Prediction of Loneliness in Married Adults in Terms of Family-of-Origin and Cognitive Triad[1]

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Abstract

The concept of loneliness has found its place in many fields as an experience that has been thought about and wondered since the day humanity appeared on the stage of history. In the field of psychology, research is carried out on the causes and effects of loneliness, which is a relatively new concept compared to other disciplines. The aim of the research is to determine whether loneliness is predicted in married adults by family-of-origin relations and perception of self, world, and future. The participant group of the study consists of 341 married individuals (135 males, 206 females) living in Turkey. In order to measure the loneliness levels of the participants, De Jong

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[1] This article was adapted from corresponding author's master thesis which is named "Prediction of loneliness in married adults in terms of family-of-origin and cognitive triad."

Gierveld Loneliness Scale, Family of Origin Relations Inventory, Cognitive Triad Inventory, Beck Depression Inventory and Personal Information Form developed by the researcher were used. Research data were analyzed using correlation analysis and multiple regression analysis. As a result of the research, it is seen that the loneliness level of the participants differs significantly in terms of various demographic variables. As a result of the regression analyzes, it was found that relations with family-of-origin and perception of self, world and future predict loneliness.

Keywords*:* Loneliness, Social Loneliness, Emotional Loneliness, Family-of-origin, Cognitive Triad

Evli Yetişkinlerde Yalnızlığın Köken Ailesi ve Doğuştan Üçleme Açısından Yordanması

Özet

Yalnızlık kavramı, insanlığın tarih sahnesine çıktığı günden bu yana üzerinde düşünülen ve merak edilen bir deneyim olarak birçok alanda kendine yer bulmuştur. Psikoloji alanında diğer disiplinlere göre nispeten yeni bir kavram olan yalnızlığın nedenleri ve etkileri üzerine araştırmalar yapılmaktadır. Araştırmanın amacı, evli yetişkinlerde yalnızlığın köken aile ilişkileri ile benlik, dünya ve gelecek algısının yordayıp yordamadığını belirlemektir. Araştırmanın katılımcı grubunu Türkiye'de yaşayan, evli 341 (135 erkek, 206 kadın) birey oluşturmaktadır. Katılımcıların yalnızlık düzeylerini ölçmek için araştırmacı tarafından geliştirilen De Jong Gierveld Yalnızlık Ölçeği, Kök Aileyle İlişkileri Envanteri, Bilişsel Üçlü Envanteri, Beck Depresyon Envanteri ve Kişisel Bilgi Formu kullanılmıştır. Araştırma verileri korelasyon analizi ve çoklu regresyon analizi kullanılarak analiz edilmiştir. Araştırma sonucunda katılımcıların yalnızlık düzeylerinin çeşitli demografik değişkenler açısından anlamlı farklılık gösterdiği görülmektedir. Yapılan regresyon analizleri sonucunda kök aile ile ilişkilerin, benlik, dünya ve gelecek algısının yalnızlığı yordadığı bulunmuştur.

Anahtar Kelimeler: Yalnızlık, Sosyal Yalnızlık, Duygusal Yalnızlık, Kök Aile, Bilişsel Üçlü

1. Introduction

The experience of loneliness is a process that humanity has been affected by and tried to make sense of throughout history. When it comes to loneliness or being alone in general; a negative, embarrassing, and stressful situation comes to life in people's minds (Killeen, 1998). This aspect

of loneliness has been influential in making it the subject of research in psychology. When researches are examined, it is stated that loneliness can cause psychological problems at a considerable level (Koçak, 2019). Walton, Shultz, Beck, & Walls (1991) emphasize that people can experience loneliness at any age. It is seen that the majority of studies dealing with loneliness are conducted with university students, adolescents and advanced adults (Coyle, & Dugan, 2012; Donovan, Wu, Rentz, Sperling, Marshall, & Glymour, 2017; Karakuş, 2012; Tuğral, 2020). One of the longest-running periods in the life cycle is adulthood, which coincides with the age range of 18-65, which starts with the end of adolescence and ends with the onset of old age, but considering the excess of individual differences, it is seen that adulthood is a challenging concept in terms of definition (Bentley, 2007; Doğan & Cebioğlu, 2011). In Erikson's psychosocial development theory, which covers human development and developmental stages in adulthood in a very comprehensive way, one of the important developmental tasks of adulthood is to establish close relationships with individuals of their own gender or not, as well as to have a marriage based on love (Can, 2020; Cüceloğlu, 2014; Öztemel, 2019). The marriage process, which has a biopsychosocial and dynamic structure, is one of the important sources of satisfaction in an individual's life (Cihan Güngör, 2007; Kabasakal, & Soylu, 2016). Loneliness appears as a phenomenon that can also be experienced among married individuals (Stevens, & Westerhof, 2006). In this direction, the focus of the study is to determine whether the loneliness levels of married adults are predicted in terms of family-of-origin and cognitive triad.

