

ECONOMY OF LONELINESS AND CONSUMER BEHAVIOR

Sabiha KILIÇ¹ Kübra Müge DALDAL²

Gönderim tarihi: 15.12.2022

Kabul tarihi: 01.03.2024

Abstract

In our country, consumers have met the concept of loneliness economy with the Covid-19 pandemic. For this reason, the study has unique value as it is the first study to examine the purchasing decisions of consumers in our country for loneliness economy products. In the study, three groups were defined as loneliness levels. These; Romantic Relationships can be expressed as Loneliness Level, Social Loneliness Level and Family Relationships Loneliness Level. As a result of the study, women feel more lonely in family relationships and social relationships, men feel more lonely in romantic relationships, consumers under the age of 25 have higher levels of Social loneliness, while consumers between the ages of 25-54 feel lonely in romantic relationships, while consumers aged 55 and over feel more lonely in family relationships compared to other age groups. It was determined that they experienced more loneliness. It was also found in the study that the level of romantic relationships and loneliness increased as the income level increased. It has been determined that the intention to buy loneliness economy products is higher than the others according to gender, those who are 55 years old and over by age groups, those who have 2000-3999 TL income according to income level, housewives according to occupational groups and singles according to marital status.

Keywords: Loneliness, The Economy of Loneliness, Covid-19, Consumer Behavior

JEL Classification: M3, M30, M31

Öz

Ülkemizde tüketiciler Covid-19 pandemisiyle birlikte yalnızlık ekonomisi kavramıyla tanışmışlardır. Bu nedenle çalışma, ülkemizdeki tüketicilerin yalnızlık ekonomisi ürünlerini satın alma kararlarının incelenmesi konusunda yapılan ilk çalışma olması nedeniyle özgün değer taşımaktadır. Çalışmada yalnızlık düzeyleri olarak üç grup tanımlanmıştır. Bunlar; Romantik İlişkiler Yalnızlık Düzeyi, Sosyal Yalnızlık Düzeyi ve Aile İlişkileri Yalnızlık Düzeyi olarak ifade edilebilir. Çalışma sonucunda kadınların aile ilişkilerinde ve Sosyal ilişkilerde, erkeklerin ise romantik ilişkilerde daha fazla yalnızlık hissettikleri, 25 yaşın altındaki tüketicilerin Sosyal yalnızlık düzeylerinin yüksek olduğu, 25-54 yaş aralığındaki tüketicilerin romantik ilişkilerde yalnızlık hissederken, 55 yaş ve üzerindeki tüketicilerin aile ilişkilerinde diğer yaş gruplarına göre daha fazla yalnızlık yaşadıkları belirlenmiştir. Çalışmada ayrıca, gelir Düzeyi arttıkça romantik ilişkiler yalnızlık düzeyinin de arttığı tespit edilmiştir. Cinsiyete göre erkeklerin, yaş gruplarına göre 55 yaş ve üzeri olanların, gelir düzeyine göre 2000-3999 TL gelire sahip olanların, meslek gruplarına göre ev hanımlarının ve medeni duruma göre de bekarların yalnızlık ekonomisi ürünlerini satın alma niyetlerinin diğerlerine göre daha yüksek olduğu belirlenmiştir.

Anahtar Kelimeler: Yalnızlık, Yalnızlık Ekonomisi, Covid-19, Tüketici Davranışları

JEL Sınıflaması: M3, M30, M31

¹ Prof.Dr., Hitit Üniversitesi, İİBF, İşletme Bölümü Öğretim Üyesi, sabihakilic@hitit.edu.tr,
ORCID: 0000-0002-0906-4567

² Dr.Öğr.Üyesi, Hitit Üniversitesi, İİBF, İşletme Bölümü Öğretim Üyesi, kmugedaldal@hitit.edu.tr
ORCID: 0000-0003-1272-5722

1. Introduction

Loneliness can be perceived as a threat and danger for individuals with a low level of interaction with the people around them. Similar to basic needs such as hunger and thirst, individuals can engage in various activities to eliminate the lack of social connectedness and to avoid the feeling of loneliness. One way individuals overcome their lack of social commitment is to gain opportunities for new relationships by engaging in group activities and participating in community service work. However, these activities may not be an opportunity for shy, introverted individuals with insufficient social abilities (Cacioppo et al., 2006). In addition, a study conducted in 2015 suggested that the feeling of loneliness prevents individuals from socializing (Park and Baumeister, 2015). This means that individuals who feel lonely may have difficulty in establishing social relationships with other people. In such cases, individuals can meet their social needs by connecting with non-human objects (Epley et al., 2008). A new concept of loneliness economy has emerged in the literature with the product needs that lonely people can meet their social needs.

Curfew restrictions due to the Covid-19 virus, quarantine practices, the risk of virus contamination, the temporary closure of cafes and restaurants with socializing environments, the moving of working life from workplaces to home environments prevented people from meeting with their families, relatives and friends. In this process, most of the restrictions were applied to the age group under 20 and over 65. While the timelessness and intense pace of work brought by modern life has already caused people to become lonely, the Covid-19 pandemic process has led to an exponential increase in loneliness. Due to all these reasons, the increasing rate of loneliness in the world population and the differences in consumer preferences of lonely people have increased the need for loneliness economy products. These products have started to be developed and launched in different countries of the world. In this study, consumer preferences for smart home assistants, which are among the loneliness economy products, were investigated. Firstly, the concepts of loneliness and loneliness economy are explained in the study. The study also conducted a literature review on the relationship between loneliness and consumption behaviors. Firstly, the concepts of loneliness and loneliness economy are explained in the next part of the study.

2. Loneliness and the Economy of Loneliness

Loneliness is a subjective and unwanted emotion arising from people's lack of interaction with their environment (Burt, 1986; Kim et al., 2005). It is not correct to say for individuals who are alone that they are lonely, and it may not be said that individuals in a crowded environment do not feel lonely. On the contrary, the feeling of loneliness emerges when there is inequality between the actual and perceived interpersonal relationships and interactions (Peplau and Perlman, 1982). In social ability research, it is observed that lonely individuals do not interact much with their environment, do not participate in group activities, and devote a lot of time to themselves (Marangoni and Ickes, 1989).

In the dictionary of Turkish Language Association (TDK), the word for loneliness is defined as "having no one around" (TDK, 2019). Loneliness is also expressed as a negative emotion that emerges in the social relationships of individuals and creates discomfort. Characteristics of lonely persons are not feeling compatible with other people around him, low social activity levels, avoiding taking responsibility, introversion, difficulty in making friends, tendency to form superficial relationships, negative thinking and evaluating, and selfish behaviors (Yılmaz and Altunok, 2009).

