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ORIGINAL ARTICLE

Associations of depressive symptoms and perceived social support with addictive use of social media among elderly people in Turkey

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Abstract

Background: The aim of this study was to investigate the relationship of addictive use of social media (AUSM) with depressive symptoms, perceived social support and demographic variables among people aged 65 years and older.

Methods: People aged 65 years and older who use social media constituted the study sample. The data were obtained from social networking sites via Google survey link. Bergen social media addiction scale (BSMAS) for determining AUSM, Multidimensional Scale of Social Support for determining social support, Geriatric Depression Scale to identify depressive symptoms and sociodemographic data form were administered to the participants.

Results: The mean age of the sample was 68.86 ± 2.0 years. AUSM showed significant differences depending on gender, marital status, economic status, educational level, settlement, occupation, and time spent in social media ($P = 0.00$). AUSM had correlations with both sub-dimensions of perceived social support and depressive symptoms ($P < 0.01$). In the regression analysis, it was found that the depressive symptoms, social support from family ($P = 0.00$) and from a significant other ($P = 0.001$) had significant effects on AUSM.

Conclusions: When evaluating elderly individuals with depressive symptoms, it is important to evaluate these individuals in terms of social media addiction. Interventions to improve social support systems, especially for older people with little perceived social support can help prevent the development of AUSM.

INTRODUCTION

In recent years, social media usage has become one of the most leading popular spare time activities.[1] Although use of social media has gradually become normal, it brings about various concerns regarding its potential addictive use.[2–4] However, some criteria have been devised to make distinction between addictive use and non-addictive use.[5] According to these criteria, being preoccupied by social media (salience), using social media in order to reduce negative feelings (mood modification), gradually using social media more and more in order to get the same pleasure from it (tolerance/craving), suffering distress if prohibited from using social media (withdrawal), sacrificing other obligations and/ or causing harm to other important life areas because of social media use (conflict/functional impairment), and desiring or attempting to control the use of social media without success (relapse/loss of control) are defined as manifestations of addictive use of social media (AUSM).[5,6] Various measurement tools have been developed to evaluate social media addiction, which is considered as a specific form of internet addiction.[4,6] Research conducted with young and middle-aged populations

imply that AUSM is related to symptoms such as irritability, cognitive difficulties and emotional disorders which may negatively affect functionality.[1] In addition, AUSM has been suggested as a type of behavioural addiction which is associated with many psychiatric disorders such as depression, anxiety disorders, sleep and eating disorders.[1,7,8]

Experimental studies have shown that passive use of social media may cause negative effects on well-being, sense of belonging and life satisfaction.[9,10] Association of passive use of social media with depressive mood has also been suggested.[11] Contrary to passive use of social media, no relationship was found between active use of social media (using social media with commenting, posting, sharing, or chatting) and depressive symptoms.[12] Studies conducted with adolescents have demonstrated that as the use of social media increases, its potential to cause depression, anxiety and stress symptoms also increases.[7,13,14] Especially AUSM and use of multiple social media sites have been shown to be associated with depression, anxiety, stress and sleep disorders.[15,16] Also, lower incidence of depression among the individuals who restrict use of social media verifies the association of excessive use of media with depression.[17]

The relationship between depression and social media is not unidirectional. It is suggested that the individuals who have depressive symptoms may be prone to use social media excessively. A recent meta-analysis study indicates that as depressive symptoms increase, frequency of social media, time spent in social media and problematic use of social media also ascend among individuals.[8] Depression can lead to sedentary life due to fatigue and reluctance, and as a result the excessive use of social media.[18,19] Another reason why depression may cause the excessive use of social media is that it leads people to seek social support through social media because of feelings of loneliness and isolation.[7,19] People with depressive symptoms feel overwhelmed by the requirements and responsibilities of everyday life and want to move away from everyday life.[20] The desire to stay away from the stress brought by responsibilities of everyday life can lead individuals to use social media.[13] In addition, individuals may turn to social media use, as social media interactions and positive feedback provide a temporary departure from negative emotions caused by depression.[21]

Low social support and loneliness are considered leading reasons for social media use in young and middle-aged adults.[22–25] In a recent study, it has been revealed that social support has a role in the negative effects of problematic social media use on mental health.[26] The individuals who have no romantic partner and are devoid of social interaction use social media more frequently and thus have the opportunity to both eliminate their feelings of loneliness and reach potential partners.[27–29] A lack of physical activity and the need for online social support can also create a predisposition to social media usage.[30] Considering this data, it may be suggested that elderly individuals who are at risk for lack of social support and physical activity should turn to excessive use of social media.

