Chapter 2

The Relationship of Smart Phone Addiction and Lonely in Geriatric Individuals 3

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Abstract

People who are physically alone in their old age may experience problems in terms of both psychological and physical health. Studies on the subject show that loneliness increases with age (Pinquart & Sorensen, 2001; Hawkley & Cacioppo, 2010). Therefore, it is inevitable for elderly individuals to want to engage in various activities in order to evaluate the periods when they are alone. It is thought that the beginning of digitalization in all areas of life and the increase in the use of smart devices are more common especially among individuals who are alone. Interviews were conducted with 8 elderly individuals via smartphones, both on Instagram, which is a social media environment, and WhatsApp, which is a phone chat application. At the same time, they became friends with these people on their WhatsApp and Instagram accounts and their profiles were examined in detail for 30 days. In order to make analysis based on gender, 4 individuals were selected as male and 4 individuals as female. These interviews were made through certain periods and at the same time, the time intervals they spent on their smart phones were tried to be determined.

INTRODUCTION

With the introduction of mobile phones into human life, great changes have occurred. Technological changes and developments have enabled mobile phones to become smart and almost like pocket computers. Smart phones, which can connect to the internet and save many applications thanks to their internal/external memory, continue to reach more and more users with their increasing options day by day. Aiming to facilitate daily life, smart mobile phones enable many transactions to be done with a device that can be carried in a pocket (Kibona & Mgaya, 2015).

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With the effect of technological developments, mobile phones have become providing people with every imaginable opportunity, from photo viewing/editing, video player, navigation, playing games (Sarwar & Soomro, 2013) and shopping, social media applications, newspapers to translations. The developments in smart mobile phones, which are experienced and continue to be experienced in rapid succession, have caused significant effects in many areas of life (Kwon et al., 2013).

It is not easy for elderly individuals to get used to smart mobile phones, which are used by all age groups and become indispensable over time. At the same time, the graying population (Özmete, 2022) has made it necessary for older individuals to adapt to more digital life (Ericsson Mobility Report, 2017). However, the rate of smartphone usage among elderly individuals varies in relation to age. According to a study on the subject, approximately 59% of 65-69 year olds and 49% of 70-74 year olds have a smartphone. However, among other findings, the ownership rate decreases towards the middle of the age of 70 (Anderson & Perrin, 2017).

The increase in the use of smartphones has brought about addiction discussions in every age group. As the features of smartphones increase, their usage areas are also diversified. This is thought to be a factor leading to addiction. Smartphones, where a significant part of daily life activities can be easily carried out, have become a family member for elderly people for various reasons. In fact, it is thought that the duration of smart phone use of elderly individuals who feel lonely due to reasons such as retirement, marriage of children, moving to a different apartment, change of country and province may increase. Research shows that older adults use their smartphones in different ways. Mobile services on smartphones can help these people improve their communication with their family and friends, enrich their personal interests, and check various health-related information (Subramanyam et al., 2019).

In addition to their negative effects, smart mobile phones also have positive contributions to the lives of elderly individuals. Even a study on the subject sees this as an advantage. According to this study, smartphones slow down the biological regression that occurs as we age and contribute to the reduction of negative psychological feelings of individuals such as loneliness and unhappiness (McGaughey et al., 2013).

Conceptual Framework and Related Studies

Although loneliness as a concept is basically an emotional and communicative form of expression, it emerged within the scope of medical

science and entered the science of social psychology thanks to the researches carried out over time (Wei et al., 2010). In general, loneliness is defined as people's subjective unpleasant and painful emotional experiences. This experience is produced when there is a quantitative and qualitative gap between the expected social relationship and the actually perceived social relationship (Costello, 1983). That is, loneliness is the subjective psychological feeling that an individual desires for social interpersonal communication, but feels alienated and rejected by the social system.

Various studies have been conducted on older individuals and the effects of loneliness. As individuals get older, the probability of being alone increases. Individuals who have to live alone for various reasons have difficulty in spending the time they are alone. As a result, these people may experience both physical and mental disorders. Studies indicate that elderly individuals who are alone are more prone to addiction (Adams et al., 2004; Cacioppo et al., 2006; Perissinotto et al., 2012).