The feeling of loneliness is an inescapable and painful subjective feeling that occurs as a result of individuals' negative experiences. In studies on loneliness, it has been concluded that the feeling of loneliness harms the life standard and human life such as smoking, alcohol, obesity and unhealthy life. In studies investigating the factors that shorten human life; it is stated that air pollution increases the risk of premature death by 5%, obesity 20% and alcohol use by 30%, while the effect of loneliness on the risk of premature death is estimated to be 45%. The feeling of loneliness not only affects human behavior, but also negatively affects the hormonal, immune and circulatory system (Arbuckle, 2018: 15). Loneliness is a subjective concept that varies from person to person. For some individuals, it expresses the feeling of not belonging, exclusion, and for some individuals, it may express the feeling of not being cared for or noticed by other individuals around them (Çetin and Anuk, 2020; 172).

According to the 2020 Love and Loneliness Report by Kaspersky technology company, 84% of people in Europe feel more lonely because they cannot see their family, friends and co-workers during the pandemic process. In addition, it was stated in the report that young adults between the ages of 18-30, individuals with low income and living alone feel more alone during the pandemic process (Adjust Brand, 2021). In Turkey, while the number of single-person households was 2,931,085 in 2020, this number reached to 4.404.997. People living alone in the 6 years in Turkey has increased by approximately 150% (TUIK, 2021).

Also in a study conducted by Üsküdar University and Method Research company to determine the loneliness levels in Turkey, 53% of respondents stated that they felt frequently or occasionally lonely and that the young bachelors, low-income people, immigrants and those living alone were the groups that felt the most lonely among the participating groups (Üsküdar News Agency, 2019).

Loneliness economy refers to the new goods and services developed by businesses to meet the increasing rate of loneliness and socialization needs of people that increase accordingly. The proposals put forward for the solution of loneliness have led to the emergence of a new concept, the economy of loneliness. The increase in the rate of loneliness in the world population has brought about new searches for businesses. Some businesses have started to offer restaurants, capsule hotel rooms and mini sports halls that will make lonely people feel good and will not remind them of their loneliness. Within the scope of the loneliness economy, solutions have been developed for people living alone in the retail sector such as single-portion ready meals, frozen foods, ready-to-eat appetizers and salads in supermarkets, and selling the vegetables and fruits in pieces (Kazan, 2020). In China, practices such as single girls hiring boyfriends in order to overcome their loneliness and get released from family pressure, or rented siblings for young individuals who feel it hard to become socialized are examples of solitude solutions and services in the loneliness economy in the world. In addition, with the increase of loneliness in China, mini stands appealing to solo singers started to be established in supermarkets and shopping centers so that only people can socialize and have fun (Avunç, 2019). In Japan, as a solution to loneliness, products where only people can communicate as well as hologram human figures have been put on the market. Another of the loneliness economy products is ElliQ smart home assistants. Smart home assistants, which are produced as a solution to loneliness, remind users to drink water, medication times and play some word games with users. So much so that the increase in loneliness and people's struggle with this loneliness have turned into an economic opportunity for businesses (The Guardian, 2020). As can be seen from these examples, it is possible to say that the increase in the rate of loneliness in the world and the epidemic process experienced due to the Covid-19 virus has led to the emergence of new markets and new opportunities. The following section contains detailed literature on consumer behavior examined within the context of loneliness.

3. Literature Review on Consumer Behavior Under the Scope of Loneliness

There are few studies in the literature examining the relationship between loneliness and consumer behavior. In recent years, the rapid increase in the level of loneliness and the number of people living alone has made the economy of loneliness interesting for researchers and academics. In a study conducted by Das et al. in 2003, it was concluded that lonely individuals have high levels of unplanned surfing on the internet, but their tendency to unplanned online shopping is low (Das et al., 2003). In a study conducted by Kim et al. in 2005, it was argued that shopping malls are critical to alleviate the feeling of loneliness, they mediate the socialization of elderly people in particular, and therefore, retailers in shopping centers can attract older consumers by emphasizing the consumption of value and services and thus enabling them to spend more (Kim et al., 2005). Pettigrew, in his study conducted in 2007, claims that shopping helps elderly consumers to develop consumption rituals and that shopping reduces the sense of loneliness of elderly people (Pettigrew, 2007). According to the study conducted by Lim and Kim in 2011, it was determined that there is a positive relationship between the level of loneliness of elderly people and their television shopping, and it was found that intimate communication between television hosts and the audience increases consumer satisfaction (Lim and Kim, 2011). In a study conducted by Kim in 2017, lonely individuals' consumption habits were examined, and it was determined that lonely individuals had a high tendency to buy nostalgic products and donate to charities (Kim, 2017). In a study conducted by Bozacı in 2018, it was determined that loneliness negatively affects hedonistic consumption in shopping centers, and depending on the increase in loneliness, going alone to shopping centers, going on weekdays evenings, going every day or several times a week increases and decreases the average monthly expenditure (Bozacı, 2018). In their study conducted in 2019, Yüncü and Sevim determined that individuals with high levels of loneliness do not prefer to have breakfast in places with a high level of interaction with other people, such as cafes, fast food restaurants, pastry shops, and bagel sellers (Yüncü and Sevim, 2019). In their studies conducted in 2020, Rejendran and Arun concluded that nostalgic advertisements only positively affect consumers and therefore their purchasing behavior (Rejendran and Arun, 2020). In this study, consumers' intentions to purchase loneliness economy products were examined depending on the loneliness level groups that developed according to their demographic characteristics. Detailed analysis and findings are included in the following section.

4. Method

The aim of the study is to determine which type of loneliness level group the consumers who buy loneliness economy products belong to. In the study, three groups were defined as loneliness levels. These; Romantic Relationships can be expressed as Loneliness Level, Social Loneliness Level and Family Relationships Loneliness Level. First of all, it was determined which group of the participants were included in the level of loneliness according to their demographic characteristics. Then, the relationships between the loneliness level group they belong to and their intention to purchase loneliness economy products were examined. The basic assumption of the study is that consumers' intention to buy loneliness economy products depends on the loneliness level group they belong. The study has a unique value because it is the first study to examine the purchasing intentions of the consumers in our country for the products of the loneliness economy.

Online survey method was used to obtain study data. The questionnaire consists of 3 parts and 23 questions. The first part of the questionnaire consists of six multiple-choice questions aimed at determining the demographic characteristics of the participants such as gender, age, income, education, occupation and marital status. The second part of the questionnaire consists of three questions determined according to the 5-point Likert scale to determine the intention, preferences and possibilities of the participants to purchase the loneliness economy product. In the third part of the questionnaire, there are 15 expressions determined according to the 5-point Likert scale ranging from "Strongly Disagree" and "Strongly Agree" to determine the loneliness levels of the participants. In determining the statements, the scale developed by DiTommaso, Brannen and Best (2004) and adapted by Çeçen (2007) in our country was used. The representative power of the sample volume on which the survey was applied to the main mass was measured with the Cronbach's Alpha coefficient. The Cronbach's Alpha value of the scale was calculated as 0.753, and it can be said that the sample volume on which the scale was applied has a high representation power of the main mass.

