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The Effect of Social Isolation on Anxiety and Quality of Life

Sosyal İzolasyonun Anksiyete ve Yaşam Kalitesi Üzerine Etkisi

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ÖZET

Bu çalışmada, genel popülasyonda sosyal izolasyon koşullarının anksiyete ve yaşam kalitesi üzerindeki etkisinin araştırılması amaçlanmıştır.

Bu kesitsel çalışmaya toplam 1384 katılımcı dahil edildi. Katılımcıların değerlendirilmesinde sosyodemografik form, Beck Anksiyete Ölçeği (BAÖ) ve Kısa Form-12'den (SF-12) oluşan çevrimiçi bir anket kullanıldı.

Evli katılımcılar daha yüksek BAÖ puanlarına (p=0,007) ve SF-12 fiziksel komponent puanlarına (p<0,01) sahipken, zihinsel komponent bekarlarda daha yüksekti (p<0,01). Evcil hayvan sahipleri, evcil hayvan sahibi olmayanlara göre daha düşük BAI puanlarına (p=0,02) ve daha düşük SF-12 fiziksel bileşen puanlarına sahipti (p=0,005). Meslekten emekli olan katılımcıların BAÖ puanları daha yüksekti (p<0.001). BAÖ puanları ile yaş (r=-0,118; p<0,001) arasında negatif, VKİ (r= 0,089; p=0,007) ve çocuk sayısı (r=0,107; p=0,001) ile pozitif yönde ilişkili olduğu belirlendi. SF-12'nin fiziksel bileşeni ile yaş (r=-0,175; p<0,001), VKİ (r=-0,167; p<0,001) ve çocuk sayısı (r=-0,120; p<0,001) arasında negatif korelasyon saptandı. SF-12 zihinsel komponent puanları yaş (r=-0,135; p<0,001), VKİ (r-0,130; p<0,001), günlük ortalama ekran süresi (r-0,076; p=0,022) ve çocuk sayısı ile negatif korelasyon gösterdi. (r-0.120; p<0.001).

Sosyal izolasyon, sağlığın çeşitli yönlerini önemli ölçüde etkiledi. Evli bireyler izolasyon koşullarında daha fazla anksiyete gösterdi. Kadın cinsiyet, evcil hayvan sahibi olma ve ekran başında geçirilen süre, daha düşük yaşam kalitesi puanları ile ilişkiliydi. Yaş, yüksek VKİ ve çocuk sayısı, fiziksel ve zihinsel sağlığı ve kaygı düzeyini etkiledi.

Anahtar Kelimeler: Sosyal İzolasyon, SF-12, Stres

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ABSTRACT

This study aimed to investigate the effect of social isolation conditions on anxiety and quality of life (QOL) in the general population.

A total of 1384 participants were included in this cross-sectional study. An online questionnaire consisting of a sociodemographic form, the Beck Anxiety Inventory (BAI), and the Short Form-12 (SF-12) was used for the evaluation of the participants.

Married participants had higher levels of BAI scores ($p=0.007$) and a higher SF-12 physical component score ($p<0.01$) while the mental component was higher in single individuals ($p<0.01$). Pet owners had lower BAI scores ($p=0.02$), and lower SF-12 physical component scores than non-pet owners ($p=0.005$). Participants who retired from their profession had higher BAI scores ($p<0.001$). The BAI scores were determined to be negatively correlated with age ($r=-0.118$; $p<0.001$) and positively correlated with BMI ($r= 0.089$; $p=0.007$) and number of children ($r=0.107$; $p=0.001$). A negative correlation was determined between the physical component of SF-12 and age ($r=-0.175$; $p<0.001$), BMI ($r=-0.167$; $p<0.001$), and number of children ($r=-0.120$; $p<0.001$). The SF-12 mental component scores were negatively correlated with age ($r=-0.135$; $p<0.001$), BMI (r-0.130; $p<0.001$), Daily Average Screen Time (r-0.076; $p=0.022$), and number of children (r-0.120; $p<0.001$).

Social isolation considerably influenced various aspects of health. Married individuals showed more anxiety under isolation conditions. Female gender, having a pet, and screen time were correlated with lower QoL scores. Age, higher BMI, and number of children influenced physical and mental health and the level of anxiety.

