RESEARCH

CONSEQUENCES OF SOCIAL ISOLATION AND LONELINESS IN PEOPLE OVER THE AGE OF 65 DURING THE COVID-19 PANDEMIC: A MIXED METHODS STUDY

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Abstract

Introduction: The purpose of this study was to examine the social and emotional loneliness of people (n = 216) over the age of 65 during the COVID-19 pandemic and then to understand in-depth the consequences of social isolation and loneliness among participants selected from the survey participants.

Materials and Method: We used a sequential explanatory mixed methods design consisting of two phases. In the quantitative phase, the 11-item Loneliness Scale for the Elderly (LSE) was used for determining the level of loneliness. This scale was adapted by Akgül and Yeşilyaprak (2015). In the qualitative phase, an open-ended question survey and semi-structured in-depth interviews were conducted with 14 participants chosen through purposeful sampling.

Results: The quantitative data showed that the mean score for emotional loneliness (5.74) was higher than the mean score for social loneliness (2.14). There were no significant differences among the age groups. However, the mean score for overall loneliness increased (6.52) with age. There was a significant difference between overall loneliness and marital status (p = 0.025) and living alone (p = 0.046). Three major themes were identified in the qualitative phase: Emotional consequences, social consequences, and physical consequences.

Conclusion: The results suggest that emotional loneliness and limited interaction with loved ones are the main consequences of the social isolation imposed during the pandemic. These results should be taken into account when developing strategies to facilitate the daily routines, well-being, social interaction-based activities, and social support systems for older people during times of social isolation.

Keywords: COVID-19 Pandemic; Aged; Social Isolation; Loneliness.

INTRODUCTION

Elderly people throughout the world have been considered at high-risk for infection by the COVID-19 virus due to the severity of the symptoms and the high mortality risk (1). Elderly people affected with the COVID-19 virus show severe reactions due to the compromised immune systems of people with age-related lowered resistance and concomitant hypertension, diabetes, obesity, and cardiovascular and respiratory disease (2,3). For this group, social isolation is recommended as the primary protective mechanism and the safest way to prevent transmission (1).

Social isolation requires the individual to be separated from others, which means maintaining a physical distance from one's family, friends, and other social networks. The isolation may be exacerbated by other factors, such as cognitive or physical disability, retirement, loss of a spouse or friend (4,5). Loneliness describes the state where there is a decrease in the number of friends and a perception of absence (6). Social loneliness describes the state where relationships with friends and colleagues are less than anticipated or desired, while emotional loneliness refers to having no sincere, true, and trustworthy relationships as would be desired (7). Social isolation and loneliness are associated with poor quality of life and malnutrition, sleeping disorders, physical and mental disorders, high rates of mortality, and suicide (8-10). Furthermore, problems such as anxiety, insecurity, and emotional stress, often due to misinformation, have also caused older people to have psychological problems that have reduced their quality of life (11). Symptoms such as depression, gaining or losing weight, increased or decreased appetite, sleeping disorders, psychomotor agitation or retardation, feelings of worthlessness, inability to focus, and fear of death have all been observed (12,13). In this study, the levels of social and emotional loneliness caused by the COVID-19-related social isolation of elderly people (≥ 65) and the problems caused by their loneliness are investigated through mixed-methods research where quantitative and qualitative methods are both used.

MATERIALS AND METHOD

Ethical Considerations

Approval for the study was obtained from the Ege University Committee on Scientific Research and Publication Ethics with the approval date and number 27/08/2020-E.215325.

Data Collection

A sequential descriptive mixed-methods design was used for this study, where quantitative and qualitative data were used together. Combining a social science perspective with quantitative methods in health studies creates methodological variety (14). Hence, the mixed methods approach is suitable for studies in which the results require explanations, and where the purposes of the study can be best achieved through research that has more than one phase (15). The study sample comprised volunteer participants over the age of 65. Both paper surveys (n = 169) and online surveys (n = 47) were used for this study and data were collected during the 6 weeks between March 2020 and April 2020. Study information and informed consent statement were included in paper surveys and online surveys.