Due to the Covid-19 pandemic, the survey was conducted online, not face-to-face. The online questionnaire form, which was prepared to reach the participants quickly and effectively, was applied to the consumers who use the social media platforms Facebook, Instagram and Twitter in Turkey. According to the Digital 2020 report published by We Are Social and Hootsuite, there are 54 million social media users in our country. 0.034% of the users consist of individuals under the age of 18. In our study, since the online questionnaire would be applied to individuals aged 18 and over, the main mass was determined as 54 million 162 thousand (54 000000x0,966) social media users. According to the Digital 2020 report, on average, 33% of social media users are women and 67% are men. Within the scope of these

data, the sample volume that will represent the main mass at a 95% confidence interval and a 0.04% error level was calculated using the following formula according to the method of determining the sample volume by means of proportions:

Figure 1 Formula

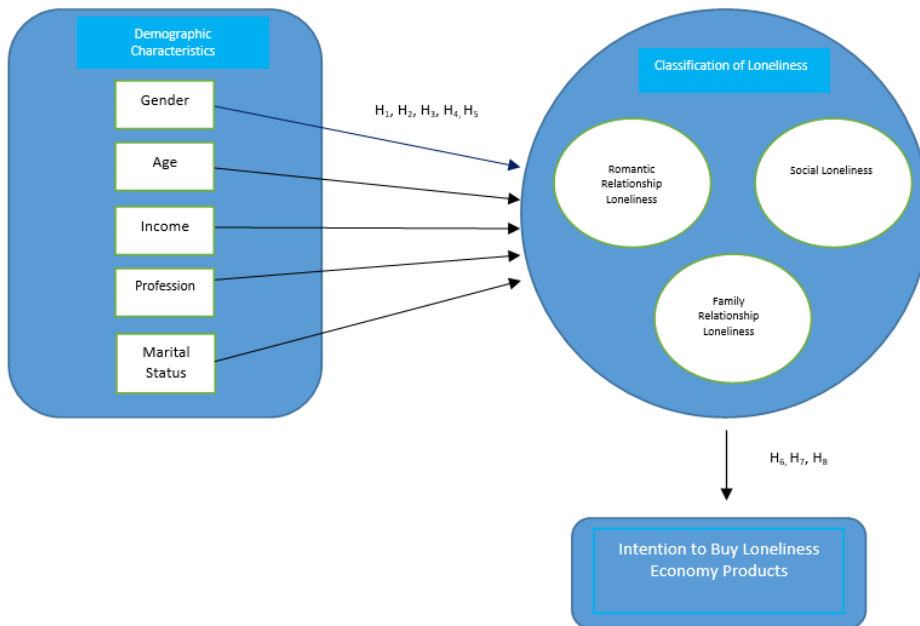
$$n = \frac{N \cdot (p \cdot q) \cdot Z^2}{(N - 1) \cdot E^2 + (p \cdot q) \cdot Z^2}$$

$$\frac{54.162.000 \cdot (0,33 \times 0,67) \cdot 2^2}{(54.162.000 - 1) \cdot (0,04)^2 + (0,33 \times 0,67) \cdot 2^2} = 552 \text{ person}$$

Considering that there may be invalid questionnaires, the questionnaires were applied to 600 participants aged 18 and over and 506 valid questionnaires were included in the analysis.

The research model developed within the scope of the aim and basic assumption of the study is as follows.

Figure 2 The Conceptual Model of the Relationship Between the Classification of Loneliness and the Intentions to Purchase Loneliness Economy Products by Consumers According to their Demographic Characteristics



The aim of the study is to determine which type of loneliness level group they belong to according to the demographic characteristics of the participants. The study also analyzed the relationship between the loneliness level group to which the participants belonged according to their demographic characteristics and their intention to purchase loneliness economy products. According to Figure 1, consumers are included in different loneliness level groups according to their demographic characteristics. These loneliness groups, which consumers are included in, can have an impact on their intention to purchase loneliness economy products. The hypotheses regarding the loneliness level groups they are included in according to the demographic characteristics of the surveyed consumers and their intention to purchase loneliness economy products are given below:

- H1: According to the gender of the consumers, the loneliness level groups they belong to differ.
- H2: According to the age of the consumers, the loneliness level groups they belong to differ.
- H3: According to the income level of consumers, the loneliness level groups they belong to differ.
- H4: The loneliness level groups of consumers differ according to their occupations.
- H5: According to the marital status of the consumers, the loneliness level groups they belong to differ.
- H6: There is a relationship between the level of romantic relationships loneliness of consumers and their intention to purchase loneliness economy products.
- H7: There is a relationship between the social loneliness level of consumers and their intention to buy loneliness economy products.
- H8: There is a relationship between the level of loneliness in family relationships and the intention to purchase loneliness economy products..

5. Data Analysis and Findings

The study data were obtained using the online questionnaire method. SPSS 26.0 package program was used in the analysis of the data. Descriptive statistics, percentage and frequency methods, discriminant and regression analysis were used as analysis methods. 65% of the participants in the data set are female and 35% are male consumers. Approximately 43% of the participants are between the ages of 25-34. It can be said that 50% of the participants have an income level of 4000 TL and above, 58% are public and private sector employees,

and approximately 51% are single. The following section includes analyzes on the classification of the loneliness levels of the consumers participating in the study.

5.1. Discriminant Analysis for Classification of Loneliness Levels

The purpose of discriminant analysis is to divide individuals into groups that have common characteristics among themselves by making use of certain known characteristics (Hair et al., 1998). It also enables the detection of differences between two or more groups (Demirhan, 1997). The features used to distinguish between groups are called discriminant variables. In the study, these variables were determined as demographic variables. Detailed analyzes regarding the discrimination of the consumers participating in the survey according to the loneliness level groups, depending on the demographic variables, are given in the sections below. The table below shows the discriminant analysis results of the loneliness level groups to which the surveyed consumers belong according to their gender.:

Table 1: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Gender) And Wilks λ Values

Variable	Wilks λ	F	SD1	SD2	Sig.	Structure Matrix	Y ₁ Famale	Y ₂ Male
Romantic Relationships	1,000	0,102	1	504	0,750	-0,108	1,805	1,955
Social Loneliness	0,991	4,638	1	504	0,032	0,728	5,232	4,955
Family Relations	0,989	5,498	1	504	0,019	0,792	6,997	6,688
	Wilks λ	X2	df	Sig.		Fixed	-22,931	-21,499
	0,983	8,657	3	0,034				