2. Defining and Classifying Loneliness

Being an uncomfortable experience, loneliness differs from social isolation in general. The experience of loneliness, which appears as a subjective process, and the level of loneliness associated with it; It is related to how isolated individuals are from others and to what extent they lack in communicating with others, how they experience, perceive and evaluate accordingly (De Jong Gierveld, & Kamphuis, 1985; Russel, Cutrona, Rose, & Yurko, 1984). De Jong Gierveld (1987; 1989) also goes for a definition by emphasizing the subjectivity of loneliness and its relationship with social networks. Loneliness; characterizes it as an unpleasant and unacceptable subjective situation experienced by the individual, where there is a lack of certain social relations. According to Peplau and Perlman (1981; 1984), loneliness is a situation that arises when the individual's social networks are inadequate and/or does not meet their wishes and needs and arouses a desire to avoid. On the other hand, Cacioppo and Patrick (2008) define loneliness by

using an alternative naming, social pain is defined as. They state that just as physical pain has a protective function against physical dangers, social pain keeps the individual away from the danger of being isolated and has a protective function.

Weiss (1973; 1974), who is an important name when it comes to studies on loneliness, states that loneliness is a common and painful experience in general. Loneliness; considers it in two dimensions, social and emotional, and goes to a definition over these two dimensions. He defines the loneliness of social isolation (social loneliness) as a condition based on a combination of distress, non-belonging, and purposelessness as a result of not having the desired level of social networks and defines the loneliness of emotional loneliness (emotional loneliness) as the loss/absence of an attachment figure (mother, father, romantic partner or friend), lack of close emotional ties, lack of an intimate relationship, and lack of commitment.

Loneliness which has a complex structure is experienced differently by each individual. Considering this different experience and the diversity of definitions of loneliness, it can be said that loneliness is a sophisticated and subjective concept. In parallel with this, classifications of loneliness also vary. Loneliness classifications in the context of social relations; social and emotional loneliness (Weiss, 1973; 1974), famiy and romantic loneliness (DiTommaso, & Spinner , 1997), in the context of its causes; creative, real, concrete, the result of alienation, the result of exclusion and chosen loneliness (Geçtan, 1994), in the context of how it is experienced; interpersonal, social, cultural, cosmic and psychological loneliness (Sadler , 1978; Sadler & Johnson, 1981), in the context of its duration/length; it is classified as transient, situational and chronic loneliness (Young, 1982). In addition to these classifications, quarantine loneliness has also been revealed as a type of loneliness during the Covid-19 pandemic process (Shah, Nogueras , Woerden, & Kiparoglou, 2020).

3. Theoretical Approaches to Loneliness

Table 1. Theoretical Approaches to Loneliness

Theoretical Approach	Researcher(s)	Outline of the Approach
Individual-Centered Approach	Rogers (2003)	He argues that when individuals show their true selves to others, they become increasingly lonely if they think that they will not be accepted and loved.

Table 1. Theoretical Approaches to Loneliness

Psychodynamic Approach	Zilboorg (1938, as cited in Leiderman, 1981), Sullivan (2013), Fromm-Reichmann (1959;1981), Klein (1981), Leiderman (1981)	Psychodynamic approaches, which argue that the roots of the loneliness experience are related to the infancy/childhood years and personality development in these years, deal with loneliness in a pathological dimension.
Existential Approach	Moustakas (2016), Yalom (1980)	Loneliness is seen as an opportunity for growth and development for the individual, who begins with a break from the outside world and becomes increasingly alienated from himself.
Cognitive Theory	McWhirter (1990), Peplau and Perlman, (1984; 1998), Wilbert and Rupert (1986)	As a result of the conflicts between the desired social relations / interactions and the real ones, the individual attributes certain meanings to this situation. Loneliness emerges as a result of the negative meanings attributed.
Cognitive-Behavioral Approach	Young (1982)	He associates loneliness with concepts such as irrational thoughts, low self-concept, social anxiety, fear of abandonment, unrealistic expectations and feelings of insecurity.