Paper surveys were collected in two ways in accordance with the COVID-19 safety. Phone surveys (n = 48) were conducted by researchers. Phone survey participants were collected through community neighbors who volunteer to share their inner circle over the age of 65 in Izmir and Sanliurfa to whom we forward the study task. Phone survey participants were informed about the study before the interview and, provided informed consent for study participation. Participants were asked to choose the answer that fitted their situation best to each question. If a participant had difficulty understanding an item, the item was read out again. All answers were filled out on paper survey sheets by researchers. In

the second part of the paper survey, participants (n = 121) were recruited from different community pharmacies in Izmir and Sanliurfa. To accelerate paper survey participants recruitment over the age of 65, pharmacies were invited to take part in the study. Pharmacies were selected from with the highest number of elderly patients by observation. Pharmacists who volunteered to co-operate were informed about the study. To ensure the safety of participants' COVID-19 precautions, surveys were collected in two steps. First, pharmacists delivered paper surveys to volunteered participants. Then as a second step, pharmacists collected surveys which were filled out by volunteered participants in their homes. Qualitative interviews were conducted with 14 people who were selected from among the participants (n = 216) who completed the survey. Face-to-face interviews (n = 8) were conducted in Izmir and Sanliurfa by considering COVID-19 precautions. The rest of the interviews (n = 6) was conducted via videophone interviews among participants able to use videophone call.

The Loneliness Scale for Elderly (LSE) which was developed by Gierveld and Kamphuis (1985), was revised by van Tilburg and de Jong Gierveld (1999), and adapted into Turkish by Akgül and Yeşilyaprak (2015), was used for the quantitative stage of this study (16,17,18). This scale consists of 11 questions, six of which measure emotional loneliness and five of which measure social loneliness. Cronbach's alpha was found to be .85 for this three-point Likert scale. The participants completed a demographic information form together with the questionnaire. For the qualitative data through semi-structured interviews, the researchers prepared open ended questions based on the literature.

Analysis

The quantitative data were analyzed using IBM SPSS Statistics v.22.0 (IBM Corp., Armonk, NY, USA). The scoring technique created by the developers of the scale was used. The questions (Q: 1, 4, 7, 8, 11) relating to social loneliness, which include positive statements, are scored as 1 = yes, 2 = maybe, 3 = no; the questions (Q :2, 3, 5, 6, 9, 10) relating to emotional loneliness, which include negative statements, are scored as 3 = yes, 2 = maybe, 1 = no. Descriptive statistics, the Kruskal-Wallis test, the Mann-Whitney U test, the Chi-square test, and Fisher's exact test were used in the analysis. The thematic analysis method was used to analyze the qualitative data, and the interview texts were analyzed according to the thematic analysis process described by Braun and Clarke in 2006 (19).

Quantitative Findings: The data regarding the demographic information of the participants are given in Table 1.

It was found that the mean emotional loneliness score (5.74) was higher than the mean social loneliness score (2.15). Social and emotional loneliness scores were derived from the mean of each participant's total scores of social or emotional loneliness scores. Furthermore, according to our findings (Table 3), emotional loneliness increases with increased age. The findings also indicated that the mean for emotional loneliness was higher (6.68) in the unmarried (widowed, divorced, bachelor) participants.

No statistically significant differences ($p > 0.05$) were found between loneliness levels and the following categorical variables: age, gender, educational background, occupation, whether they had children, the place of residence and domestic partner; however, significant differences were found between marital status and loneliness level ($p = 0.025$) and between living alone and loneliness level ($p = 0.046$). The statistical difference ($p = 0.003$) between marital status and emotional loneliness level was also significant. The differences between domestic partner and emotional loneliness ($p = 0.022$), living alone and emotional loneliness ($p = 0.014$), and living with spouse and emotional loneliness ($p = 0.011$) were all statistically significant. The differences between the emotional loneliness levels ($p = 0.011$) of participants who lived in a city with their spouses and those living in an urban or rural area and their social loneliness levels ($p = 0.013$) were significant.

Table 1. *Demographic characteristics of participants (n = 216)*

Age	**Frequency**	**%**
65–69	123	56.95
70–74	49	22.68
75+	44	20.37
Gender		
Female	120	55.56
Male	96	44.44
Marital Status		
Married	143	66.2
Single	5	2.32
Widowed	68	31.48
Educational level		
Illiterate	57	26.98
Primary	66	30.56
Middle school	18	8.33
High school	34	15.74
Vocational School	16	7.41
Bachelor	21	9.72
Graduate School	4	1.85
Children		
None	9	4.17
1	12	5.56
2	61	28.24
3+	134	62.03
Occupation		
Retired	113	52.31
Housewife	74	34.26
Employee/other	29	13.43
Live in		
City	196	90.74
Rural	20	9.26
Living with		
Alone	14	6.48
Husband/Wife	147	68.06
Husband, wife and kids	38	17.59
Sister/Brother/Mother/Kids	17	7.87

The LSE loneliness scores (n = 216) are given in Table 2. The mean loneliness score for participants is 7.89, while the mean score for social loneliness is 2.15, and the mean score for emotional loneliness is 5.74.