As digitalization increases, it is observed that the loneliness of individuals also increases. It is undeniable that this situation is related to the general progress of the world, globalization and transformation into digital societies (Caplan, 2006). Studies suggest that loneliness is a multidimensional concept. Many definitions have been made about the concept of loneliness. Peplau and Perlman stated that loneliness is not a pleasant experience, and that it can lead to incompatibility between the ideal and the achieved individual relationships in one's life (Peplau & Perlman, 1982). Weiss, on the other hand, stated that loneliness has various negative effects on a person's life in terms of social and emotional aspects (Weiss, 1987). At the same time, loneliness is divided into two as social and emotional. Social loneliness results from social isolation, while emotional loneliness results from the lack of a close emotional bond (Weiss, 1973). Although both types of loneliness seem different from each other, there is a deficiency in the basis of both.

In general terms, individuals may feel more or less alone in society. However, prolonged or severe loneliness affects the physical and mental health and normal lives of individuals. For the elderly, loneliness, which is an important indicator for measuring their mental health, is not only closely related to mental health conditions such as anxiety and depression. It is also a risk factor for increased mortality, hypertension, diabetes, cardiovascular disease, cognitive disorders, sleep disorders and other physiological diseases in middle-aged and elderly people (Miller, 2011; Emerson and Jayawardhana, 2016; Grover et al., 2019). In the context of the aging population, it is of great importance to understand and examine the problem of loneliness in

the elderly, as loneliness is closely related to health. Given the many negative effects of loneliness on the elderly, the factors affecting it have become the focus of numerous studies.

Situations such as the death of spouses, children leaving home for various reasons or not having any children/friends may cause elderly individuals to be alone over the years. Individuals who are usually alone can get under stress and struggle with different difficulties in this process (Ong et al., 2016; Victor & Bowling, 2012). While the researches indicate that loneliness is an important problem in old age, it is revealed that the quality of life of individuals who cannot cope with it decreases and as a result they have to struggle with physical and psychological diseases. Accordingly, it is considered normal to increase the use of smartphones among the elderly. While struggling with loneliness, many elderly individuals state that they feel important by forgetting their loneliness thanks to smartphones (Coyle & Dugan, 2012). According to the findings of one of the studies conducted in this context, it has been found that loneliness affects smartphone usage behavior and individuals with high levels of loneliness are more likely to use smartphones to obtain emotional support and regulate negative emotions (Morahan-Martin et al., 2003). On the other hand, according to a different study, a causal relationship was found between loneliness and the use of smartphones that can connect to the Internet. It is thought that loneliness may turn into a preference over time, and as a result, using smart phones connected to the Internet for long hours may adversely affect health (Caplan, 2003).

One of the theories reached as a result of the use of smart phones connected to the Internet is the substitution theory. The substitution theory reduces the individual offline social connection and social participation by occupying the interaction of the elderly in the real space, and leads to an increase in individual loneliness (Kraut et al., 1998; Nie et al., 2001). Theorists who support the reverse expansion theory and conduct research within this framework suggest that smartphone use can reduce the loneliness of elderly individuals. At the same time, according to the findings of the studies conducted in this context, smartphones as a communication tool and entertainment platform can help the elderly to overcome time and distance barriers, increase the frequency of social interaction, expand or maintain their social connections, and avoid social isolation. This may make it easier for elderly individuals to cope with the feeling of loneliness in general (Cotten et al., 2013; Cotten et al., 2012; Boekel et al., 2017).

Different functions and durations of smartphone use also have different effects on loneliness. Apart from this, the purposes of use may similarly create different effects on people. For example, it is thought that using smartphones only as a communication tool and communicating only with relatives, regular friends, children, etc. are associated with emotional loneliness. On the other hand, making new friends, being busy with games and spending time through new applications are seen as activities to reduce social loneliness (Sum et al., 2008).