4. Family-of-origin and Relations with Family-of-origin Concept

The family, as a unit consisting of individuals with an environmental background and connected to each other by emotional, psychological and biological ties, has a great influence on the shaping of the current and future lives of its members (Gladding, 2015). The family-of-origin, where the individual spends his childhood and has his first experiences, has a critical role in the formation of the individual's personality (Botha, Van de Berg, & Venter, 2009). According to Framo (1976), the problems that individuals experience in their marriages and in the families, they have established are a reflection of the problems they experience in their family-of-origin. It is stated that the individual seeks and obtains their own identity or autonomy within the developmental processes,

and this includes focusing on one's relationship with one's own family-of-origin. Alienation and/or loneliness may occur if the individual cannot stay in contact with other people who are important to him while maintaining his identity, that is, being himself (Hovestadt, Anderson, Piercy, Cochran, & Fine, 1985). In addition, in the family-of-origin, loneliness can be experienced because of certain important experiences and situations (grief, irresponsible parents, etc.) (Large, 1989).

5. Cognitive Triad and Positive Cognitive Triad Concept

The concept of the cognitive triad consists of three components: the individual's negative perception of the self, the future and the world. The negative perception of the individual towards the self is inadequacy, thinking that he is sick, feeling worthless and lacking the necessary features to achieve good things; the individual's negative perception of the future; that failure, frustration, hardship and suffering will continue; the individual's negative perception of the world includes that there are insurmountable obstacles and that the goals cannot be reached (Beck, 1963; Beck, 1964; Beck, 2002; Beck, Rush, Shaw & Emery, 1979). Bringing a positive approach to the concept of cognitive triad, which is handled on a negative basis, Mak, Ng, & Wong (2011) emphasize that individuals' having a positive cognitive triad concept has a protective quality for individuals.

6. Method

6.1 Research Method

Correlational survey model, one of the quantitative research methods, was used in the research. In the Correlational survey model, the changes in the combination of two or more variables and, if there is an existing change, how this occurs is examined (Karasar, 2011). From this point of view, it was investigated whether loneliness was predicted in terms of family-of-origin and cognitive triad in married adults and whether loneliness was predicted by age, gender, etc. relationship between variables was handled within the framework of the correlational survey model.

6.2.Participants

The participants consist of married adults living in Turkey with a secondary or higher education level. 60.4% of the participants are female and 39.6% are male (206 female, 135 male). Most of the participants are in the 26-49 age group (83.9%). In terms of other demographic variables, it is seen that most of the participants work (83.6%), receive care from their mother or parents (90.6%), and have siblings (97.7%). Other demographic variables of the participants are shown in Table 2.

6.3. Data Collection

In the data collection process, Google Forms was used in line with the quarantine conditions due to the pandemic process due to COVID-19. Participants participated in the research voluntarily. A total of 344 participants were reached, and 341 of these answers were considered valid and included in the analysis process. Personal Information Form, De Jong Gierveld Loneliness Scale, Family of Origin Relations Inventory, Cognitive Triad Inventory and Beck Depression Inventory were applied to the participants through the forms created via Google Forms.

6.4. Data Collection Tools

6.4.1. Personal Information Form

The Personal Information Form, which was created in accordance with the purpose of the research, was prepared for the variables within the research as a result of the necessary literature review. The form includes questions with categorized answers as well as open-ended questions. Participants were asked to answer; gender, age, education level, employment status, income level, family type, number of siblings, childhood caregiver, whether the parents were alive/dead in childhood, whether the parents were married/separated in childhood, for how many years they had been married, the number of children they have, how they met their spouses, with whom they lived, whether they were married before and how much time they spent on social media per day.

6.4.2. De Jong Gierveld Loneliness Scale

De Jong Gierveld by De Jong Gierveld, & Kamphuis (1985) Loneliness The adaptation study of the scale was carried out by Çavdar, Bağcı, Chorbaci, Saritas, & Tasdelen-Yayvak (2015). The scale measures the social and emotional loneliness levels of individuals. Consisting of 11 items, the scale is in the 4-point Likert type. The scale has two sub-dimensions, Emotional Loneliness and Social Loneliness. The KMO coefficient of the scale was .95 and the Cronbach Alpha internal consistency coefficient was .87.

6.4.3. Family of Origin Relations Inventory

The scale was developed by Cihan Güngör (2007) to be used in his doctoral study and to determine the psychological, physical and emotional characteristics and structure of the family in which the individual grew up in childhood. The scale consists of 21 items and consists of two answer options as "Yes" and "No". It has three sub-dimensions: Relations with Mother, Relations with Father and

Family Environment Relations. The Cronbach Alpha internal consistency coefficient of the Relations with the Mother sub-dimension was .70 and the test-retest reliability was .75, the Cronbach Alpha internal consistency coefficient of the Relations with the Father sub-dimension was .85 and the test-retest reliability was .84, the Cronbach Alpha internal consistency coefficient of the Family Environment sub-dimension was .95 and test-retest reliability was found to be .75.