Table 1 shows the loneliness classifications of the consumers participating in the study according to their gender. In the table, levels of loneliness fall under three groups: romantic loneliness, social loneliness, and family relations loneliness. The F value in the table indicates whether there is a difference between loneliness levels by gender at the significance level of $P < 0.05$. Accordingly, it can be said that there are significant differences between social ($p < 0.032$) and family relations ($p < 0.019$) loneliness levels of male and female consumers, but there are no significant differences between loneliness levels in romantic relationships ($p < 0.750$). Hence, H_{1a} was accepted. Structure matrix expresses the correlation between discriminant function and discriminant variables. According to this, the highest correlation coefficients between discriminant function formed by gender and loneliness levels are family relations (0.792) and social (0.728) loneliness levels. Therefore, it can be said that these two levels of loneliness are effective in the classification of loneliness according to gender. Y1

and Y2 values in the structure matrix express how much the independent variables contribute to the separation of groups. Accordingly, it can be said that women contribute higher than men in the classification of loneliness levels. In other words, it can be said that women have a higher level of social and family relationships loneliness than men. Wilks λ expresses the statistical significance of the analysis. Therefore, in the analysis with Wilks λ (0.982), it can be said that the x^2 value is statistically significant at 3 degrees of freedom compared to $p < 0.034$. According to the discriminant analysis, it can be said that women experience more loneliness in family and social relationships than men. Men, on the other hand, experience higher levels of loneliness in romantic relationships than women. Therefore, the hypothesis "H1: The loneliness level groups they belong to differ according to the gender of the consumers" was accepted. The table below shows the discriminant analysis results of the loneliness level groups to which the surveyed consumers belong according to their age:

Table 2: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) And Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 18-24	Y ₂ 25-34
Romantic Relationships	0,981	6,643	1	335	0,010	-0,612	1,297	1,800
Social Loneliness	0,983	5,722	1	335	0,017	0,568	5,456	4,875
Family Relations	0,997	1,125	1	335	0,290	0,252	6,927	6,766
	Wilks λ	X ²	df	Sig.		Fixed	-22,571	-21,630
	0,950	17,215	3	0,001				

When the data of Table 2 are examined, it is seen that there is a difference at the significance level of $p < 0.05$ in terms of romantic loneliness and social loneliness between the 18-24 age group and the 25-34 age group. According to the structure matrix results, it can be said that there is a higher level of relationship between these age groups and social loneliness compared to other loneliness levels. According to the Fisher discriminant function, it is seen that consumers in the 18-24 age group have higher levels of social loneliness than other age groups, and consumers in the 25-34 age group have higher levels of romantic loneliness than the other age group. According to this, consumers in the 18-24 age group feel more social loneliness than other age groups, while consumers in the 25-34 age group feel lonely in romantic relationships compared to other consumer groups. Therefore, in the analysis with Wilks λ (0.950), it can be said that the x^2 value is statistically significant at 3 degrees of freedom compared to $p < 0.001$. The table below contains analysis data for the 18-24 and 35-44 age groups.

Table 3: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 18-24	Y ₂ 35-44
Romantic Relationships	0,985	3,494	2	448	0,031	-0,600	1,345	1,741
Social Loneliness	0,987	3,047	2	448	0,048	0,559	5,412	4,790
Family Relations	0,996	0,946	2	448	0,389	0,217	7,459	7,610
	Wilks λ	X ²	df	Sig.		Fixed	-23,850	-23,492
	0,955	20,356	6	0,002				

When the data of Table 3 are examined, it is seen that there is a difference at the significance level of $p < 0.05$ in terms of romantic relations and social loneliness between the 18-24 age group and the 35-44 age group. When the structure matrix data are examined, it can be said that there is a higher level of relationship between these age groups and the level of social loneliness. In other words, it has been determined that social loneliness is felt at a higher level among these age groups than romantic relationships and family relations loneliness levels. When Fisher discriminant function values are examined, it can be said that consumers in the 18-24 age group have higher levels of social loneliness (5,412) compared to the other age group (5,412), and that consumers in the 35-44 age group have higher levels of loneliness in romantic relationships (1,741) compared to the other age group. In other words, consumers in the 18-24 age group feel more social loneliness than the other age group, while consumers in the 35-44 age group have more loneliness about romantic relationships. In the analysis with Wilks λ (0.955), it can be stated that the x^2 value is statistically significant at 6 degrees of freedom compared to $p < 0.002$. The table below contains detailed analyzes for the 18-24 and 45-54 age groups:

Table 4: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 18-24	Y ₂ 45-54
Romantic Relationships	0,982	3,007	3	490	0,030	0,633	1,482	1,638
Social Loneliness	0,987	2,215	3	490	0,086	-0,526	5,447	5,054
Family Relations	0,989	1,759	3	490	0,154	-0,152	6,967	6,475
	Wilks λ	X ²	df	Sig.		Fixed	-23,560	-21,179
	0,950	24,889	9	0,003				

When Table 4 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of the 18-24 and 45-54 age groups. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these age groups and the level of loneliness in romantic relationships (0.633) compared to other types of loneliness. When Fisher Discriminant function coefficients⁽³⁾ are examined, it can be said that consumers in the 45-54 age group have higher levels of loneliness in romantic relationships compared to consumers in the 18-24 age group, in other words, they feel more lonely about romantic relationships. In the analysis with Wilks λ (0.950), it can be stated that the χ^2 value is statistically significant at 9 degrees of freedom compared to $p < 0.003$. The table below contains detailed analyzes for the 18-24 and 55+ age groups:

Table 5 Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 18-24	Y ₂ 55+
Romantic Relationships	0,973	3,450	4	501	0,009	0,692	1,515	0,873
Social Loneliness	0,987	1,681	4	501	0,153	-0,413	5,543	5,176
Family Relations	0,985	1,969	4	501	0,100	-0,305	6,897	7,985
	Wilks λ	χ^2	df	Sig.		Fixed	-23,864	-24,539
	0,934	35,339	12	0,001				

When Table 5 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of the 18-24 and 55+ age groups. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these age groups and the level of loneliness in romantic relationships (0.692) compared to other types of loneliness. When Fisher Discriminant function coefficients are examined, it can be said that consumers in the 18-24 age group have higher levels of loneliness in romantic relationships compared to those in the 55+ age group, in other words, they feel more lonely about romantic relationships. In the analysis with Wilks λ (0.934), it can be stated that the χ^2 value is statistically significant at 12 degrees of freedom compared to $p < 0.001$. The table below contains detailed analyzes for the age groups 25-34 and 55 and over:

Table 6: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 25-34	Y ₂ 55+
Romantic Relationships	0,975	3,245	3	380	0,022	0,780	2,141	0,888
Social Loneliness	0,999	0,113	3	380	0,953	-0,398	4,883	5,234
Family Relations	0,983	2,226	3	380	0,085	-0,083	6,397	7,452
	Wilks λ	X ²	df	Sig.		Fixed	-22,230	-23,635
	0,951	18,887	9	0,026				