Different studies on similar issues indicate that elderly individuals who try to combat loneliness by increasing the use of smartphones experience social isolation problems. Elderly individuals, who have more fun and say that they are not bored thanks to smartphones, do not feel the need to communicate in real life (Hajek and König, 2021). Another study conducted in this context has found that elderly individuals increase the use of smartphones to cope with loneliness. It is also among the findings of the research that the elderly use the internet for social interaction in order to reduce loneliness, strengthen their existing friendships and meet their social needs (Nowland et al., 2018). At the same time, in another study, it was found that as the loneliness of elderly individuals increased, their dependence on devices connected to the Internet such as smart phones increased. It has also been reported that high levels of smartphone addiction are associated with low self-esteem, loneliness, depression and shyness (Bian et al., 2015).

Method

The method of this study is virtual ethnography. The main reason for choosing this method for the research is the on-site analysis and examination of smartphone addiction, which is the subject of the study. Interviews were conducted with 8 elderly individuals via smartphones, both on Instagram, which is a social media environment, and WhatsApp, which is a phone chat application. At the same time, they became friends with these people on their WhatsApp and Instagram accounts and their profiles were examined in detail for 30 days. In order to make analysis based on gender, 4 individuals were selected as male and 4 individuals as female.

Virtual ethnography is a method used to analyze the lives of individuals who spend more time in the internet world day by day and who have created a new world for themselves in this new medium (Kozinets, 1998: 366). The most important feature that distinguishes this method from content analysis or other internet analysis is that the researcher communicates with the members of the research group as if they are a participant in the group. The method in question is also called by different names depending on its

practitioners. Among these names; network ethnography (Howard, 2002), internet ethnography (Boyd, 2008), virtual ethnography (Hine, 2000), digital ethnography (Murthy, 2008), discourse-centered online ethnography (discoursecentered online ethnography) (Androutsopoulos, online ethnography (Garcia et al., 2009), netnography (Kozinets, 2010), cyberethnography (cyberethnography) (Dominiguez et al., 2007; Robinson et al. Schultz, 2011) are among the prominent ones.

In this study, data were collected on the basis of virtual ethnography principles, which were especially highlighted by Christine Hine (2000). Accordingly, "participatory observation" and "in-depth analysis" were carried out during the data collection phase. Unlike real ethnographies, the participatory observation made here focuses on the sharing of people on the internet, beyond observing people.

Findings and Analysis

Among the 10 people interviewed within the scope of the research, 5 women and 5 men were selected equally. When questions were asked to understand the smartphone addiction levels of the interviewees during the interviews, all of the women and 2 of the men gave answers that are prone to addiction. When the interviewees were asked about the time they spent with their smartphones, people who were prone to addiction stated that they spent about 7-10 hours. On the other hand, do you feel unhappy or deprived when you are away from your smartphones or when you cannot use a smartphone? Again, the same people answered "yes" to the question.

According to the results obtained, it is thought that female interviewers are more prone to smartphone addiction than men. At the same time, although one of the male interviewees said that he spends an average of 1 hour a day on Instagram, when the Instagram page was checked with participant observation, it was noticed that the person shared and commented about every half hour on the same day, and spent a much longer time on Instagram when he actually stated. In this context, when a general evaluation is made, when men and women are evaluated within the scope of smartphone addiction, it has been determined that men spend longer periods of time on their smartphones, even if not as much as women.

When the reasons for the use of smartphones by elderly individuals are examined, it has been determined that it is generally to communicate and strengthen their communication. Half of the interviewees believe that their communication will be strengthened in direct proportion to the time they use their smartphones. One of the interviewees expressed his views

as follows; "Everything has improved a lot today. In the past, we didn't even have a phone in our house. This is a very important development for the world, we can talk to anyone we want whenever we want, however we want. I think that made communication limitless". Another interviewee said, "Thanks to my smartphone, I can video chat with my relatives, share with them on social networks, and witness the growth of my grandchildren from afar. I am not as upset as I used to be that they live far away". Another said, "In the old days, if we bought it, we used to follow the developments in the newspapers. This means that we actually receive the news given to us. However, now we can easily find all the information we want and wonder because smart phones are connected to the internet. In fact, since I cannot use a computer on my own, I am very happy that the smartphone is like a computer. It is also easier to learn".