Although there are many studies on the relationship of AUSM with depression and perceived social support in young and middle-aged adults as stated above, as far as we know, this relationship has not yet been investigated in elderly people. The aim of this study is to determine the relationship of sociodemographic characteristics, depressive symptoms and perceived social support with AUSM in elderly individuals.

METHOD
Participants and procedure
The study sample consisted of 450 persons who use social media network sites and aged 65 years and older. Study data were collected through a Google survey link over Facebook in March 2021 after ethics committee approval was given by Istanbul Gelişim University. All participants were active internet users who have Facebook accounts and profiles. In order to invite the participants to the study, snowball sampling method was used: Facebook groups who have members aged 65 years and older were searched on Facebook and Google. A study link was posted to the identified Facebook groups with the permission of the group administrators. The group members were also asked to share the study link on their personal Facebook profiles. A message explaining the present study's objectives and the estimated time for completing the survey was sent with the survey link. Participants were informed that they were taking part in a study the aim of which was to examine social media use, social support and depressive symptoms.

Before survey commencement, a project information sheet explaining the aim of the study, structure of the survey, and confidentiality assurance was provided to the participants. Participants could enter the survey only after they provided an online informed consent form that expressed their willingness to participate. The questionnaire was created in such a way that one could not move on to the next without completing the question. Exclusion criteria were having any cognitive impairment that does not allow understanding or responding to the questions, and not willing to participate in the study. The participants received no remuneration for taking part in our research project.

Measures

Sociodemographic form

This was a short information form prepared by the researchers that includes questions about the participants' demographic information, such as gender, age, marital status, economic status, education level and working status, and questions about social media use. Questions about social media use were as follows. 'How much of your time do you spend on social media on a daily basis?' 'How often do you use social media?' 'Since when have you been using social media?' 'How much of your time on the internet do you spend on social media sites?' 'Do you consider yourself a "social media addict?"'

Geriatric Depression Scale (GDS)

This was developed by Yedevage et al. with the aim of measuring depressive symptoms among elders.[31] The scale consists of 30 questions answered as 'yes' or 'no' for the elderly participants to answer in a simple way. A minimum of 0 and a maximum of 30 points can be obtained from the scale. The total score obtained from the scale indicates no depression for a score of 0–10, probable depression for a score of 11–13, and definite depression for a score of 14 and above. The cut-off point of the scale for depression was determined as 14 for this study. In the Turkish validity and reliability study of the scale, the internal consistency coefficient was determined as 0.91 and test–retest reliability as 0.74.[32]

Bergen Social Media Addiction Scale (BSMAS)

This was developed by Andreassen et al. with the purpose of measuring social media addiction.[33] The BSMAS consists of six questions that include symptoms of addiction (salience, mood modification, tolerance, withdrawal, conflict, and relapse). The scale has been developed as a type of five-point Likert scale (1 = very rare, 5 = very frequent). A minimum of six and a maximum of 30 points can be obtained from the scale. As the overall score from the scale increases, the level of AUSM increases. The internal consistency coefficient of the scale was found to be 0.83 in the Turkish adaptation study.[34]

Multidimensional Scale of Perceived Social Support (MSPSS)

The scale was developed by Zimet et al. and is a self-report form which evaluates perceived social support.[35] It evaluates the level of social support satisfaction obtained from three types of sources: friends, significant others and family. The items of friends, a significant other and family sub-dimensions are collected separately and from sum of these three dimensions, the total score can be obtained. The increase in the total score taken from the scale indicates an increase in perceived social support. In a Turkish reliability and validity study, Cronbach's alpha value was found to be between 0.80 and 0.85.[36]

Statistical analysis

The data obtained through Google surveys were encoded in IBM SPSS 20.0 program and analysed by non-parametric tests as the data did not show normal distribution as a result of the Kolmogorov–Smirnov normality test. The analysis is based on 95% reliability level. Mann–Whitney U-test was used to determine the difference between the two groups. Kruskal–Wallis H-test and post-hoc analysis were used to determine the difference between groups of three and more. Spearman's rank correlation analysis was used to determine the correlations between scales. Hierarchical regression (stepwise) models were created by including the BSMAS total score as the dependent variable, the GDS total score, the MSPSS family, a significant other and friends subscale scores as independent variables. In all statistical analyses, $P < 0.05$ was considered statistically significant.