When Table 6 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of the 25-34 and 55+ age groups. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these age groups and the level of loneliness in romantic relationships (0.780) compared to other types of loneliness. When Fisher Discriminant function coefficients are examined, it can be said that consumers in the 25-34 age group have higher levels of loneliness in romantic relationships compared to those in the 55+ age group, in other words, they feel more lonely about romantic relationships. In the analysis with Wilks λ (0.951), it can be stated that the χ^2 value is statistically significant at 9 degrees of freedom compared to $p < 0.026$. The table below contains detailed analyzes for 35-44 and 55+ age groups:

Table 7: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Age) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ 35-44	Y ₂ 55+
Romantic Relationships	0,960	3,485	2	166	0,033	0,799	<u>2,597</u>	1,423
Social Loneliness	0,998	0,143	2	166	0,867	-0,059	4,780	5,239
Family Relations	0,963	3,226	2	166	0,042	0,885	7,204	<u>7,872</u>
	Wilks λ	X ²	df	Sig.		Fixed	-24,019	-24,707
	0,916	14,519	6	0,024				

When Table 7 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships and family relations loneliness levels of the 35-44 and 55+ age groups. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these age groups and the level of loneliness in family

relations (0.885) and romantic relations loneliness (0.799) compared to the other loneliness type. When Fisher Discriminant function coefficients are examined, it can be said that consumers in the 35-44 age group have higher levels of loneliness in romantic relationships compared to those in the 55+ age group, in other words, they feel more lonely about romantic relationships. On the other hand, it can be stated that consumers in the 55+ age group have higher levels of family relationships (0.782) than consumers in the 35-44 age group than those in the 35-44 age group, and that those in this age group feel more alone in terms of family relationships. In the analysis with Wilks λ (0.916), it can be stated that the χ^2 value is statistically significant at 6 degrees of freedom compared to $p < 0.024$. As a result of the discriminant analysis, the hypothesis H2: The loneliness level groups they belong to differ according to the age of the consumers. The following table shows the discriminant analysis results of the loneliness level groups of the surveyed consumers according to their income levels:

Table 8: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Income) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ Less than 2000	Y ₂ 2000-3999 TL
Romantic Relationships	0,985	3,874	1	249	0,050	0,650	1,176	<u>1,577</u>
Social Loneliness	0,991	2,365	1	249	0,125	-0,508	4,566	4,057
Family Relations	1,000	0,042	1	249	0,838	-0,067	6,818	6,863
	Wilks λ	X ²	df	Sig.		Fixed	-20,766	-20,430
	0,964	8,953	3	0,030				

When Table 8 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of the consumers with an income of less than 2000 TL and the income between 2000-3999 TL. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these income groups and the level of loneliness in romantic relationships (0.650) compared to the other loneliness type. When Fisher Discriminant function coefficients are examined, it can be said that consumers with an income between 2000-3999 TL have higher levels of loneliness in romantic relationships compared to consumers with an income of less than 2000 TL, in other words, they feel more loneliness about romantic relationships. Therefore, in the analysis with Wilks λ (0.964), it can be said that the χ^2 value is statistically significant at 3 degrees of freedom compared to $p < 0.030$.

Table 9: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Income) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ Less than 2000	Y ₂ 4000-5999 TL
Romantic Relationships	0,980	3,743	2	363	0,025	0,691	1,363	<u>1,906</u>
Social Loneliness	0,992	1,539	2	363	0,216	-0,425	5,677	5,284
Family Relations	0,994	1,0052	2	363	0,367	-0,266	6,349	6,029
	Wilks λ	X ²	df	Sig.		Fixed	-22,406	-21,643
	0,954	17,117	6	0,009				

When Table 9 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of the consumers with an income of less than 2000 TL and the income between 4000-5999 TL. According to the data of the structure matrix, it is seen that there is a higher level of relationship between these income groups and the level of loneliness in romantic relationships (0.691) compared to the other loneliness type. When Fisher Discriminant function coefficients are examined, it can be said that consumers with an income between 4000-5999 TL have higher levels of loneliness in romantic relationships compared to consumers with an income of less than 2000 TL, in other words, they feel more loneliness about romantic relationships. Therefore, in the analysis with Wilks λ (0.954), it can be said that the x^2 value is statistically significant at 6 degrees of freedom compared to $p < 0.009$. According to the discriminant analysis, the hypothesis “H3: The loneliness level groups they belong to differ according to the income levels of the consumers” was accepted. The table below shows the discriminant analysis results of the loneliness level groups of the surveyed consumers according to their occupations:

Table 10 : Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Occupation) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ Student	Y ₂ Civil Servant
Romantic Relationships	0,991	2,578	1	269	0,110	-0,456	1,554	1,976
Social Loneliness	0,981	5,110	1	269	0,025	0,643	5,886	5,349
Family Relations	0,989	3,044	1	269	0,082	0,496	6,867	6,567
	Wilks λ	X ²	df	Sig.		Fixed	-23,390	-21,938
	0,956	12,031	3	0,007				

When Table 10 is examined, it is seen that there is a difference at $p < 0.05$ significance level between the social loneliness levels of students and public employees. According to the data of the structure matrix, it is seen that there is a higher level of relationship between occupational groups and social loneliness level (0,643) compared to the other loneliness type. When Fisher Discriminant function coefficients are examined, it can be said that students have higher levels of social loneliness than public employees, in other words, they feel more lonely about social loneliness. In the analysis with Wilks λ (0.956), it was determined that the x^2 value was statistically significant at 3 degrees of freedom compared to $p < 0.007$. The analysis of the level of loneliness of students and private sector employees is included in the table below.

Table 11: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Occupation) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁ Student	Y ₂ Private Sector Employee
Romantic Relationships	0,984	3,271	2	397	0,039	0,802	1,338	1,940
Social Loneliness	0,989	2,259	2	397	0,106	0,475	4,926	4,489
Family Relations	0,992	1,537	2	397	0,216	0,401	7,192	6,869
	Wilks λ	X ²	df	Sig.		Fixed	-22,554	-21,818
	0,957	17,267	6	0,008				

When Table 11 is examined, it is seen that there is a difference at a significance level of $p < 0.05$ between the romantic relationships loneliness levels of students and private sector employees. According to the data of the structure matrix, it is seen that there is a higher level of relationship between occupational groups and romantic relationships loneliness level (0.802) compared to the other loneliness type. When Fisher Discriminant function coefficients are examined, it can be said that private sector employees have higher levels of loneliness in romantic relationships compared to students, in other words, they feel more lonely about romantic relationships. In the analysis with Wilks λ (0.957), it was determined that the χ^2 value was statistically significant at 6 degrees of freedom compared to $p < 0.008$. As a result of the discriminant analysis, the hypothesis "H3: The loneliness level groups that consumers belong to differ according to their occupations" was accepted. The following table shows the discriminant analysis results of the loneliness level groups of the surveyed consumers according to their marital status:

Table 12: Equality Test of Groups, Structure Matrix, Fisher Discriminant Function (Marital Status) and Wilks λ Values

Variable	Wilks λ	F	sd ₁	sd ₂	Sig.	Structure Matrix	Y ₁	Y ₂
							Single	Married
Romantic Relationships	0,993	3,408	1	504	0,045	0,545	1,771	2,047
Social Loneliness	0,993	3,352	1	504	0,048	-0,540	5,281	4,800
Family Relations	0,999	0,429	1	504	0,513	0,193	6,683	6,899
	Wilks λ	χ^2	df	Sig.		Fixed	-22,200	-22,198
	0,978	11,324	3	0,010				

When Table 12 is examined, it is seen that there is a $p < 0.05$ significant difference between the levels of romantic relationships and social loneliness between married and single consumers. According to the structure matrix data, the highest correlation coefficient between the discriminant function created according to marital status and loneliness levels belonged to the romantic relationships (0.545) level. The most prominent discriminant variable that determines the loneliness level in the discriminant function created according to marital status is the romantic relationships loneliness level. When the Fisher Discriminant function coefficients are examined, it is seen that the romantic loneliness levels of the married consumers are higher than the single consumers, and the social loneliness levels of the single consumers

are higher than the married consumers. Therefore, while married people experience loneliness in romantic relationships, single people experience social loneliness. In the analysis with Wilks λ (0.978), it can be stated that the x_2 value is statistically significant at 3 degrees of freedom at $p < 0.05$ significance level. As a result of the discriminant analysis, the hypothesis "H5: The loneliness level groups they belong to differ according to the marital status of the consumers" was accepted. In the section below, there are analyzes of the relationship between the loneliness levels of consumers and their intention to purchase loneliness economy products.

5.2. Level of Loneliness and Economics of Loneliness Regression Analysis of the Product Purchase Intention

Multiple Linear Regression Model was used to analyze the relationship between the loneliness levels of the consumers participating in the study and their intention to purchase a product in the loneliness economy. In the selection of the variables in the model, the method of adding variables (forward selection) is preferred. The data regarding the model determined as a result of the analysis are given in the table below:

Table 13: Between the loneliness levels of participants and their intentions to purchase the product of the economy of loneliness relationship model summary

Model	R	R ²	Cor- rected R ²	Standard Error of Estimate	Change and Anova Statistics					Durbin- Watson Index
					Chan ge in R ²	Change in F	sd1	sd2	Sig.	
1	0,121 ^a	0,015	0,013	1,08618	0,015	7,482	1	504	0,00 6 ^b	1,983

a: Independent Variables (Romantic Relationship Level of Loneliness; Social Loneliness Level; Family Relationship Loneliness Level)

b: Dependent Variable (Loneliness Economy Product Purchase Intention)

The regression model developed for the relationship between the level of loneliness and the intention to purchase a loneliness economy product is as follows:

$$y_1 = a_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

y_1 = Intention to Buy an Economy of Loneliness Product (Dependent Variable)

$\beta_1, \beta_2, \beta_3$ = Parameters to be predicted

x_1, x_2, x_3 = Levels of Loneliness (Independent Variables)

x_1 = Level of Loneliness in Romantic Relationships

x_2 = Social Loneliness Level

x_3 = Family Relationship Level of Loneliness

ε = Error Term

$$y_1 = 2.118 + 0.121x_1 + 0x_2 + 0x_3 + 0.253$$

According to the model, among the three sub-loneliness variables considered to determine the purchase intention of the loneliness economy, it could be said that the dependent variables of only romantic relationships (x_2) and family relations (x_3) in which the social loneliness level (x_1) is included in the model due to the correlation between the dependent variable (y_1) e not included in the model since there is no correlation relationship with the dependent variable (y_1). At the model table, R^2 represents the power of the independent variable to explain the change in the dependent variable. Accordingly, of the three independent variables (x_1, x_2, x_3) in the model, only Social Loneliness level (x_1) explains 12.1% of the change in the dependent variable. The remaining 25.3% is explained by the variables that are not included in the model by means of the error term. Therefore, while H_6 and H_8 were rejected at $p < 0.05$ significance level, H_7 was accepted. As a result of the regression analysis, it was determined that there is a relationship between the social loneliness level of consumers and their intention to buy loneliness economy products. It can be said that the factor that pushes the consumers participating in the research to buy loneliness economy products is social loneliness. The level of loneliness in romantic relationships and the level of loneliness in family relationships do not affect their intention to buy products of loneliness economy.

Whether there is autocorrelation in the model was determined by Durbin-Watson test. According to the Durbin-Watson value (1.983) in the table, there is no autocorrelation in the model. The Durbin-Watson test value being 1.5-2.5 indicates that there is no autocorrelation (Kalaycı, 2008: 267). In this case, an important assumption of the multiple linear regression model is confirmed. Whether the model is meaningful as a whole was tested by Analysis of Variance. The data for the analysis can be found in the table below:

Table 14: Analysis of Variance (ANOVA)

Model		Sum of Squares	SD	Square of the Mean	F	Sig.
1	Regresyon	8,827	1	8,827	7,482	0,006 ^b
	Error	594,611	504	1,180		
	Total	603,439	505			

When Table 14 is examined, it is seen that the F values for independent variables are significant at the $p < 0.05$ error-making level. Accordingly, it can be said that the model is meaningful at all levels as a whole. The parameter values obtained from the estimated result of the model and the related t values are shown in the table below:

Table 15: t and Beta table

Model		Unstandardize Coefficients		Standardized Coefficients	t	Sig.	95% confidence interval for Beta	
		B	Standart Hata	Beta			Lower Limit	Upper Limit
1	Fixed	2,118	0,253		8,356	0,000	1,620	2,616
	Social Loneliness	0,221	0,081	0,121	2,735	0,006	0,062	0,381

According to Table 15, the fixed term for the Social Loneliness variable was determined as 2,118. Accordingly, it can be stated that even if the social loneliness levels of the consumers participating in the study change, the solitude economy product can be purchased at the rate of the fixed term coefficient. According to the values of the t statistics in the table, the social loneliness variable in the model is significant at the significance level of $p < 0.05$.