When all these answers from the interviewees are evaluated, it is possible to say that the use of smartphones provides positive developments in the lives of elderly individuals, improves their communication and facilitates their access to the news. None of the interviewees think that the increase in smartphone usage is negative, since it is in question to develop and establish communication. Therefore, the interviewees show that they use their smart phones more as reasons to strengthen communication, learn something new and communicate more unlimitedly with their relatives. As a result of this situation, they do not think that the situation they are in is negative, even if they use their smartphones for long hours - prone to addiction - on the contrary, they think that it benefits them.

Thanks to the applications on smart phones, geriatric individuals can easily share their instant feelings in various ways such as a photo, video, text, poem. In fact, this is the reflection of people's momentary moods on the aforementioned channels and is seen as an important form of communication. However, when people increase their sharing and start to spend more time with their smart phones in virtual environment than physical time, they create a new world for themselves by isolating from daily life. In virtual worlds, individuals can generally reflect themselves not as they are, but as they want them to be. Because individuals with low general quality of life who cannot achieve the happiness they want in real life want to establish environments where they will be happier in virtual environments. Accordingly, over time, individuals may start sharing in order to receive answers that will be liked, appreciated and forgotten about their loneliness. This, in turn, can increase the sharing of people and cause them to become addicted to smartphones over time. Therefore, it was aimed to establish a relationship between their addiction to their smartphones and loneliness by

asking the interviewees questions about their shares. One of the interviewees says "everyone in all the apps I use via my smartphone are real people. I usually use a smartphone to keep in touch with my family and close friends. Especially with the people I can't meet face to face, I quench my longing with the help of video calls, videos and photos". Another interviewer said; "There is no person I do not know with whom I communicate directly on my smartphone and talk on WhatsApp. But of course, I also follow people I don't know on social media tools. When I like their posts, I like to show it and sometimes repost them on my page. Because it makes me happy that people like what I post. Sometimes you get very good answers. So I never feel alone and useless. Especially after I retired, I started to feel very bored and lonely when I was alone at home. After I bought myself a smartphone, this feeling has decreased a lot".

When these comments of the interviewees are evaluated in general, it is possible to say that elderly individuals use their smartphones to reduce their feelings of loneliness and to feel happier. However, in general, geriatric individuals do not make direct conversations with individuals they do not know on their smartphones. The interviewees, who stated that they did not meet through social media tools and that they interacted with famous individuals, clearly stated that they were free from the feeling of loneliness in these environments. Therefore, from this point of view, smart phones, developing technology, internet and interactive environments may be beneficial for elderly individuals. Because individuals who retire and move away from their social lives may feel useless and lonely over time. Doing something in these environments can make them feel happy and useful. Apart from this, smart phones also provide leisure time activities for elderly individuals in a way, as they provide a lot of opportunities for people. Especially considering that smartphones enter the lives of elderly people very late compared to their age, this actually makes them feel good by keeping up with the new world order. In this way, smartphone addiction can bring more benefit than harm for older individuals who feel happier.

More specific questions were also asked to the interviewees in order to associate loneliness with smartphone addiction. For example, the first of these questions; "According to you, does smartphone use distract individuals from feeling lonely? And when you use your smartphone too much, do you miss your relationships in physical life? The response of one of the interviewees is as follows; "I think it definitely takes away from loneliness. I get carried away and sometimes I finish half the day surfing my smartphone. I feel better and more enjoyable overall. I think the smartphone is definitely a useful invention. However, it certainly cannot be compared to spending