RESULTS

Comparison of BSMAS scores by sociodemographic variables and depression

The mean age of the sample was 68.86 ± 2.0 years. The difference between the total scores of the participants' BSMAS according to sociodemographic variables is shown in Table 1. Compared to women, men obtained higher BSMAS scores ($P < 0.01$), the scores of singles were higher than married ($P < 0.01$), those having monthly income levels between 2000–3000 Turkish lira (TL) achieved higher scores than those having monthly income levels between 3000–4000 TL ($P < 0.01$); similarly, those having monthly income levels between 3000–4000 TL ($P < 0.01$) obtained higher scores than those having monthly income levels of 5000 TL and more ($P < 0.01$). Those whose educational level was primary education obtained higher BSMAS scores in comparison with high school ($P < 0.01$), university ($P < 0.01$) and masters degree and above graduates ($P < 0.01$). Those living in village-towns obtained higher statistically significant BSMAS total scores than those living in the city ($P < 0.01$) and big cities ($P < 0.01$); unemployed achieved higher scores than retired ($P < 0.01$), civil servants ($P < 0.05$) and private sector employees ($P < 0.05$).

Table 2 shows the results of the Kruskal–Wallis H-test, which was conducted to determine whether the BSMAS total scores differ significantly according to the participants' statements about internet and social media use and Mann-Whitney U-test whether they have depression or not. BSMAS score of the participants who answered 6 h and more to the statement 'How much of your time do you spend on social media on a daily basis?' was found to be higher than the participants who spent between 3–6 h ($P < 0.01$) and 1–3 h ($P < 0.01$). BSMAS score of the participants who used social media three times a week or more was found to be higher compared to participants who used social media twice a week ($P < 0.01$) and once a week ($P < 0.01$). It was observed that those who answered more than 6 years to the statement 'Since when have you been using social media?' achieved higher BSMAS scores in comparison with those who answered 4–6 years ($P < 0.01$), 1–3 years ($P < 0.01$) and less than 1 year ($P < 0.01$). Those who responded almost all to the statement 'How much of your time on

Table 1 Comparison of Bergen Social Media Addiction Scale scores according to sociodemographic characteristics

Variables	n	%	X̄ ± SD (min-max)	Test (U/χ^2)	P
Gender					
Female	128	28	21.71 ± 8.06 (6–30)	12697[a]	<0.01
Male	322	72	15.73 ± 8.13 (6–30)		
Marital status					
Married	301	67	14.96 ± 7.81 (6–30)	11 598.5[a]	<0.01
Single	149	33	22.42 ± 7.76 (6–30)		
Monthly income					
1000–2000 TL	67	15	26.34 ± 4.32 (6–30)	184.342[b]	<0.01
2000–3000 TL	114	25	22.89 ± 6.46 (6–30)		
3000–4000 TL	168	37	14.01 ± 7.03 (6–30)		
5000 TL and above	101	22	11.04 ± 6.14 (6–30)		
Education					
Primary	126	28	24.41 ± 6.16 (6–30)	175.8342[b]	<0.01
Secondary	44	9.8	23.61 ± 5.78 (6–30)		
High school	154	34	15.35 ± 7.52 (6–30)		
University	103	23	11.18 ± 5.79 (6–30)		
Masters degree and higher	23	5.1	9.30 ± 4.75 (6–29)		
Working status					
Retired	222	49	20.67 ± 8.10 (6–30)	127.706[b]	<0.01
Unemployed	50	11	25.02 ± 5.53 (6–30)		
Civil servant	22	4.9	11.81 ± 5.30 (6–24)		
Private sector	156	35	11.18 ± 5.21 (6–30)		
Residential area					
Village-town	59	13	25.01 ± 6.26 (6–30)	163.403[b]	<0.01
County	101	22	23.87 ± 6.05 (6–30)		
City	80	18	16.85 ± 7.37 (6–30)		
Big city	210	47	12.42 ± 6.81 (6–30)		

[a] Mann–Whitney U-test. [b] Kruskal–Wallis H-test. TL, Turkish lira.