Keywods : Social Isolation, SF-12, Stress

Introduction

Social isolation is an important threat affecting health and quality of life (QOL) associated with the risk of death (Klinenberg, 2016). Being socially isolated is also a cause of various mental health problems (Taylor et al., 2018). In the recent past, there has been a long process of lockdown around the world. This social isolation led to various physical and psychological problems (Fulden et al., 2022; Shanbehzadeh et al., 2021). Although it was understood that the precautions of social isolation and social distancing were to protect indivduals and those around them from the disease, they led to stressful conditions such as long-term isolation, restrictions to funeral and mourning processes, fear for relatives who were hospitalised and could not be visited, and feelings of loneliness, hopelessness, insecurity, and exclusion (C. Wang et al., 2020; H. Wang et al., 2020). It has also been reported in literature that disinformation and misinformation occurred as a result of lack of communication with the social environment during isolation and tools of mass communication becoming the single source of information (Cao et al., 2020; Jung & Jun, 2020; Li et al., 2020).

Many negative effects of the social isolation have been reported. The prevalence of a high level of depression and anxiety symptoms has been reported to be associated with low QOL (Suryavanshi et al., 2020). A higher initial level of social isolation and low QOL were found to be associated with greater anxiety as the period progressed. It has also been emphasised that elderly adults who were previously socially isolated and had low QOL were more vulnerable to the psychological effects of isolation (Dove et al., 2022). Studies conducted in Turkey have researched different dimensions of the isolation conditions in different sections of the population. It has been reported that the isolation

conditions had a negative effect on the mental health of adolescents, and pychosocial symptoms which increased in this period, were associated with low QOL (Tekin, 2022). The basic factors directly affecting the QOL of individuals living in Turkey have been reported to be ongoing anxiety, psychological health, and social isolation (Potas et al., 2021). It has also been reported that the fear of getting a sickness was affected by gender, marital status, and level of

education, QOL during the pandemic was affected by economic status, and there was a negative relationship between the level of fear and QOL (Aksoy et al., 2021). Anxiety symptoms were reported to be common in students during isolation status (Cam et al., 2022). Another study showed that post-traumatic stress disorder, depression, anxiety, and evidence of stress were commonly seen in university students during the isolation period. In a study of Turkish healthcare workers, it was reported that younger age, female gender, low professional experience increased workload and low professional satisfaction could increase levels of anxiety during isolation (Ceylan et al., 2022). Quarantine conditions have been reported to be a factor increasing the levels of anxiety and loneliness in the geriatric population (Kilincel et al., 2020).

1. METHODS

1.1 Participants

This descriptive, cross-sectional study included 1384 volunteers who were isolated at home and met the study criteria. Approval for the study was made by the Ethics Committee of Istanbul University, Cerrahpaşa Medical Faculty (number of decision: 04.06.2020-67885). Data were collected by an online questionnaire prepared on Google Forms, which included a Voluntary Consent Form. The evaluations were performed between 01.04.2020 and 30.04.2020.

Power analysis of the study was made using G*Power program. The inclusion of 1384 subjects would provide effect size of 0.9763 and post-hoc power was calculated as 0.97. For post-hoc analysis, the minimum power value required is 0.67, thus the power analysis applied was acceptable.

Inclusion criteria of the study were; a) to have a smartphone, b) no communication disability, c) no visual disorder. The presence of diagnosed severe psychological disorder, severe systemic disease or a change in living conditions within the last 3 months were the exclusion criteria of the study.