time with my loved ones face to face in physical life. This may be a substitute; it can never take the place of a physical meeting." He stated that the use of smartphones does not completely reduce his loneliness, but only masks it. However, while half of the interviewees stated that the use of smartphones reduces loneliness, the remaining half clearly stated that it cannot replace physical interviews. Even if the use of smartphones instantly comforts the elderly, it does not actually cure their loneliness. In other words, due to the generation gap, elderly individuals who are late acquainted with smart phones and new technology continue to yearn for their physical lives, even if they enjoy using them. On the other hand, almost all of the interviewee's state that they increase the use of smartphones because they feel lonely. The answer of one of the interviewees is much more remarkable than the others; "I can say that using a smartphone has officially saved me. After retiring, I had a hard time adjusting to home life. In this process, I started to live alone because my children got married and my wife passed away. Thanks to the smartphone, I am very happy now and I can easily reach everything I want. I've even been shopping since my daughter taught me. So I can live my life without needing anyone. Sometimes I don't feel like meeting even with neighbors and friends. In our age group, the conversations are all about negative, illness and sad things. But thanks to the applications I use thanks to my smartphone, I can spend my day more enjoyable." These statements of the interviewer actually show that the use of smartphones is evaluated differently by elderly individuals.

As can be seen, almost all of the interviewees are happy in this new world created after the development of technology. Since people's general life is more lonely in the modern world, everyone is looking for a friend. In a way, smartphones can even be seen as virtual friends for older individuals. Because elderly individuals are left alone in their homes after retirement. Sometimes, individuals who are suddenly alone and away from work may even experience psychological problems. In such times, the most likely solution is to spend time with the smart phone, which is the most widely used technological tool.

Elderly individuals spend time with their smart phones, citing various reasons. The most common response among the interviewees was "to reach my relatives and loved ones because I am alone". At the same time, elderly individuals who live alone use their smartphones a lot to shop and spend time on social networks. When the information received from the interviewees and participant observation comments were compared, it was determined that these people spent more than half of the day on average with their smartphones. One interviewee explains the reason for this quite

eloquently; "There is nothing that cannot be done with a smartphone today. I find so many activities to do in a row... I don't think it's so abnormal that I spend more than half of the day busy with my smartphone". As it can be understood from here, the applications in the smartphone keep the individual busy. Today, there is almost nothing left that cannot be done via a smartphone. People can even do their grocery shopping through apps. This situation normally causes individuals to spend more time with their smartphones.

Looking at the results of the interviews, smart mobile phones have become an indispensable tool in the lives of elderly individuals' day by day. In a way, it is possible to say that this device suppresses the openness of these people to exist in social life and to be social. On the other hand, in the long run, these devices can be effective in the general life of these people, even on their psychology and personality. These effects are not always positive. For example, individuals do not spend so much time in front of the screen that they may have difficulty adapting to real life over time. Over time, face-to-face communication is in danger of disappearing completely. Because individuals who are very accustomed to using screens cannot stay away from their smart phones even when they come together with their relatives. Although people seem to be together, it is difficult to talk about physical proximity because everyone has a mobile phone. On the other hand, spending too much time in virtual environments can negatively affect people's perception of reality. Since people will have difficulty in separating the real from the virtual, they may experience blinding emotions about reality. An interviewee's response that exemplifies this situation is as follows; "I'm so used to seeing my grandson behind the camera and through the photos that we've been seeing each other like this for 5 years. I don't know how to act when I meet him in real life". As it can be understood from here, the confusion of virtual and real emotions can cause people to forget even behaviors they have known for a long time.

As a result, in this study, a significant relationship was found between the intense use of smartphones and loneliness. Elderly individuals may become dependent on their smartphones, which they use for long hours, to get rid of their long-term loneliness and maintain their sociality. This may lead to a decrease in face-to-face communication. The more time a person spends with his/her smartphone, the more he/she moves away from face-to-face communication and communication practices established in real life. Smartphones are such effective devices that even older individuals have been greatly affected by these technologies, even if they were introduced to these technologies quite late in their lives. This technology even leads to the formation of behaviors that turn into addiction in individuals. This

may result in individuals adopting a different lifestyle over time. People can acquire new ones by giving up their long-term habits due to new technologies and situations they face. Although it is difficult for older individuals to learn to use new technological tools such as smartphones, especially compared to younger generations, it is noteworthy that they show addictive behavior similar to younger generations after learning. Although the feeling of loneliness is seen as normal not only for the elderly, but also for people of all ages, being alone against their will may cause them to seek a way out.