Beta coefficients in the table show the importance level of the independent variable. The Beta coefficient of the social loneliness variable included in the model was determined to be 12.1%. The table below contains cross-tabular data regarding the loneliness economy product purchase intentions according to the demographic characteristics of the participants:

Table 16: Intention to purchase the loneliness economy product by demographic characteristics cross tabular values

Gender	1	2	3	4	5	Toplam	4+5 %
Famale	38	109	86	83	13	329	29,18
Male	24	48	42	56	7	177	35,59
Married	39	82	50	68	8	247	30,77
Single	23	75	78	71	12	259	32,05
18-24	10	35	36	38	3	122	33,61
25-34	29	70	54	51	11	215	28,84
34-44	17	38	25	31	3	114	29,82
45-54	6	8	12	15	2	43	39,54
55+	0	6	1	4	1	12	41,67
Less than 2000	15	49	36	35	3	138	27,54
2000-3999 TL	12	26	33	35	7	113	37,17
4000-5999 TL	13	44	25	29	4	115	28,70
6000-7999 TL	12	21	20	24	2	79	32,91
8000 TL+	10	17	14	16	4	61	32,79
Civil Servant	22	54	39	42	7	164	29,88
Private Sector Employee	19	33	38	30	9	129	30,23
Self-employment	1	11	4	8	0	24	33,33
Student	10	35	27	34	1	107	32,71
Housewife	4	9	6	12	3	34	44,12
Unemployed	6	15	14	13	0	48	27,08

Table 16 shows the crosstab data. Each group in the table was evaluated according to whether or not to buy the loneliness economy product. Housewives (44.12%), consumers aged 55 and over (41.67%) and male consumers (35.59%) are among the first three groups that most prefer to buy the loneliness economy product, respectively. Men by gender, those aged 55 and over by age groups, those with an income of 2000-3999 TL according to their income level, and housewives according to occupational groups, answered that I would buy the products of loneliness economy and I would definitely buy it.

Table 17: Hypothesis Acceptance/Rejection situations

Hypothesis	Conclusion
Gender →Loneliness Classifications	Acceptance
Age →Loneliness Classifications.	Acceptance
Income →Loneliness Classifications.	Acceptance
Profession →Loneliness Classifications	Acceptance
Marital Status →Loneliness Classifications	Acceptance
Romantic Relationship Loneliness→ Purchase loneliness economy product	Rejection
Social Loneliness → Purchase loneliness economy product	Acceptance
Family Relationship Loneliness→ Purchase loneliness economy product.	Rejection

6. Conclusion and Suggestions

The aim of the study is to obtain findings on the intention of Turkish consumers to purchase loneliness economy products. In the survey study prepared for this purpose, consumers who participated in the survey were asked whether they would buy the Smart home assistant ElliQ, a product of loneliness economy. The smart home assistant ElliQ is a loneliness economy product that chats with its owner, reminds the owner to drink water frequently, tells the time if he has medicine. The device also has the ability to play some word games loaded on its system with its owner.

Smart home assistant products are generally very popular in countries with elderly populations. Due to the Covid-19 epidemic that affected the whole world, people's loneliness levels changed due to the necessity of living in isolation and out of contact. People of all age groups have been exposed to different types of loneliness due to less social life, less human interaction, and changes in routine lifestyle. In this context, although we are a country with a young population, the effects of loneliness levels caused by less interaction with social distance on the consumers of our country were analyzed in our study.

In the study, first of all, the demographic characteristics of the participants were examined. In the analysis of loneliness classification made according to gender, it was determined that women feel lonely in terms of social and family relations compared to men. When the participants are evaluated within their own groups in terms of gender, age, income level and occupation, the first three among those who answered the question of intention to purchase the loneliness economy product as "I agree" and "I strongly agree" are housewives (44.12%), 55 years old and over. consumers (41.67%) and male consumers (35.59%).

As a result of the discriminant analysis in the study; it was found that;

- ✓ In the loneliness classification analysis made according gender ; women experience higher levels of loneliness in family and social relationships than men, and men experience higher levels of loneliness in romantic relationships than women,
- ✓ In the loneliness classification analysis made according to age ; 18-24 age group has higher social loneliness, 25-34, 35-44, 45-54 age group has higher romantic loneliness, 55+ age group has higher family relationships loneliness levels,
- ✓ In the loneliness classification analysis made according to the income levels, the level of romantic relationships loneliness increases as the income level increases,
- ✓ In the loneliness classification analysis made according to professions, there is only a difference between students and public and private sector employees in terms of loneliness,
- ✓ Students feel themselves socially alone at a higher level than public employees,
- ✓ On the other hand, private sector employees felt more lonely about romantic relationships than students.
- ✓ In the analysis made according to the intention to buy the loneliness economy products; Men by gender, those aged 55 and over by age groups, those with an income of 2000-3999 TL according to income level, housewives according to occupational groups and single people according to marital status answered that I would buy loneliness economy products at a higher rate than other consumers and I would definitely buy them.

Within the scope of the study, as a result of the regression analysis performed on the relationship between the loneliness levels of the consumers and their intention to purchase the products of the loneliness economy; it has been determined that there is a relationship between the level of social loneliness and the intention to purchase the product of the loneliness economy. Therefore, it can be said that consumers with a high level of social loneliness have a higher tendency to purchase loneliness economy products. In this respect, it is possible to say that giving more place to features that will alleviate the feeling of social loneliness in loneliness economy products may increase the preference level of the products.

In the study, the purchasing intentions of each consumer group participating in the research were evaluated within themselves, and it was determined that among the top three groups who preferred to purchase the loneliness economy product were housewives, consumers aged 55 and over, and men, respectively. The tendency to purchase loneliness economy products is higher for housewives and participants aged 55 and above, which could be due to the fact that, while developing loneliness economy products, applications are directed

towards housewives which play music, give food recipes and calculate the calories of recommended meals, and towards women having children that provide information about children, and towards individuals aged over 55 that serve for remaining purposes, solving simple crosswords and puzzles, so as to decrease the sense of loneliness, offering products which will enable having more joyful and sincere times in today's world where social distance is highly experienced. In addition, it is seen that the level of loneliness varies according to demographic variables. For this reason, establishing a system similar to mobile applications that allows the installation of applications needed by consumers with different demographic characteristics can provide a wider audience in the consumer market.

The findings of the study support Pettigrew's claim in his 2007 study that shopping helps older consumers develop consumption rituals and that shopping reduces the feeling of loneliness of older individuals. The findings also support the finding, stated in the study conducted by Lim and Kim in 2011, that there is a positive relationship between the loneliness level of older people and their television purchases.

Loneliness economy products are products that are produced and put on the market to reduce the feeling of loneliness of individuals. The Covid 19 pandemic process experienced today has changed the dimensions of loneliness. For this reason, it is possible to say that products targeting only a certain consumer group may not be valid in the near future or even today, and therefore, developing technological developments with flexible software applications for these products will be more advantageous for consumers and businesses. In this study, the intention to buy loneliness economy products was examined depending on the loneliness levels and demographic characteristics of the individuals. Considering that the level of loneliness and purchasing intentions of consumers are also affected by sociocultural variables in future studies, it can be said that analyzing the products of loneliness economy in terms of cultural characteristics will contribute to the literature.