1.2 Data Collection Tools

Evaluations of the individuals who met the inclusion criteria were made using an online questionnaire, created using Google Forms. The snowball sampling methodology was used to be able to reach potential respondents. The prepared form was delivered online through different platforms (WhatsApp, Gmail, Facebook, Instagram, Twitter, etc). The first section consisted of a consent form providing information about the study and explaining the evaluations to be made. After confirmation of voluntary consent for participation, the respondent could move on to the evaluation sections. In the second section, the clinical and demographic data of the respondent were saved on the Case Report Form. In the third section, the Short Form-12 (SF-12) QOL scale was used to evaluate the health-related QOL of the respondent. The SF-12, which is a simplified, shorter form of the SF-36 evaluating the last 4 weeks, is a 12-item scale that is easy to apply and has proven validity and reliability. The 12 items are gathered under 8 headings. The general health status of the individual is determined by questioning limitations in daily life. Two parameters of physical health and mental health are evaluated. Scoring is

applied from 0-100 according to the algorithm stated in the study by Ware, with higher points indicating a better health status (Jung & Jun, 2020). In the fourth section of the questionnaire, the Beck Anxiety Inventory (BAI), was used. This 21-item scale evaluates the frequency and severity of anxiety symptoms experienced by the individual. Items are scored from 0 to 3 points, giving a possible maximum score of 63 points. Higher scores swhow higher level of anxiety (Ulusoy et al., 1998).

1.3 Statistical Analysis

Data were analzed using SPSS vn. 25 software (IBM; USA). Descriptive statistics were presented as percentage (%), number (n), mean, and standard deviation (SD). The normal distribution of data was evaluated using the Kolmogorov-Smirnov test. Independent categorical data were compared using the Chi-squared test. The comparison of two independent groups was performed using the Independent Samples T-Test. In the evaluation of three or more groups of independent variables, the One-Way ANOVA test was used. $p<0.05$ was accepted as significant.

RESULTS

Evaluation was made of a total of 1384 participants with a mean age of 27.62±12.22 years and body mass index of 23.16±3.93kg/m2. The SF-12 (Physical and Mental) Levels and BAI scores are presented in Table 1.

Table 1. Demographic and Clinical Features

Variables	Mean	SD	Min	Max
Age (Years)	27.62	12.22	16	75
BMI (Kg/m^2)	23.16	3.93	15.24	38.1
Sf-12 Physical Component Score (%)	44.95	6.31	21.85	63.9
Sf-12 Mental Component Score (%)	36.85	10.76	12.23	62.0
BAS	30.25	9.95	0	62
Daily Average Screen Time (Hours)	5.34	3.11	0.5	17
Number of Children (n)			0	7
Number of Family Members Living at Home (n)			1	12

SD: Standard Deviation; Min: Minimum; Max: Maximum; BMI: Body Mass Index; SF-12: Short Form-12; BAS: Beck Anxiety Score.

Married individuals showed higher BAI scores when compared to single participants (p= 0.027). Individuals living with pets had statistically significantly lower anxiety scores (p= 0.02) (Table 2).

Table 2 Comparison of Beck Anxiety Scores According to Descriptive Characteristics of Participants

Variables		n	%	Mean	SD	p	Bonferroni
Gender	Female	863	63.6	30.42	9.72	0.513	
	Male	521	36.4	29.97	10.38		
Marital status	Married	972	67.3	30.76	10.23	**0.007***	
	Single	412	32.7	29.21	9.20		
Educational status	1.Primary school	36	2.7	29.36	8.18	0.61	
	2.Middle school	65	4.5	29.80	9.31		
	3.High school	528	36.8	31.01	10.48		
	4.Bachelor degree	586	44.4	29.71	9.13		
	5.Master's degree	149	10.1	30.43	11.38		
	6.Doctorate	20	1.4	29.38	14.47		
Profession	1.Officer	129	10.7	30.32	9.94	0.07	
	2.Worker	68	4.7	27.44	7.62		
	3.Retired	33	2.6	31.79	10.09		
	4.Health professional	167	11.0	30.22	10.86		
	5.Student	669	47.5	31.12	10.38		
	6.Academician	32	1.9	29.35	8.30		
	7.Other	286	21.6	28.83	8.86		
Presence of a pet	Yes	260	19.1	29.18	8.99	**0.02***	
	No	1124	80.9	30.51	10.17		
Routine working environment	1.House	453	31.6	31.25	10.02	0.37	
	2.School	429	31.4	29.82	9.85		
	3.Hospital	82	5.8	30.73	11.61		
	4.Factory	94	7.4	30.49	11.86		
	5.Office	27	1.8	28.12	9.394		
	6.Other	299	22.0	30.33	10.15		
Frequency of going out before isolation	1 Day in a Week	141	9.2	28.45	7.43	0.57	
	2 days in a week	101	7.5	30.61	8.87		
	3 days in a week	112	8.1	30.18	8.62		
	4 Days in a Week	97	6.6	29.80	10.94		
	5 days in a week	203	15.4	29.92	9.00		
	6 Days in a Week	243	18.0	30.14	10.62		
	7 Days in a Week	487	35.2	30.96	10.85		