6.4.4. Cognitive Triad Inventory

Beckham, Leber, Watkins, Boyer, & Cook (1986) to measure Beck 's Cognitive Triad. The scale was adapted into Turkish by Erarslan, & Işıklı (2019). The scale consists of 36 items and is in 7-point Likert type. The scale has three sub-dimensions: Sense of Self, World Perception, and Future Perception. The Cronbach Alpha internal consistency coefficient of the scale was found to be .91, and the test-retest reliability coefficients of the inventory, which was administered twice with a four-week interval, ranged from 0.86 to 0.82.

6.4.5. Beck Depression Inventory

Beck, Ward, Mendelson, Mock, & Erbaugh (1961) to measure the depression level of individuals under the name Beck Depression Inventory was adapted into Turkish by Hisli (1988; 1989). The scale consists of 21 items and 4 options are offered to the participant for each item. The Cronbach Alpha coefficient of the scale was found to be .80 and the split-half reliability was found to be .74.

6.5. Data analysis

6.5.1. Comparisons Between Groups

Shapiro-Wilk normality test was used for the normality tests of the scores obtained from the scales. None of the data obtained from the scales showed normal distribution. For the comparisons between the groups, the normality tests of the scale scores of each group were also done with the Shapiro-Wilk tests, and it was not found that all the groups compared were normally distributed. For this reason, non-parametric analysis methods were used in all intergroup comparisons. Mann Whitney-U test was used in paired group comparisons and Kruskal Wallis test was used in comparisons with more than two groups. Pairwise comparisons were made with Bonferroni correction and Mann-Whitney-U tests in analyzes with statistically significant differences. All analyzes were performed with SPSS 25.0 statistical program. The statistical significance level was accepted as 0.05.

6.5.2.   Correlation and Regression Analysis

Since the scale scores did not show normal distribution, all correlation analyzes were performed with Spearman correlation analysis. For the regression analysis, multivariate regression models were established with the Least Squares (Least Squares) estimation method. Variable elimination method for the variables that will enter the model (backward selection). Whether there is autocorrelation between the error variables of the model was investigated with the Durbin Watson test.

Autocorrelation is when the error terms are related to each other, and if the Durbin Watson test value is between 1.5 and 2.5, the error terms are uncorrelated. The conformity of the error terms to the normal distribution was investigated by Kolmogorov-Smirnov normality tests. Whether there is a heteroscedasticity problem in the model was investigated with the Breusch-Pagan test. The problem of changing variance is that the variance of the error terms is not constant, and in the presence of the problem, the regression coefficient significance tests (partial t tests) and the model's significance F test lose their reliability (Montgomery, Peck, & Vining, 2012). The existence of multicollinearity problem among the independent variables of the model was controlled by the variance amplification factor (VIF). A VIF coefficient greater than 10 indicates a strong linear connection, and values between 1 and 5 indicate a moderate linear connection (Montgomery, Peck, & Vining, 2012). All analyzes SPSS 25.0 (statistical package for social sciences) statistics program. The statistical significance level was accepted as 0.05.

7.   Findings

7.1. Findings on the Relationship Between Loneliness and Demographic Variables

Within the scope of the research, it was examined whether loneliness among married adults showed a significant difference in terms of certain demographic variables (gender, age, education level, employment status, income level, family type, number of siblings , caregiver in childhood, whether the mother and father were alive in childhood, relationship status of mother and father in childhood, duration of marriage, number of children, way of meeting with spouse, living with whom, whether or not they have been married before). It is seen that the levels of loneliness differ significantly among the participants in terms of gender, age (participants between the ages of 26-33 and 42-49), employment status, psychiatric drug use, childhood caregivers and the number of

children. In terms of other demographic variables, there was no significant difference between the loneliness levels of the participants.