Table 2 Comparison of Bergen Social Media Addiction Scale scores according to social media use patterns and sociodemographic characteristics

Variables	n	%	X̄ ± SD (min-max)	Test (U/χ^2)	P
'How much of your time do you spend on social media on a daily basis?'					
1–3 h	207	46	10.23 ± 4.19 (6–30)	270.4[a]	<0.01
3–6 h	135	30	21.38 ± 5.82 (6–30)		
6 h and more	108	24	26.28 ± 5.59 (6–30)		
'How often do you use social media?'					
Once a week	46	10	8.15 ± 2.21 (6–14)	72.805[a]	<0.01
Twice a week	105	23	10.04 ± 3.36 (6–21)		
Three times a week and more	299	66	21.45 ± 7.52 (6–30)		
'Since when have you been using social media?'					
Less than 1 year	60	13	8.90 ± 3.83 (6–24)	230.13[a]	<0.01
1–3 years	161	36	12.21 ± 5.50 (6–30)		
4–6 years	144	32	21.63 ± 7.09 (6–30)		
More than 7 years	85	19	26.22 ± 4.92 (6–30)		
'How much of your time on the internet do you spend on social media sites?'					
Short period of time	149	33	9.03 ± 2.71 (6–19)	275.575[a]	<0.01
Almost half	60	13	13.81 ± 4.94 (6–30)		
More than half	44	9,8	18,18 ± 6.12 (6–27)		
Almost all	197	44	24.72 ± 5.91 (6–30)		
'Do you consider yourself a social media addict?'					
No	252	56	11.25 ± 5.26(6–30)	279.555[a]	<0.01
Partially	146	32	24.66 ± 4." (8–30)		
Yes	52	12	27.07 ± 4.28 (11–30)		
Depression					
No depression	269	60	12.41 ± 6.24 (6–30)	4979.5[b]	<0.01
Have depression	181	40	24.89 ± 5.52 (6–30)		

[a] Kruskal–Wallis *H*-test. [b] Mann–Whitney *U*-test

the internet do you spend on social media sites?' had higher BSMAS scores compared to those who responded more than half ($P < 0.01$), almost half ($P < 0.01$) and short period of time ($P < 0.01$). Those who responded yes to the statement 'Do you consider yourself a social media addict?' had a higher BSMAS score than those who answered partially ($P < 0.01$) and no ($P < 0.01$). It was determined that the participants with depression had a statistically significantly higher BSMAS score than the participants who did not have depression ($P < 0.01$) according to the GDS cut-off point.

Correlation analysis

Table 3 shows the Spearman correlation analysis, which was conducted to determine the correlations between the participants' BSMAS total score, GDS total score, MSPSS total score, and MSPSS subscale scores. Statistically significant negative correlation was found between BSMAS total score and MSPSS total score ($r = -0.700$, $P < 0.01$), MSPSS family sub-dimension score ($r = -0.684$, $P < 0.001$), MSPSS significant other sub-dimension score ($r = -0.563$, $P < 0.001$) and

MSPSS friend sub-dimension score ($r = -0.590$, $P < 0.01$). A statistically significant positive correlation was found between the participants' total BSMAS score and the total GDS score ($r = 0.723$, $P < 0.01$).

Regression analysis

A hierarchical regression (stepwise) analysis was made to determine whether the participants' GDS total score and MSPSS subscale scores were predictors of the BSMAS total score. As can be seen in Table 4, depressive symptoms, social support from family and social support from a significant other account for 65.8% of the variance in participants' social media addiction. In the first stage, GDS total was included in the regression analysis and it was determined that it accounted for 58.9% of the total variance ($F = 641.170$, $R = 0.767$, $R^2 = 0.589$, $P < 0.01$). In the second stage, in addition to the GDS total, the social support from the family was included in the regression analysis and the social support from the family increased the explained variance of social media addiction to 65% with a contribution of 6.1% ($F = 414.449$, $R = -0.740$, $R^2 = 0.650$, $P < 0.01$). In

Table 3 Correlation analysis of study variables in participants

Variable	M	SD	1	2	3	4	5	6
1) BSMAS total	17.43	8.54						
2) MSPSS total	44.85	21.75	−0.700*					
3) MSPSS significant other	13.90	7.52	−0.563*	0.899*				
4) MSPSS friends	13.09	7.72	−0.590*	0.919*	0.888*			
5) MSPSS family	17.85	9.15	−0.684*	0.819*	0.541*	0.597*		
6) GDS total	12.02	8.16	0.723*	−0.772*	−0.637*	−0.686*	0.708*	

*$P < 0.01$. BSMAS, Bergen Social Media Addiction Scale; GDS, Geriatric Depression Scale; MSPSS, Multidimensional Scale of Perceived Social Support.