*: Independent Sample T-Test

p<0.05 significant

The QOL scores of the participants are shown in Table 3. The physical component scores of married individuals (p< 0.001) and the mental QOL scores of single individuals (p< 0.001) were found

to be higher in the comparison of the QOL of the participants. The SF-12 physical component scores of retired individuals were lower compared to those of the other groups (p< 0.001). Participants who were living with a pet had lower QOL scores (p= 0.005).

Table 3 Comparison of Quality of Life Scores According to Descriptive Characteristics of Participants

Variables				SF-12 Physical Component				SF-12 Mental Component			
		n	%	Mean	SD	p	Bonferroni	Mean	SD	p	Bonferroni
Gender	Female	863	63.6	45.21	6.49	0.10		35.56	10.80	**<0.001***	
	Male	521	36.4	44.49	5.96			39.11	10.34		
Marital status	Married	972	67.3	45.85	6.33	**<0.001***		35.89	10.87	**<0.001***	
	Single	412	32.7	43.10	5.86			38.82	10.27		
Educational Status	1.Primary	36	2.7	41.47	5.39	0,11		39.39	12.11	0.18	
	2.Middle	65	4.5	43.4155	5.11			37.19	10.75		
	3.High school	528	36.8	44.80	6.20			36.42	10.94		
	4.Bachelor	586	44.4	45.35	6.62			36.46	10.68		
	5.Master's	149	10.1	45.62	5.57			38.61	9.92		
	6.Doctorate	20	1.4	42.48	6.75			41.64	10.80		
Profession	1.Officer	129	10.7	44.26	7.01	**<0.001****	5>1; 5>7; 4>1; 4>7	38.96	9.819	0.06	
	2.Worker	68	4.7	44.01	4.99			39.10	9.02		
	3.Retired	33	2.6	43.21	4.56			41.16	8.57		
	4.Health	167	11.0	45.93	5.76			36.99	11.78		
	5.Student	669	47.5	46.00	6.33			35.47	10.92		
	6.Academicia	32	1.9	44.63	7.99			37.14	10.96		
	7.Other	286	21.6	43.90	5.88			37.72	10.55		
Presence of	Yes	260	19.1	44.24	5.70	**0.005**		37.04	10.36	0.79	
	No	1124	80.9	45.11	6.44			36.80	10.86		
Routine working environment	1.House	453	31.6	44.96	5.99	0.15		36.99	11.64		
	2.School	429	31.4	45.36	6.24			35.80	10.30		
	3.Hospital	82	5.8	44.53	5.20			37.93	11.07	0.08	
	4.Factory	94	7.4	45.97	8.21			35.96	10.90		
	5.Office	27	1.8	44.44	4.16			41.33	7.40		
	6.Other	299	22.0	43.06	7.30			37.51	8.67		
Frequency of going outdoors before isolation	1 Day in a	141	9.2	43.01	5.97	0.051		36.89	10.51	0.46	
	2 days in a	101	7.5	45.19	6.69			34.46	9.81		
	3 days in a	112	8.1	44.36	6.17			35.98	12.04		
	4 Days in a	97	6.6	44.87	4.96			36.79	11.60		
	5 days in a	203	15.4	44.63	6.08			36.92	9.93		
	6 Days in a	243	18.0	45.20	6.67			37.33	10.67		
	7 Days in a	487	35.2	45.56	6.41			37.29	10.97		

n: Number; SD: Standard Deviation;; SF-12: Short Form-12;*: Independent Sample T- Test; **: One-Way Anova

A significant negative correlation was determined between the BAI scores and age (r= -0.118; p<0.001) and number of children (r= -0.107; p= 0.001), and a significant positive correlation was determined between the BAI Score and BMI (r= 0.089; p= 0.007) (Table 4).

