' study, there is significant relationship between average points of loneliness and depression among elderly individuals and this relationship is statistically significant with senility perception (Parlar Kılıç *et al.*, 2014). In Djukanović and colleagues' study in Sweden, they found relationship between depressive symptoms and loneliness, 27.5% of participants experience depressive symptoms and loneliness (Djukanović *et al.*, 2015). According

to Holvast and colleagues study made in Canada, they found that depression negatively affect depression in further senility period (Holvast *et al.*, 2015). In elderly individuals who participate this study, 40.5% of them have stress type urinary incontinence and 50.5% of them have urge type urinary incontinence and 30% of them have mixed type urinary incontinence (Table 4). In İlçe and Ayhan's study, they found that 3/5 of participants have mixed type urinary incontinence, 1/5 of participants have urge urinary incontinence and approximately 1/5 of them have stress and nocturnal urinary incontinence (İlçe and Ayhan, 2011). According to Hayek and Abrams's study, urge type urinary incontinence are more frequent after age of 60 and above (Hayek and Abrams, 2005). Our research's results are similar Hayek and Abrams's research.

According to Ergin and colleagues study, 54% of elderly individuals who have urinary incontinence have urge type, 22% of elderly individuals who have urinary incontinence have stress type, 18% of elderly individuals who have urinary incontinence have mixed type and 6% of elderly individuals who have urinary incontinence have other type (Ergin *et al.*, 2011). Also, this research supports our study (Table 4). In this research, it is found that there is significantly different relationship between total average point of ICIQ-SF and effects of chronic diseases to daily activities ($p < 0.05$) (Table 5). According to other research which supports this finding, elderly individuals have difficulties in daily activities like nourishment, evacuation, bathing, making housework and climbing stairs and chronic disease and urinary incontinence negatively affect daily activities (Acar, 2010). According to Gökdoğan and colleagues' research which aims to determine elderly individuals' requirement of caring in home, 30% of elderly individuals need help in self-care, moving and daily activities (Gökdoğan *et al.*, 2008). In the light of this finding, it can be thought that elderly individuals who have chronic disease have difficulties in sustaining daily life they need to other's help for reaching to toilet. Urinary incontinence affects chronic diseases and owing to chronic diseases it can affect daily activities of individual. Because nurses are interested in elderly individuals for longer time, they have responsibilities about examining and evaluation this problem. In the research, it is found that there is statistically difference between total average point of ICIQ-SF and health perception of elderly individuals ($p < 0.05$) (Table 5). This difference is originated that elderly individuals who have poor health perception have more frequent urinary incontinence than elderly individuals who have good or average health perception ($p < 0.017$). According to Altıparmak's research, 47.7% of participants have average health perception, 46.2% of participants have good health perception and 6.2% of participants have poor health perception (Altıparmak *et al.*, 2009). In this research, elderly individuals' possess to bad health perception is important finding for affecting their life quality and psychosocial state.

According to Ergün and colleagues' study, elderly individuals who have urinary incontinence problem have statistically significant lower general health perception than elderly individuals who have not urinary incontinence problem (Ergün *et al.*, 2011). Incontinence are the primary reason to affect elderly individuals' psychosocial condition. In this respect, presence of incontinence negatively affect health of elderly individuals. Elderly individuals' explanation about people who

support themselves in emotional and social area is very important in preventing of depression (Sönmez *et al.*, 2007). So, people whom elderly individuals live together can affect depression. In the research, it is found that significant relationship between GDS-SF total average point and people whom elderly individuals live together. GDS-SF scores of elderly individuals live alone, with spouse, with children and with relatives were examined. Elderly individuals who live together with relatives have higher depression scores (Table 5). Although this score is important with respect to average and median, it is not statistically significant ($p > 0.05$). Higher median depression scores of elderly individuals who live with relatives can be result of neglect or exploitation. According to researches, neglect and exploitation of elderly individuals come true in home environment mostly (Akdemir *et al.*, 2008). Elderly individuals can go out slightly or never so, exploitation can easily hide from other people. Also, health care personnel cannot realize this neglect and exploitation because of various anxieties of elderly individuals. Elderly individuals who live with relatives can have higher depression scores because they do not live with our family members and they do not feel belong in this place.

According to Wan Mohd and colleagues' study, there is linear relationship between social support of elderly individuals, depression and loneliness (Azam *et al.*, 2013). The frequency of depression changes to marital status of elderly individuals. It is found that divorced elderly individuals have higher depression score than married elderly individuals (Table 5). According to this result, married elderly individuals take support from spouses and this support is important in preventing depression. Aslantaş and Ergin found that 23.8% of participants have depressive symptoms. The frequency of depressive symptoms in divorced elderly individuals is higher 2.59 times than married elderly individuals (Arslantaş and Ergin, 2011). In elderly individuals who have chronic physical disease, loss of ability and depressive symptom level have intimate relation. In elderly individuals, loss of ability increases depressive symptoms (Tel, 2014). Elderly individuals who have chronic disease have higher depression scores than elderly individuals who have not any chronic disease ($p < 0.05$) (Table 5). If chronic disease affect daily life activities of elderly individual, depression risk increases ($p < 0.05$) (Table 5). Also, according to Altay and Üstün's research, chronic disease increases risk of depression. They found that elderly individuals who have one chronic disease have depression risk as 42%, elderly individuals who have more than one chronic disease have depression risk as 51.9% (46). This result is found compatible of our results (Demir *et al.*, 2013).

In this research, it is found that there is significantly difference between total average point of UCLA-LS and elderly individuals' participation to social activities ($p < 0.05$) (Table 5). The higher loneliness score indicates the lower participation to social activities. Income level, chronic diseases, poor health perception can be thought as causes to block participation of social activities. Dereli and colleagues' study supports our results in this way (Dereli *et al.*, 2010). In this research, it is found that there is significant difference between total average point of UCLA-LS and effects of chronic diseases to daily activities ($p < 0.05$) (Table 5). Because of chronic diseases, if daily activities are suffered, individuals experience more loneliness. Also similar researches indicates that loneliness

affect daily activities of elderly individuals (Danış *et al.*, 2015; Dereli *et al.*, 2010; Kurt *et al.*, 2010). In the research, it is detected that there is significantly difference between total average point of UCLA-LS and health perception of elderly individuals ($p<0.05$) (Table 5). Individuals who have poor health perception experience more loneliness ($p<0.017$). According to this, individuals who perceive their health as poor think that "I am inadequate and dependent." and they have tendency to move away from society.

Conclusion

In elderly individuals, there is positively but poor relationship between urinary incontinence and geriatric depression ($r=0.215$; $p<0.05$) (Table 4). In this research, it is found that there is mean above positively significant relationship between geriatric depression and loneliness in elderly individuals ($r=0.601$; $p=0.000<0.05$) (Table 3). Accordingly, because among health care personnel, nurses are interested in elderly individuals longer time, they determine this problem easily. Determining urinary incontinence in early period and handling this problem with sufficient consultancy make important contributions to development of healthy aging. In planning nursing care, evaluation tools, protocols and strategies for elderly individuals can be described. After applications, special managerial arrangements intended to urinary incontinence and caring results can be developed. For social support to elderly individuals, some solutions which try to remove person's loneliness with the help of family members or relatives can be developed. In this research, in investigating elderly individuals' urinary incontinence problem, it is suggested that geriatric depression and loneliness feeling should be handled. For protecting elderly individuals' health and preventing diseases, individual should be handled as a whole, in this way health of elderly individuals can be developed.

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