Table 4 GDS total score and MSPSS subscale scores on predicting BSMAS score

Step	Predictor	Unstandardised coefficients		Standardised coefficients		R^2	R^2 ch	F	P
		B	SE	β	P				
1	GDS Total	0.803	0.032	0.767	<0.01	0.589	0.589	641.2	<0.01
2						0.65	0.061	414.4	<0.01
	GDS Total	0.507	0.045	0.485	<0.01				
	MSPSS Family	−0.35	0.040	−0.38	<0.01				
3						0.658	0.008	285.8	<0.01
	GDS Total	0.449	0.048	0.429	<0.01				
	MSPSS Family	−0.33	0.040	−0.35	<0.01				
	MSPSS S.O.	−0.14	0.041	−0.12	<0.01				
4						0.658	<0.001	213.9	<0.01
	GDS Total	0.447	0.048	0.427	<0.01				
	MSPSS Family	−0.32	0.041	−0.35	<0.01				
	MSPSS S.O.	−0.12	0.069	−0.11	0.079				
	MSPSS Friends	−0.02	0.073	−0.02	0.798				

GDS, Geriatric Depression Scale; MSPSS, Multidimensional Scale of Perceived Social Support; BSMAS, Bergen social media addiction scale; S.O., significant other.

the third stage, the social support from a significant other was included in the regression analysis in addition to GDS total and the social support from the family. Social support from a significant other increased the explained variance of social media addiction to 65.8% with a contribution of 0.8% ($F = 285.815$, $R = −0.592$, $R^2 = 0.658$, $P < 0.01$). In the fourth stage, in addition to the variables of GDS total, social support from family and a significant other, social support from friends was also included in the regression analysis. As a result, social support from a friend did not predict social media addiction ($P > 0.05$).

DISCUSSION

Our study revealed that depression and perceived social support levels from a significant other and family are related with AUSM in elderly individuals. To our knowledge, this is the first study to show the relationship of depressive symptoms and perceived social support with AUSM in the elderly population.

Our study found that singles were more likely to use social media than married people, women were more likely to use social media than men, those who did not work used social media more than employees, and those with low monthly income had higher social media usage than those with higher monthly income levels. In some previous studies, it has been shown that individuals who do not have romantic partners and lack social interaction, use social media more often than who have partners and social interaction.[27–29] Individuals without partners have the opportunity to both relieve feelings of loneliness and reach potential partners through social media. Because of various preoccupations in married elders with children, social media use may occur for more limited periods than singles. Additionally, single elderly individuals who are more likely to feel lonely may tend to use social media more frequently due to some advantages such as being able to communicate with people instantly at any time, meet new people, and spend free time thanks to entertaining content. Elderly people with low income may more

likely turn to social media use because they have less opportunity to socialise and engage in fun activities than those with higher incomes. In our study, women's use of social media was found to be higher than that of men. Some previous studies report that women use social media more in an addictive manner than men, as well as some studies report that men use it more than women.[30,37,38] Since gender roles in our country may restrict women in terms of socialisation compared to men, women may prefer to meet their need for socialisation at home through social media. The high score of social media addiction among those with low levels of education in our study coincides with the findings of the study conducted by Andreassen et al.[39] As the level of education increases, individuals may have more friendships from school years which may reduce the need for social media use. Being educated can also provide knowledge and advantage in socialisation skills. In our study, participants' social media addiction scores were higher in those living in villages and towns than those living in cities and big cities. It is known that the social media usage rates of rural residents are lower than those living in the city.[40] On the other hand, the reason why the rate of AUSM is higher among those living in villages and towns than those living in cities in our study may be due to the fact that elderly individuals living in the city have wider opportunities in terms of social activities and leisure activities.