A significant negative correlation was determined between the SF-12 physical component score and age (r= -0.175; p <0.001), BMI (r=-0.167; p< 0.001), and number of children (r= -0.222; p <0.001). A significant positive correlation was determined between the SF-12 mental component score and age (r= 0.135; p <0.001) and a significant correlation was determined between the SF-12 mental component score and BMI (r=0.130; p< 0.001), average daily screen time (r= -0.176; p= 0.022), and number of children (r= 0.120; p< 0.001) (Table 4).

Table 4. The effect of staying at home during isolation on anxiety and quality of life

		Age	BMI	Daily Average Screen Time	Number of children	Number of Family Members Living at Home
BAS	*r*	-0.118	0.089	0.023	0.107	0.025
	p	**<0.001***	**0.007***	0.493	**0.001***	0.467
Sf-12 Physical	*r*	-0.175	-0.167	0.091	-0.222	0.010
Component Score	*p*	**<0.001***	**<0.001***	0.066	**<0.001***	0.772
Sf-12 Mental	*r*	-0.135	-0.130	-0.076	-0.120	-0.049
Component Score	*p*	**<0.001**	**<0.001**	**0.022***	**<0.001***	0.143

BMI: Body Mass Index; SF-12: Short Form-12; BAS: Beck Anxiety Score.

*: Spearman Correlation

p< 0.05 significant

DISCUSSION

In this study, the effect was investigated on anxiety levels and QOL of staying at home during periods of isolation. The study results showed that the anxiety levels of individuals who were married were higher, and the anxiety level and physical component QOL score of pet owners were lower than those of participants who did not have a pet. The QOL physical component score was higher in married participants and the mental component score was higher in those who were single. The individuals who had retired from their profession were determined to have lower QOL compared to those who were still employed. The mental component QOL score was determined to be lower in females than in males. The anxiety levels of the participants were higher in younger age, high BMI, and the number of children. The QOL was found to be higher in those who were younger, had a low BMI, and had less daily screen time, and those who have a smaller number of children.

Previous studies have emphasised that the isolation status cause severe public health problem which also seriously damaged the lives of individuals, and the stress level was reported to be high especially in the first periods of isolation (Piquero et al., 2020) When anxiety levels were compared

according to marital status, there can be seen to be different results in literature. A study in Canada reported that the stress, anxiety, and depression levels during isolation were higher in single individuals than in those who were married.(Nkire et al., 2021) In contrast, a 2020 study that evaluated the anxiety levels of the general population in Iran found that different marital statuses made no difference in respect of anxiety level.(Moghanibashi-Mansourieh, 2020) A previous study in Turkey reported similar levels of anxiety in married and single healthcare workers during isolation (Ceylan et al., 2022) Another study in Turkey reported that male gender, being married, and having children were risk factors for psychological problems (Duran & Erkin, 2021). In a study conducted in Poland, being married was found to be among the leading markers of high anxiety (Malesza & Kaczmarek, 2021) The variation seen in the results of different studies could be due to different isolation conditions in different countries, the use of different evaluation methods, the dates of evaluation and the populations evaluated. That a higher level of anxiety was determined in the married participants in the current study is probably due to the experiences of married couples spending long periods of time with each other in a restricted environment, which created stress.

When the effect of isolation conditions was examined on the QOL of married and single individuals, it was seen that different resuts have been reported in the literature. A study in China found the QOL levels to be higher in elderly and married individuals (Duan et al., 2021). Similarly, a previous study in Turkey also reported that those who were married had higher levels of QOL. In contrast, it was reported in a study conducted in Egypt that QOL was at a higher level in single individuals than in those who were married (Mohsen et al., 2022). The results of the current study showed that QOL decreased in both married and single individuals because of the isolation conditions. However, the married individuals had a higher physical component score as despite the isolation conditions, they were more active than the single individuals. In contrast, the higher mental health component score of the single individuals was probably due to there being no risk of infection for people living alone, that they could make their own decisions about housework, and that they were better adapted to the conditions of living alone than those who were married.