Conclusion and Evaluation

In general, research on smart phone addiction of elderly individuals is seen as an important issue that is thought to increase day by day. While smartphone use can have positive effects, it is also open to negative effects due to the risk of addiction. In this study, the level of smartphone addiction in geriatric individuals was associated with loneliness. Virtual ethnography was used as a method in the study. In-depth interviews were conducted with a total of 10 people, men and women, in equal numbers over the age of 60, via Instagram and WhatsApp, and a participant observation analysis was also carried out by making friends with these people in the virtual environment.

Today, the use of smartphones constitutes an important part of the life of individuals of all ages, but it is considered even more remarkable for elderly individuals. A significant portion of these people first acquire a smartphone to communicate with their children, grandchildren, relatives and friends. However, over time, the use of smartphones can turn into a pathological situation and evolve into a different dimension. Since elderly individuals, almost all of whom are retired, spend a significant part of their time at home, smartphones seem to be a very attractive tool to spend time. Especially since loneliness increases the amount of smartphone use, an addiction situation may arise that needs to be examined. Being aware of the fact that they can do a wide variety of activities thanks to these phones, elderly individuals have started to use many applications actively. Especially games played with smartphones and social media tools seem very attractive for this age group, who is retired and often lonely.

Participant observations and in-depth interviews conducted within the scope of the research show that even if the use of smartphones causes addiction, elderly individuals who are alone lead to a happier and more enjoyable life. 8 interviewees said, "Yes, excessive use of the smartphone can be harmful, but I have a lot of fun and forget my loneliness. I receive news from my relatives and I do not understand how the time passes". On the other hand, even if they know that the use of smartphones may be

harmful to them in the long run, elderly individuals do not need control in this regard. As it can be understood from here, similar to all addictions, in smartphone addiction, the person prefers to feel good by seeing the positive aspects of this phenomenon. In general, it is possible to say that individuals prefer to have a good and pleasant time rather than face the situation they are in. Therefore, it was considered important within the scope of the study to learn how the elderly individuals position their smartphones in their lives.

When the Instagram profiles and WhatsApp status shares of the elderly individuals were examined, it was determined that their lives were different with the answers given by the others, except for only one interviewer. It was noticed that a significant portion of the interviewees exhibited behaviors prone to smartphone addiction. On the other hand, similarly, almost all interviewees stated that they did not have any complaints about excessive use of smartphones. It is thought that this situation is related to the fact that elderly individuals do not have a more fun or good occupation to do.

Since this research aims to understand the relationship between smartphone addiction and loneliness in elderly individuals, the questions asked to the interviewees are aimed to be in this direction. When the results of the interviews are evaluated in this context, it is possible to say that smartphone addiction has a strong relationship with loneliness. Individuals who are retired, lose their spouses, leave their children home, and are left alone for many other reasons use smartphones in a way that is prone to addiction. In general, even though these people are aware of their situation, they do not want to get rid of it and do not see it as a problem. In this case, it is not right to see these people as completely bad, even if they use their smart phones, which make them feel happy and get rid of loneliness. It would be appropriate to repeat Plato's view, which is a pharmacological expression and states that drugs are "both a cure and a poison" in this context. Smartphones should be seen as "both a cure and a poison", just like drugs (Derrida, 1999). Smartphones, which can be harmful to them when used excessively, should also be seen as an important tool for elderly individuals who have to struggle with loneliness and many problems, to have a better time, maintain contact with their loved ones and have fun.

As a result, smart phones, which have an important place in the lives of elderly individuals, make their lives significantly easier. In this way, it has become easier to cope with loneliness, which is one of the most important problems at this age. Despite all this, since it is not known exactly what kind of problems the addictions seen in this age group may cause in the future, it would be useful to consider and evaluate this issue from different perspectives.