In our study, it was found that the social media addiction score of the participants increased as the year they started using social media and the frequency of use increased. This result may be associated with the tolerance item of behavioural addiction, which is defined as the increase in the frequency of the behaviour in order to get the desired result from that behaviour.[41] In addition, as the years of social media use increased, also AUSM increased in our study. This result suggests that the use of social media has the potential to turn into addiction as in other behavioural addictions, especially when social media use is not restricted. Restrictions applied more especially to elderly individuals due to the COVID-19 pandemic which may have increased AUSM in these people as well as in the general population.[42] In addition to the restrictions, COVID-19-related stress may have facilitated older individuals' tendencies to use the internet more and promoting the development of AUSM.[43]

Our study found that participants who were likely to have depression according to the cut-off score of GDS were more likely to use social media in an addictive manner than those who have not. Also in regression analysis, it was determined that the depression score effected the social media addiction score. Studies conducted on college students also showed that those with possible depression had higher social media addiction rates and that symptoms of depression were predictors of social media addiction.[44–46] According to a recent systematic review, depressive symptoms are associated with problematic social media use among young adults.[8] The search for actual social support decreases due to increased physical fatigue, reluctance and pessimism in depression. As a result, a tendency to sedentary lifestyle occurs which may cause a predisposition to AUSM.[18,19] The use of social media in people with depression may increase in order to make up for the loss of social relationships and to eliminate feelings of loneliness.[7,19] In addition, social media use may increase in these people as a way to move away from everyday responsibilities which may be too heavy for people with depressive symptoms.[13,20] Another reason for the high level of AUSM in people with depressive symptoms may be that these people turn to social media use in order to temporarily get rid of the negative emotions caused by depression.[21]

Studies on social media use and depression in young and middle-aged adults suggests that AUSM has a relationship and may be a risk factor for depression.[7,13,14,47] Although a cause-effect relationship could not be established, the fact that depression was associated with AUSM in our study suggests that the relationship between AUSM and depression may not be unidirectional, especially in the elderly. People can access social media free of charge, make friends with other people, communicate with them without time and space limitations, express themselves with their posts, spend their time with games and fun content, and thus actively use social media to deal with stress and depression. Thus with the use of social media, it can temporarily ease depressive symptoms and as with other behavioural addictions, increase the recurrence and frequency of this behaviour due to the reward effect. It can be considered that the use of social media in order to cope with the negative emotions brought by

depression is added to the behavioural repertoire of elder individuals and AUSM develops as a result of constantly preferring the use of social media. As a result, AUSM can lead to depression as well as anxiety and impaired sleep quality.[15,16]

In our study, it was found there was a negative relationship between social media addiction score and perceived social support from family, friends, and a significant other. Also social support from family and a significant other was a predictor of AUSM. This finding is in line with previous studies showing that lack of social support can lead to social media addictive use in young people and adults.[22–25] In addition to relieving feelings of loneliness, social support also increases the capacity to cope with everyday stress. Especially, excessive daily stress increases the feeling of lack of social support, leading people to seek to achieve this deficiency online.[25] Recently a study conducted by Brailovskaia et al. showed that a lack of physical activity along with daily stress levels was associated with addictive tendency in social media use.[30] The lack of social support needs, which have increased due to the relatively low levels of physical activity in old age and the limited resources to cope with everyday stress may encourage people to get this support through social media. In a recent study, it was found that real-life social support reduced depression, anxiety and social isolation, while social support on social media did not affect these variables.[38] Further, online social support may lead to AUSM, creating a perception of temporary elimination of this deficiency in older people who experience a lack of social support and reinforcing it over time.

One of the limitations of our study is that AUSM and depressive symptoms were evaluated with self-report scales. The relationship between the diagnosis of depression in the elderly and social media addiction can be investigated through studies conducted with clinical interviews. Due to the cross-sectional nature of our study, the inability to establish a cause-effect relationship between social media addiction and depressive symptoms which are two common clinical phenomena that may affect each other, is an important limitation. Prospective follow-up studies in elderly individuals will be useful in clarifying the nature of the relationship between depressive symptoms and social media addiction. Evaluating only social media addiction and not including game

addiction and addictive internet use other than social media can be considered as a limitation in our study. Another limitation of our study is not investigating the effects of psychiatric symptoms other than depression on AUSM in elderly individuals.

In conclusion, our study revealed that depressive symptoms, perceived social support from family and a significant other are associated with AUSM in elderly individuals. When evaluating elderly individuals with depressive symptoms, it is important to evaluate these individuals in terms of social media addiction. Interventions to improve social support systems, especially for older people with little perceived social support, can help prevent the development of AUSM in these people.