References

- Arbuckle, G.A. (2018), "Loneliness: A Global Pandemic", *Health Progress*, Vol.99.No.4, pp. 15-19.
- Avunç, S. (2019), "Yalnızlık Ekonomisi İşe Yaradı", available at:<https://cinhaber.net/ekonomi/yalnizlik-ekonomisi-h2635.html> (accessed 24 February 2021)
- Bozacı, İ. (2018), "Algılanan Yalnızlık ile Alışveriş Merkezinde Hazcı Tüketim İlişkisinin İncelenmesi: Kırıkkale İlinde Bir Araştırma". II. Uluslararası Sosyal Bilimler Kongresi, 30 Kasım-2 Aralık 2018. Ankara. 132-145
- Burt, R. S. (1986), *Strangers, Friends, and Happiness*. GSS Technical Report No. 72. Chicago, IL: University of Chicago, National Opinion Research Center.
- Cacioppo, John T., Louise C. Hawkley, John M. Ernst, Mary Burleson, Gary G. Berntson, Bita Nouriani, and David Spiegel (2006), "Loneliness within A Nomological Net: An Evolutionary Perspective," *Journal of Research in Personality*, 40 (December), pp.1054-85.
- Çeçen, A. R. (2007), "The Turkish short version of the Social and Emotional Loneliness Scale for Adults (SELSA-S): Initial development and validation", *Social Behavior and Personality*, Vol.35 No.6, pp.717-734.
- Çetin, C., and Anuk, Ö. (2020), "COVID-19 pandemi sürecinde yalnızlık ve psikolojik dayanıklılık: Bir kamu üniversitesi öğrencileri örneklemi", *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, Vol.7 No.5, pp.170-189.
- Das, S., Echambadi, R., McCardle, M. and Luckett, M. (2003), "The Effect of Interpersonal Trust, Need for Cognition, and Social Loneliness on Shopping, Information Seeking and Surfing on the Web", *Marketing Letters*, Vol.14, No.3, pp.185–202.
- Demirhan, N. (1997), "Kümeleme Analizi ile Konfeksiyon Üretiminde Beden-Drop Ölçülerinin Belirlenmesi ve bir Uygulama", Yüksek Lisans Tezi, Marmara Üniversitesi, İstanbul.
- DiTommaso, E., Brannen, C. and Best, L. A. (2004), "Measurement and validity characteristics of the short version of the social and emotional loneliness scale for adults", *Educational and Psychological Measurement*, Vol.64 No.1, pp.99-119.
- Epley, Nicholas, Scott Akalis, Adam Waytz, and John T. Cacioppo (2008), "Creating Social Connection Through Inferential Reproduction: Loneliness and Perceived Agency in Gadgets, Gods, and Greyhounds," *Psychological Science*, Vol.19 (February), pp.114-20.

- Hair, J. F., Anderson, R. E., Tatham, R. L., Black, W. C. (1998). *Multivariate Data Analysis*, Prentice Hall International.
- Hanehalkı Tiplerine ve Büyüklüklerine Göre Hanehalkı Sayısı, 26.02.2021, [https://data.tuik.gov.tr/ Kategori/GetKategori?p=Nufus-ve-Demografi-109](https://data.tuik.gov.tr/Kategori/GetKategori?p=Nufus-ve-Demografi-109) (date of access: 02.03.2021).
- Kalaycı, Ş. (2008), “Çoklu Doğrusal Regresyon Modeli”. Ş. Kalaycı (Ed.). *SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri*, Asil Yayınevi, Ankara.
- Kazan, B. (2020), available at:<https://www.yenimarmaragazetesi.com/yalniz-insan-ekonomisi-yukselen-bir-trend-mi-6078.html> (accessed 12 February 2021).
- Kim, J., (2017), *Lonely Consumers: When, How, and Why Does Loneliness Influence Consumer Behavior?*. (Yayımlanmamış Doktora Tezi, Virginia Tech, Blacksburg).
- Kim, Y. K., and Kang, J., Kim, M. (2005), “The relationships among family and social interaction, loneliness, mall shopping motivation, and mall spending of older consumers”, *Psychology & Marketing*, Vol.22 No.12, pp.995-1015.
- Lim, C. M., and Kim, Y. K., (2011), “Older consumers' TV home shopping: Loneliness, parasocial interaction, and perceived convenience”, *Psychology & Marketing*, Vol.28 No.8, pp.763-780.
- Marangoni, C., and Ickes, W. (1989), “Loneliness: A theoretical review with implications for measurement”, *Journal of Social and Personal Relationships*, Vol.6 No.1, pp.93-128.
- Park, Jina and Roy F. Baumeister (2015), “Social Exclusion Causes a Shift Toward Prevention Motivation,” *Journal of Experimental Social Psychology*, Vol.56 No.January, pp.153-59.
- Peplau L.A., and Perlman, D. (1982), “Perspectives on Loneliness. Peplau L.A. Perlman D, (Eds.), *Loneliness: A Sourcebook of Current Theory, Research and Therapy*. New York: Wiley.
- Pettigrew, S. (2007). “Reducing the Experience of Loneliness among Older Consumers”, *Journal of Research for Consumers*, Vol.(12).
- Rajendran, R. P., Arun, C. J. (2020), “The Effect Of Loneliness And Nostalgic Advertising On Mobile Shopping Intention: A Conceptual Framework”, *International Journal of Business and Economics*, Vol.5 No.2, pp.42-55.

Türk Dil Kurumu (TDK). (2019). Available at:http://www.tdk.gov.tr/index.php?option=com_gts&arama=gts&guid=TDK.GTS.5c41b7e2935f36.28168509 (accessed 01 March 2021).

Üsküdar Haber Ajansı, 2019, available at:<https://uskudar.edu.tr/tr/icerik/4652/uskudar-universitesi-istanbulun-yalnizlik-haritasini-cikardi> (accessed 02 March 2021).

Yılmaz, E. and Altınok, V. (2009), “Okul yöneticilerinin yalnızlık ve yaşam doyumu düzeylerinin incelenmesi”. *Kuram ve Uygulamada Eğitim Yönetimi*, Vol.15 No.59, pp.451-469.

Yüncü, H.R. and Sevim, N. (2019), “Yalnızlık düzeylerine göre dışarıda kahvaltı yapma alışkanlıklarının değerlendirilmesi”, *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, Vol.23 No.4 , pp.1751-1766.

<https://wearesocial.com/digital-2020> (accessed 02 February 2021)

<https://www.adjustbrand.com/arastirmalar/ask-ve-yalnizlik-raporu-yayinlandi/> (accessed 02 March 2021).

<https://www.theguardian.com/society/2020/nov/01/loneliness-business-booming-pandemic> (accessed 24 February 2021)