Kaynakça

- Adams K.B., Sanders S. & Auth E.A. (2004). Loneliness and depression in independent living retirement communities: Risk and resilience factors. Aging & Mental Health. 8(6):475–485.
- Anderson M. & Perrin A. (2017). Tech Adoption Climbs Among Older Adults. Internet and Technology, Pew Research Centre. 2-17.
- Bian M. & Leung L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. Soc Sci Comput Rev. 33:61-79. doi: 10.1177/0894439314528779.
- Boekel L., Peek S.T. & Luijkx K.G. (2017). Diversity in Older Adults' Use of the Internet: Identifying Subgroups Through Latent Class Analysis. J. Med. Internet Res. 19 (180). doi: 10.2196/jmir.6853.
- Boyd, D. (2008). How Can Qualitative Internet Researchers Define the Boundaries of Their Projects: A Response to Christine Hine. A. N. Markham ve N. K. Baym (Ed.), Internet Inquiry: Conversations About Method in (26-32) Los Angeles: Sage.
- Cacioppo J.T., Hughes M.E., Waite L.J., Hawkley L.C. & Thisted R. (2006). Loneliness as a specific risk factor for depressive symptoms: Cross sectional and longitudinal analyses. Psychology and Aging. 21: 140–151.
- Caplan S.E. (2003). Preference for Online Social Interaction A Theory of Problematic Internet Use and Psychosocial Well-Being. Commun. Res. 30: 625-648.
- Caplan SE. (2007). Relations among loneliness, social anxiety, and problematic internet use. CyberPsychol Behav. 10: 234–42. doi: 10.1089/ cpb.2006.9963.
- Costello E. (1983). Loneliness: A Sourcebook of Current Theory, Research and Therapy. J. Behav. Then. Exp. Psychiatry. 14: 281. doi: 10.1016/0005-7916(83)90066-6.
- Cotten S.R., Anderson W.A. & Mccullough B.M. (2013). Impact of Internet Use on Loneliness and Contact with Others among Older Adults: Cross-Sectional Analysis. J. Med. Internet Res. 15 (39). doi: 10.2196/ jmir.2306.
- Cotten S.R., Ford G., Ford S. & Hale T.M. (2012). Internet use and depression among older adults. Comput. Hum. Behav. 28: 496–499. doi: 10.1016/j. chb.2011.10.021
- Coyle C.E. & Dugan E. (2012). Social isolation, loneliness and health among older adults. J Aging Health. 24: 1346-63. doi: 10.1177/0898264312460275.
- Derrida, J. (1999). Platon'un Eczanesi. Toplumbilim Dergisi: 10 Jacques Derrida Özel sayısı. Çev. Zeynep Direk. İstanbul: Bağlam Yayınları.

- Domínguez D., Beaulieu A., Estalella A., Gómez. Schnettler, B. & Read, R. (2007). Virtual Ethnography. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research. 8(3), http://nbn-resolving.de/ urn:nbn:de:0114-fqs0703E19.
- Emerson K.G. (2016). Jayawardhana J. Risk Factors for Loneliness in Elderly Adults. J. Am. Geriatr. Soc. 64: 886. doi: 10.1111/jgs.14053
- Ericsson Mobility Report. (2017) Link: https://tinyurl.com/y2cjluf6.
- Garcia A. C., Standlee A. I., Bechkoff J. & Cui, Y. (2009). Ethnographic approaches to the internet and computer-mediated communication. Journal of Contemporary Ethnography. 38(1): 52-84.
- Grover S., Verma M., Singh T., Dahiya N. & Nehra R. (2019). Loneliness and its correlates amongst elderly attending non-communicable disease rural clinic attached to a tertiary care centre of North India. Asian J. Psychiatry. 43: 189–196. doi: 10.1016/j.ajp.2019.06.001
- Hajek A. & König H-H. (2021). Social isolation and loneliness of older adults in times of the COVID-19 pandemic: can use of online social media sites and video chats assist in mitigating social isolation and loneliness? Gerontology. 67: 121-4. doi: 10.1159/000512793.
- Hawkley L.C. & Cacioppo J.T. (2010). Loneliness Matters: A Theoretical and Empirical Review of Consequences and Mechanisms. Ann. Behav. Med. 40: 218–227. doi: 10.1007/s12160-010-9210-8.
- Hine, C. (2000). Virtual Ethnography. London: Sage Publications.
- Howard, P. N. (2002). Network ethnography and the hypermedia organization: new media, new organizations, new methods. New Media & Society. 4(4): 550-574.
- Kibona L. & Mgaya G. (2015) Smartphones' Effects on Academic Performance of Higher Learning Students. Journal of Multidisciplinary Engineering Science and Technology. 2: 777-784.
- Kraut R., Patterson M., Lundmark V., Kiesler S., Mukophadhyay T. & Scherlis W. (1998). Internet paradox a social technology that reduces social involvement and psychological well-being. Am. Psychol. 53:1017. doi: 10.1037/0003-066X.53.9.1017.
- Kwon M., Lee J.Y., Won W.Y., Park J.W. & Min J.A. (2013) Development and validation of a smartphone addiction scale (SAS). Journal of public library of science and medicine. 8: 1-7.
- Miller G. (2011). Why loneliness is hazardous to your health? Science. 331:138– 140. doi: 10.1126/science.331.6014.138.
- McGaughey R.E., Zeltmann S.M. & McMurtrey M.E. (2013) Motivations and obstacles to smartphone use by the elderly: developing a research framework. Int J of Electronic Finance. 7: 177-195.