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REFERENCES

1 Kuss DJ, Griffiths MD. Online social networking and addiction a review of the psychological literature. *Int J Environ Res Public Health* 2011; **8**: 3528–3552.
2 Boyd DM, Ellison NB. Social network sites: definition, history, and scholarship. *J Comput Mediat Commun* 2007; **13**: 2010–2030.
3 Andreassen CS. Online social network site addiction: a comprehensive review. *Curr Addict Rep* 2015; **2**: 175–184.
4 Griffiths MD, Kuss DJ, Demetrovics Z. Social networking addiction: an overview of preliminary findings. In: Rosenberg PK, Feder CL, eds. *Behavioral Addictions: Criteria, Evidence, and Treatment*. Amsterdam: Elsevier/Academic Press, 2014; 119–141.
5 Griffiths MA. Components model of addiction within a biopsychosocial framework. *J Subst Use* 2005; **10**: 191–197.
6 Andreassen CS, Torsheim T, Brunborg GS et al. Development of a Facebook addiction scale. *Psychol Rep* 2012; **110**: 501–517.
7 Keles B, McCrae N, Grealish A. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *Int J Adolesc Youth* 2019; **25**: 79–93.
8 Cunningham S, Hudson CC, Harkness K. Social media and depression symptoms: a meta-analysis. *Res Child Adolesc Psychopathol* 2021; **49**: 241–253.
9 Verduyn P, Lee DS, Park J et al. Passive Facebook usage undermines affective well-being: experimental and longitudinal evidence. *J Exp Psychol Gen* 2015; **144**: 480–488.
10 Tobin SJ, Vanman EJ, Verreynne M et al. Threats to belonging on Facebook: lurking and ostracism. *Soc Influ* 2015; **10**: 31–42.
11 Frison E, Eggermont S. Exploring the relationships between different types of Facebook use, perceived online social support,

and adolescents depressed mood. *Soc Sci Comput Rev* 2015; **34**: 153–171.

12 Aalbers G, McNally RJ, Heeren A *et al*. Social media and depression symptoms: a network perspective. *J Exp Psychol Gen* 2019; **148**: 1462–1495.

13 Shensa A, Sidani JE, Dew MA *et al*. Social media use and depression and anxiety symptoms: a cluster analysis. *Am J Health Behav* 2018; **42**: 116–128.

14 Chen IH, Pakpour AH, Leung H *et al*. Comparing generalized and specific problematic smartphone/internet use: longitudinal relationships between smartphone application-based addiction and social media addiction and psychological distress. *J Behav Addict* 2020; **9**: 410–419.

15 Primack BA, Shensa A, Escobar-Viera CG *et al*. Use of multiple social media platforms and symptoms of depression and anxiety: a nationally-representative study among US young adults. *Comput Hum Behav* 2017; **69**: 1–9.

16 Wong HY, Mo HY, Potenza MN *et al*. Relationships between severity of internet gaming disorder, severity of problematic social media use, sleep quality and psychological distress. *Int J Environ Res Public Health* 2020; **17**: 1879.

17 Hunt MG, Marx R, Lipson C *et al*. No more FOMO: limiting social media decreases loneliness and depression. *J Soc Clin Psychol* 2018; **37**: 751–768.

18 Asare M, Danquah SA. The relationship between physical activity, sedentary behaviour and mental health in Ghanaian adolescents. *Child Adolesc Psychiatry Ment Health* 2015; **9**: 1–8.

19 Brailovskaia J, Margraf J. Relationship between depression symptoms, physical activity, and addictive social media use. *Cyberpsychol Behav Soc Netw* 2020; **23**: 818–822.

20 Andrews B, Wilding JM. The relation of depression and anxiety to life-stress and achievement in students. *Br J Psychol* 2004; **95**: 509–521.

21 Brailovskaia J, Margraf J. What does media use reveal about personality and mental health? An exploratory investigation among German students. *PLoS One* 2018; **13**: e0191810.

22 Yeh YC, Ko HC, Wu JYW *et al*. Gender differences in relationships of actual and virtual social support to Internet addiction mediated through depressive symptoms among college students in Taiwan. *Cyberpsychol Behav* 2008; **11**: 485–487.

23 Zhang S, Tian Y, Sui Y *et al*. Relationships between social support, loneliness, and internet addiction in Chinese post-secondary students: a longitudinal cross-lagged analysis. *Front Psychol* 2018; **9**: 1707.

24 Liu C, Ma JL. Adult attachment orientations and social networking site addiction: the mediating effects of online social support and the fear of missing out. *Front Psychol* 2019; **10**: 2629.

25 Brailovskaia J, Rohmann E, Bierhoff HW *et al*. The relationship between daily stress, social support and Facebook addiction disorder. *Psychiatry Res* 2019; **276**: 167–174.