The effect of isolation conditions on pet owners is a subject that has been investigated in the literature. In a study in New Zealand, pet owners were reported to have lower levels of depression and anxiety (Gasteiger et al., 2021). It was reported in a study in the USA that being a dog-owner could provide people with a stronger sense of social support and this could be helpful in preventing the negative psychological effects caused by the isolation conditions (Martin et al., 2021). A study conducted in Spain reported that the lifestyle and emotional status of individuals under quarantine conditions were negatively affected at a high level, and that domestic animals provided significant support to lessen these effects (Bowen et al., 2020). In another study, it was emphasised that being a dog owner not only reduced feelings of loneliness during isolation, but also supported mental and physical health (Bussolari et al., 2021). Pet owners in the USA were evaluated in a study, and it was reported that pets met the social and emotional needs of elderly adults during isolation (Applebaum et al., 2021). While the low anxiety level of pet owners in the current study shows similarity to literature, the low QOL physical component score could be due to the different isolation conditions in Turkey (animals were included in quarantine) and that as animals were exposed to limited physical activity in a restricted area, this constituted a physical burden for pet owners.

The reference to elderly individuals as a high-risk group in respect of coronavirus disease has become a subject that is accepted and criticised as discriminatory discourse in literature (Rahman &

Jahan, 2020). While some previous studies have found higher anxiety levels in elderly individuals, others have reported opposite results. A study in the Republic of Ireland reported a significantly higher level of anxiety in individuals aged ≥65 years than in those aged 18-34 years (Hyland et al., 2020). The levels of QOL were found to be lower in individuals aged ≥40 years in a study in Egypt (Mohsen et al., 2022). In contrast, a 2020 study in Brazil reported that QOL was higher in individuals aged ≥40 years (Teotônio et al., 2020). The variation that can be seen in the findings according to different countries can be attributed to the differences in populations and isolation conditions or the way in which information is presented by the media of the country as the source of communication with the outside world. Although age group categorisation was not made in the current study, the QOL scores were found to be lower in retired individuals and QOL was found to be correlated with age. Although it is accepted that the elderly population is a critical group, there are studies in literature showing higher anxiety levels in young individuals (Moghanibashi-Mansourieh, 2020; Varma et al., 2021). A study in the USA reported that although there was an increased probability of negative events together with age (eg., the death of a spouse), emotional health was better in the older age group (Wilson et al., 2021). Similarly, in the current study, an inverse correlation was found between anxiety level and age.

In most previous studies, similar to the results of our study, QOL during the pandemic has been reported to have been more negatively affected in females than males. A study in Italy reported that females were a vulnerable group and QOL was significantly affected (Epifanio et al., 2021). Female gender was found to be associated with low QOL in a study in Israel (Horesh et al., 2020). In another study in Ireland, it was also emphasised that females constituted one of the most vulnerable groups, and the isolation conditions were a factor in reducing QOL (Daneshfar et al., 2021). In the traditional family structure in Turkish society, females have a responsibility for all issues related to the family, the workload is greater compared to males and these responsibilities increased during the pandemic, which could explain these results.

The anxiety created by social isolation caused the emergence of unhealthy nutritional habits, and this has been linked to increasing BMI. The relationship between BMI and isolation-related stress was examined in a study in Poland, and a higher level of stress-related eating disorder symptoms was reported, especially in females.(Czepczor-Bernat et al., 2021) In another study in the USA, stress factors such as the environmental threat of social isolation were reported to be associated with eating habits and increased BMI (Himmelstein et al., 2022). Also in the USA, another study reported a positive correlation between perceived stress and emotional eating and BMI of mothers. The mothers with higher BMI values had higher rates of stress (Wang et al., 2021). A study conducted in the UK reported that in a significant number of participants during isolation there was a change in lifestyle behaviours related to weight after the outbreak of COVID-19 compared to before (Robinson et al., 2020). Another study in the UK stated that there was a correlation between stress due to isolation and negative body image (Swami et al., 2021). In the current study findings, there was found to be a positive correlation between anxiety levels and BMI.