- Morahan-Martin J. & Schumacher P. (2003). Loneliness and social uses of the Internet. Comput. Hum. Behav. 19:659-671. doi: 10.1016/ S0747-5632(03)00040-2
- Nowland R., Necka E.A. & Cacioppo J.T. (2018). Loneliness and social internet use: pathways to reconnection in a digital world? Perspect Psychol Sci. 13:70-87. doi: 10.1177/1745691617713052.
- Murthy, D. (2008). Digital ethnography: An examination of the use of new technologies for social research. Sociology. 42(5): 837-855.
- Nie N.H. & Erbring L. (2001). Internet and Society: A Preliminary Report; Digital Divide. MIT Press: Cambridge, MA, USA.
- Ong A.D., Uchino B.N. & Wethington E. (2016). Loneliness and health in older adults: a mini-review and synthesis. Gerontology. 62:443-9. doi: 10.1159/000441651
- Özmete, E. (2022). Gerontolojik Sosyal Hizmet. Atatürk Üniversitesi Açıköğretim Fakültesi. https://itunesu-assets.itunes.apple.com/itunes-assets/CobaltPublic6/v4/67/88/c8/6788c831-5289-5fc8-4cf6-be48cfcac 5c1/301-4850218610395060044-1. nite.pdf.
- Perissinotto C.M., Cenzer I.S. & Covinsky K.E. (2012). Loneliness in older persons: A predictor of functional decline and death. Archives of Internal Medicine. 172(14):1078-1083.
- Pinquart M. & Sorensen S. (2001). Influences on Loneliness in Older Adults: A Meta-Analysis. Basic Appl. Soc. Psychol. 23:245–266. doi: 10.1207/ S15324834BASP2304 2.
- Robinson, L. & Schulz, J. (2011). New Fieldsites, New Methods: New Ethnographic Opportunities. S. N. Hesse-Biber, (Ed.), The Handbook of Emergent Technologies in Social Research in. (180-198). Oxford, New York: Oxford University Press.
- Sarwar M. & Soomro T.R. (2013) Impact of Smartphone's on Society. European Journal of Scientific Research. 98: 216-226.
- Subramanyam A., Singh S. & Raut N. (2019) Mobile phone use in the elderly: Boon or bane? 5: 81-83.
- Sum S., Mathews R.M., Hughes I. & Campbell A. (2008). Internet use and loneliness in older adults. Cyberpsychol Behav. 11:208–211. doi: 10.1089/ cpb.2007.0010.
- Victor C.R. & Bowling A. (2012). A longitudinal analysis of loneliness among older people in great britain. J Psychol. 146:313-31. doi: 10.1080/00223980.2011.609572.
- Wei Y., Liu X. & Zhang Y. (2010). The Influence of Social Support on Rural Elderly Women's Loneliness. J. Popul. 47:1235–1245

Weiss R.S. (1987). Reflections on the present state of loneliness research. J Soc Behav Personal. 2:1-16.