Table 2. *The mean loneliness scale scores for participants* (n = 216)

	Valid N	**Mean**	**Standard Deviation**	**Median**	**Min.**	**Max.**	**Range**
Social loneliness	216	2.15	2.31	2	0	9	9
Emotional loneliness	216	5.74	3.22	6	0	12	12
Total	216	7.89	4.80	8	0	21	21

Table 3. *Loneliness scale scores between variables (n =216)*

Valid N			Social Loneliness			Emotional Loneliness			Total score		
		Mean	SD	p	Mean	SD	p	Mean	SD	p	
Gender	Male	96	2.46	2.43	.095	5.47	3.36	.276	7.93	5.09	.938
	Female	120	1.90	2.19		5.96	3.10		7.86	4.58	
Age	≥75	44	2.09	2.08	.961	6.52	3.02	.147	8.61	4.36	.416
	70-74	49	2.24	2.42		5.41	3.45		7.65	5.38	
	65-69	123	2.13	2.36		5.59	3.18		7.72	4.72	
Marital Status	Married	143	2.07	2.26	.502	5.26	3.21	**.003**	7.33	4.76	**.025**
	Widowed /Divorced / Single	73	2.30	2.41		6.68	3.04		8.99	4.71	
Education	Illiterate	57	2.32	2.38	.909	5.88	3.45	.370	8.19	5.59	.609
	Primary	66	2.09	2.14		5.48	2.94		7.58	4.41	
	Middle School	52	2.13	2.48		6.33	3.15		8.46	4.46	
	Vocational/Bachelor/Grad.School	41	2.02	2.32		5.22	3.39		7.24	4.68	
Occupation	Retired	112	2.27	2.41	.187	5.85	3.34	.795	8.12	4.81	.661
	Housewife	74	1.77	2.08		5.74	2.91		7.51	4.55	
	Employee/other	30	2.63	2.39		5.33	3.56		7.97	5.44	
Children	Yes	206	2.10	2.28	.210	5.70	3.22	.374	7.80	4.83	.156
	No	10	3.10	2.81		6.60	3.27		9.70	3.83	
Number of children	None	10	3.10	2.81	.060	6.60	3.27	.526	9.70	3.83	.221
	1	12	1.67	2.27		4.58	3.63		6.25	5.34	
	2	61	1.59	2.09		5.82	3.15		7.41	4.44	
	3+	133	2.38	2.33		5.74	3.22		8.12	4.95	
Live in	City	189	2.03	2.31	**.013**	5.70	3.33	.592	7.72	4.87	.169
	Rural	27	3.00	2.13		6.04	2.31		9.04	4.16	
Living with	Lonely	47	2.47	2.57	.582	6.81	3.03	**.022**	9.28	4.79	.077
	Wife/Husband and children	38	1.79	2.30		4.63	3.36		6.42	4.73	
	Kids / Sister-Brother	23	2.04	2.06		6.09	3.10		8.13	4.76	
	Wife/Husband	108	2.16	2.26		5.59	3.17		7.75	4.73	
Living alone	Yes	47	2.47	2.57	.375	6.81	3.03	**.014**	9.28	4.79	**.046**
	No	169	2.06	2.23		5.44	3.22		7.50	4.74	
Living with sb	Yes	146	2.06	2.27	.420	5.34	3.23	**.011**	7.40	4.75	.053
	No	70	2.33	2.41		6.57	3.05		8.90	4.78	

Table 4. *Quotes from qualitative interviews by theme*

Main themes	Sub-themes	Participant's quotes
Emotional consequences	Infection anxiety and fear	"Before the pandemic, I was using public transportation. Since the pandemic started, for a year we couldn't use it anymore because, for me, the chances are high to get infected from this kind of place." (Attendee 4, male, 71)
	Feelings of longing for loved ones	"I couldn't see my children, I mostly feel upset because of this (she gets emotional, crying), they couldn't come because of the fear of getting me infected." (Attendee 10, female, 72)
	Craving for social life and rituals	"My grandchild is born, I couldn't get to see my grandson, I couldn't visit my son and daughter-in-law."(Attendee 4, male, 71)
	Ageism	"the pandemic made us feel our age, that is, we get old as we are over 65 years, although we were not aware of it, it (she means life) is flowing away." (Attendee 8, female, 70)
	Feeling rejection	"When I went to my village, I said to my cousin let me see you, he said please don't come. I asked then that he would come, he said I can't come its dangerous. (his voice getting shrill while talking) I'm feeling bad about that. I lose something every day with kinship. Deeply, it feels so sad". (Attendee 3, male, 66)
	Feeling uncertainty and psychological fatigue	"When I think about changes in our lives with the pandemic: we spend more time on eating, our daily routines have changed. I used to read books before the pandemic, now I've stopped reading, the things you have to do is getting less. I think some kind of mental distress. I don't know, at the beginning you are watching TV lying down, now you watch while sitting down. You get up first, by yourself, when you want to drink water, you are now waiting for your spouse and your child, it seems like a very unfortunate, meaningless life." (Attendee 2, male, 70)