Previous studies have emphasised that a greater number of children in the family is a factor increasing the anxiety level. A study in the UK found that the number of children was associated with high anxiety levels (Shevlin et al., 2020). Two separate studies in Turkey have also reported that anxiety levels are higher in families that have to care for children (Elbay et al., 2020; Hacimusalar et

al., 2020). A study from Portugal reported that the conversion of already limited living space to creche, educational, and play areas for children in the isolation period, which started from the first

day of the pandemic, became a factor that reduced the QOL of families (Ferreira et al., 2021). The number of children was reported to be a determinant of physical exhaustion and burnout during isolation in a study in Greece (Antoniadou, 2022). A study in Canada reported a low QOL in pet owners with two or more children (Amiot et al., 2022). The results of the current study demonstrated a correlation between the number of children, high anxiety level, and low QOL.

The negative effects of isolation on QOL is another topic that has been emphasised in literature. Singh and Singh stressed that living standards as a whole were affected worldwide because of the loneliness, anxiety and depression that occurred together with the isolation conditions (Singh & Singh, 2020). In a study that investigated factors predicting the effects of isolation in elderly individuals, it was reported that social isolation was associated with high anxiety, and elderly individuals with a lower QOL were particiularly vulnerable to the negative psychological effects of isolation (Siew et al., 2021). A study in Brazil emphasized that the QOL of elderly individuals was significantly affected by isolation, and the frail elderly were especially vulnerable to sudden restrictions in their living areas (Saraiva et al., 2021). Different occupational groups were also compared in the current study, and it was observed that retired individuals had lower QOL scores, which supports the previous findings of a negative effect on QOL in individuals of older age.

Another result of this study was that increased screen time together with isolation was associated with low QOL. That low levels of physical activity and increased screen time show the greatest negative effect on health-related QOL has been emphasized in previous studies (Davies et al., 2012). The limitations in facilities for physical activity together with isolation caused a tendency to technological resources, with similar results. A study conducted in China reported that more than half of Chinese adults had insufficient physical activity during isolation, adopted a sedentary lifestyle with more screen time and poor mood status, and this affected emotional wellbeing (Qin et al., 2020). A previous study in Canada associated more screen time with more loneliness, and more loneliness with low QOL (Rumas et al., 2021). In contrast, a study in England showed that strategies to increase Internet use (especially for communication) for middle-aged and older adults could be useful for mental health and to combat isolation as the coronavirus crisis continued, and it was reported that high QOL and low depression scores in middle-aged and older adults were associated with more frequent Internet use during the pandemic. However, in the same study, the use of the Internet to search for health or state services was associated with more depression symptoms. This may explain the difference seen between the results of that study and the current study.

A strong aspect of this study was that the effect of several factors was investigated on anxiety and QOL in the general population under isolation conditions. Moreover, the study was conducted in periods of continuous isolation, when case numbers and death rates were highest during the most intense period of the pandemic.

There were also limitations of this study, first, the cross-sectional design and that the evaluations were made online with self-reported statements because of the isolation conditions. The completion of the questionnaires could not be supervised by the research team as the research was conducted online, but this was an inevitable inherent factor of surveys during the pandemic. Another limitation could be said to be that the majority of participants were younger individuals but this is not surprising when it is considered that fewer people aged >60 years use a smartphone. Finally, there was seen to be abnormal categorical distribution in some variables and this could have affected the study results.

CONCLUSION

The results of this study showed that married individuals had higher levels of anxiety under the isolation conditions. The restricted environment negatively affected QOL for both married and unmarried individuals. Mental wellbeing was negatively affected in married individuals and physical wellbeing in those who were single. Although having a pet decreased anxiety levels, the living conditions in a restricted environment had a negative effect on QOL. Under the conditions of isolation, the level of QOL of females showed a greater decrease compared to males. With increasing age, both anxiety and QOL were seen to decrease. Anxiety increased and QOL was negatively affected in those with a high BMI value and a greater number of children. A low QOL was seen in those with a high level of average daily screen time.

Although the stress factors leading to disease decreased together with improvements in the pandemic conditions, it is important that the different effects of isolation conditions, a global public health problem, are evaluated in all aspects. The results of this study show the short-term effects of the physical and social isolation. To be able to report more definitive results, it can be recommended that in future studies bio-psychosocial evaluations are made of the long-term effects of isolation conditions.

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