26 Lin CY, Namdar P, Griffiths MD *et al*. Mediated roles of generalized trust and perceived social support in the effects of problematic social media use on mental health: a cross sectional study. *Health Expect* 2021; **24**: 165–173.

27 Ryan T, Chester A, Reece J *et al*. The uses and abuses of Facebook: a review of Facebook addiction. *J Behav Addict* 2014; **3**: 133–148.

28 Kuss DJ, Griffiths MD, Karila L *et al*. Internet addiction: a systematic review of epidemiological research for the last decade. *Curr Pharm des* 2014; **20**: 4026–4052.

29 Andreassen CS, Torsheim T, Pallesen S. Predictors of use of social network sites at work -a specific type of cyberloafing. *J Comput Mediat Commun* 2014; **19**: 906–921.

30 Brailovskaia J, Ozimek P, Bierhoff HW. How to prevent side effects of social media use (SMU)? Relationship between daily stress, online social support, physical activity and addictive tendencies–a longitudinal approach before and during the first Covid-19 lockdown in Germany. *J Affect Disord Report* 2021; **5**: 100144.

31 Yesavage JA, Brink TL, Rose TL *et al*. Development and validation of a geriatric depression screening scale: a preliminary report. *J Psychiatr Res* 1982; **17**: 37–49.

32 Ertan T, Eker E, Şar V. Geriatrik depresyon ölçeğinin Türk yaşlı nüfusunda geçerlilik ve güvenilirliği. *Noro Psikiyatr Ars* 1997; **34**: 62–71.

33 Andreassen CS, Billieux J, Griffiths MD *et al*. The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: a large-scale cross-sectional study. *Psychol Addict Behav* 2016; **30**: 252–262.

34 Demirci İ. Bergen sosyal medya bağımlılığı ölçeğinin türkçeye uyarlanması, depresyon ve anksiyete belirtileriyle ilişkisinin değerlendirilmesi. *Anadolu Psikiyatri Derg* 2019; **20**: 15–22.

35 Zimet GD, Dahlem NW, Zimet SG *et al*. The multidimensional scale of perceived social support. *J Pers Assess* 1988; **52**: 30–41.

36 Eker D, Arkar H, Yaldız H. Çok boyutlu algılanan sosyal destek ölçeği'nin gözden geçirilmiş formunun faktör yapısı, geçerlik ve güvenirliği. *Türk Psikiyatri Derg* 2001; **12**: 17–25.

37 Liu D, Baumeister R. Social networking online and personality of self-worth: a metaanalysis. *J Res Pers* 2016; **64**: 79–89.

38 Meshi D, Ellithorpe ME. Problematic social media use and social support received in reallife versus on social media: associations with depression, anxiety and social isolation. *Addict Behav* 2021; **119**: 106949.

39 Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: findings from a large national survey. *Addict Behav* 2017; **64**: 287–293.

40 Gambo S, Özad BO. The demographics of computer-mediated communication: a review of social media demographic trends among social networking site giants. *Comput Hum Behav Rep* 2020; **2**: 100016.

41 Griffiths M. Does Internet and computer" addiction" exist? Some case study evidence. *Cyberpsychol Behav* 2000; **3**: 211–218.

42 Panno A, Carbone GA, Massullo C *et al*. COVID-19 related distress is associated with alcohol problems, social media and food addiction symptoms: insights from the Italian experience during the lockdown. *Front Psych* 2020; **11**: 577135.

43 Li YY, Sun Y, Meng SQ *et al*. Internet addiction ıncreases in the general population during COVID-19: evidence from China. *Am J Addict* 2021; **30**: 389–397.

44 Dailey SL, Howard K, Roming SM *et al*. Biopsychosocial approach to understanding social media addiction. *Hum Behav Emerg Technol* 2020; **2**: 158–167.

45 Haand R, Shuwang Z. The relationship between social media addiction and depression: a quantitative study among university students in Khost, Afghanistan. *Int J Adolesc Youth* 2020; **25**: 780–786.

46 Al Mamun MA, Griffiths MD. The association between Facebook addiction and depression: a pilot survey study among Bangladeshi students. *Psychiatry Res* 2019; **271**: 628–633.

47 Lin LY, Sidani JE, Shensa A *et al*. Association between social media use and depression among US young adults. *Depress Anxiety* 2016; **33**: 323–331.