Social Consequences	Lack of family visits	"We are terrified that a guest will come, you can't open the door if they come, you can't let them in, but you miss them if they don't come." (Attendee 1, female, 70)
	Lifestyle changes	"Sometimes my brother stops by to see me, he sits under the balcony to talk, he calls me on my phone, we see each other from far away and talking to each other on the phone, that's it." (Attendee 10, female, 72)
		"We live in the house and in our garden. We have lost contact with almost everybody, just phone calls, small talk, it's our new sterile life." (Attendee 11, female, 70)
	Using technology	"I've started to play computer games during the pandemic, I cannot understand how time flies, you can play for hours." (Attendee 3, male, 66)
		"At the beginning of the pandemic, we made group calls with my friends, one or two times, but then we just got used to the situation, and just started texting from time to time." (Attendee 11, female, 70)
Physical Consequences	Limited access to or inaccessibility of healthcare services	"I don't have any health problems, but I have check-ups. I had to cancel my appointments when the pandemic started due to staff shortages" (Attendee, 11, female, 69)
	Difficulties in reaching out for daily needs	"Sometimes I feel desperate, it's hard to go to the market or there is nobody younger to ask help for it, it was really hard at times. (His voice is getting shrill; he gets emotional). (Attendee 4, male, 71)
	Adaptation problems in lockdown hours for those over 65	"We are really affected by the curfew: by the time we get up and have breakfast it's almost 12 A.M, then there's lunch. Time flies so quickly that we can't even understand what to do. (Attendee 2, male, 70)

Qualitative Findings

During the qualitative phase of this study, three main themes, namely emotional, social, and physical consequences, with a total of 12 categories (Table 4) were obtained.

DISCUSSION AND CONCLUSION

This study shows that, due to COVID-19, emotional loneliness arising out of social isolation is evident in people aged 65 and over. These older people experience a range of problems in accommodating themselves to the changes in their daily lives and routines. Of the participants, 72.7% described their experience of loneliness, and for many this was experienced at levels, two, three, and four. The qualitative statements of the participants regarding their loneliness support our quantitative findings. Feelings of loneliness are associated with decreased social communication and social support (10). We believe that our findings about loneliness are strongly associated with limited social communication and a lack of social support due to social isolation. Our participants' statements were similar to those in the study by Batra et al. (12), which concluded that older population maintained their physical and mental health by creating meaningful relationships. A study by Kılıc and colleagues (20) on people over the age of 65 found that loneliness levels were higher in those who lived alone than in those who lived with their spouse or children (20). While no statistically significant differences ($p > 0.05$) were found between loneliness levels and age, gender, educational background, occupation, whether they had children, the place of residence or domestic partner, significant differences were found between marital status and loneliness level ($p = 0.025$) and between living alone and loneliness level ($p = 0.046$). It is assumed that this stems from conjugal social relations (spouse, children, and other related social connections) and interaction. Many studies on loneliness have reported that loneliness increases with age (21-23). In this study, no age-dependent differences were found in total loneliness levels; however, it was observed that emotional loneliness increased with age (6.52). Another significant finding was the difference in emotional loneliness among elderly people who live in a city together with their spouse ($p = 0.011$). There were no findings connecting loneliness with pathological physical or mental disease. However, negative psychological impacts, such as eating disorders, psychomotor retardation, feelings of valuelessness, anxiety, depression, and acute stress, were all reported by participants, which confirmed the results found by other researchers (12,13).

The constant emphasis on the risk of infection, the anxiety due to the necessity to self-protect, the social isolation imposed on people over the age of 65, and a lack of adequate communication all contributed to the depressive responses. It was also evident that the eating habits of people over the age of 65 had changed, they could not go for their routine health checks, and in these ways, their environments had become less conducive to healthy living. A lack of, or else limited, communication via telephone with their close circle, such as children and relatives, had led many to experience fears, anxieties, and feelings of valuelessness, as has been stated by other researchers (12,13). However, this intense need for communication had also caused people to develop skills in new ways of communicating involving communication technologies such as video calls and social media.

Taking into consideration all the uncertainties of the COVID-19 pandemic, together with its enforced social isolation, it is suggested that programs should be developed to assist older people to maintain their daily activities and their well-being oriented activities. Awareness programs should be created to ensure the continuity of social commu-

nication, and social support assistance should be developed in parallel with the restrictions imposed by the pandemic. Finally, long-term studies using methodological variety should be conducted in order to understand the long-term impact of enforced social isolation during a pandemic.

Disclosure Statements

The authors state that there are no conflicts of interest in this study.

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