Table 2. Demographic Variables of the Participants

Variable	Group	n	%
Gender	Male	135	39.6
	Female	206	60.4
Age	18-25	8	2.3
	26-33	106	31.1
	34-41	94	27.6
	42-49	86	25.2
	50-57	39	11.4
	58+	8	2.3
Working Status	Working	285	83.6
	Not working	48	14.1
	Other	8	2.3
Psychiatric Drug Use	Uses	28	8.2
	Not using	313	91.8
Childhood Caregiver	Mom	167	49
	Father	3	0.9
	Mother and father	142	41.6
	Grandparents	21	6.2
	Caregiver	3	0.9
	Other	5	1.5
Number of Children	0	82	24
	1	103	30.2
	2	135	39.6
	3-4	21	6.2

In terms of gender, it is seen that the social loneliness levels of male participants are higher than female participants. There was no significant difference between the genders in terms of emotional loneliness and total loneliness levels. In terms of the age of the participants, the emotional and total loneliness scores of the participants in the 26-33 age group are significantly higher than the participants in the 42-49 age group. No significant difference was found in terms of social loneliness levels. Social loneliness levels of working participants are higher than non-working participants. There is no significant difference in terms of other loneliness levels. It is seen that the emotional loneliness scores of the participants who do not use psychiatric drugs are significantly lower than the participants who use them. It is among the findings that the social loneliness and total loneliness scores of the participants who received care from their grandparents in their childhood were significantly higher than the participants who received care from their parents. The

total loneliness scores of the participants who received care from their grandparents in their childhood were significantly higher than those who received care from their mothers. In terms of the number of children, it is seen that the total loneliness scale scores of the participants who do not have children are significantly higher than those who have 2 children.

7.2.Findings Regarding Loneliness, Cognitive Triad, Relations with Family-of-Origin, and Depression

It can be said that the variables (self, future and world perception) have a significant and positive relationship with loneliness, and the world perception sub-dimension has the highest and most significant relationship with loneliness.

Table 3. Findings Related to Loneliness and Cognitive Triad

		Sense of Self	World Perception	Future Perception
Social loneliness score	*correlation*	0.443	0.609	0.523
	p	<0.001	<0.001	<0.001
Emotional loneliness score	*correlation*	0.511	0.572	0.495
	p	<0.001	<0.001	<0.001
Loneliness scale total score	*correlation*	0.542	0.659	0.572
	p	<0.001	<0.001	<0.001

Spearman correlation analysis conducted to investigate the relationship between family-of-origin relations and loneliness, it was found that there was a negative and weakly significant linear relationship between family-of-origin relations and loneliness. The family-of-origin relations sub-dimension shows the strongest relationship with social loneliness (r=-0.411, p<0.001). It was concluded that the strongest relationship in terms of emotional loneliness was with the sub-dimension of relations with the mother (r=-0.342, p<0.001). After the relations with the mother sub-dimension, the family-of-origin relations sub-dimension reveals the strongest relationship with emotional loneliness (r=-0.338, p<0.001). The strongest relationship with the total score of the loneliness scale is the relations with the family-of-origin relations sub-dimension (r=-0.410, p<0.001).

Table 4. Findings on the Relationship Between Loneliness and Family-of-origin Relationships

			Relations with mother	Relations with father	Family environment relations	Family-of-origin relations
Social	**loneliness**	*correlation*	-0.380	-0.277	-0.366	-0.411
score		*p*	<0.001	<0.001	<0.001	<0.001

Table 4. Findings on the Relationship Between Loneliness and Family-of-origin Relationships

Emotional loneliness score	*correlation*	-0.342	-0.221	-0.296	-0.338
	p	<0.001	<0.001	<0.001	<0.001
Loneliness scale total score	*correlation*	-0.399	-0.274	-0.360	-0.410
	p	<0.001	<0.001	<0.001	<0.001

As a result of the analysis conducted to investigate the relationship between depression and loneliness, it was found that there was no significant and linear relationship between depression and loneliness.

Table 5. Findings on the Relationship Between Loneliness and Depression

		Depression
Social loneliness score	*correlation*	-0.020
	p	0.717
Emotional loneliness score	*correlation*	0.048
	p	0.372
Loneliness scale total score	*correlation*	0.015
	p	0.782

7.3. Regression Results for Loneliness Level

7.3.1. Regression Model of Social Loneliness Level

It is seen that the regression model established with five variables (gender, psychiatric drug use, perception of the world, perception of the future, and relations with the mother) is statistically significant [$F_{(5, 335)}$=59.413, $p<0.001$, R = 0.686, Adjusted R^2=0.462, Durbin Watson=1.757].

The negative coefficient of the gender (female) variable as a result of the regression analysis indicates that the average social loneliness scores of women are lower than that of men. While the values of the other variables are constant, there is a mean decrease of 0.855±0.270 points in the social loneliness score when the participant is female. The average social loneliness scores of the participants who use psychiatric drugs are lower than those who do not use them. While other variables are kept constant, a mean decrease of 1.101±0.466 points is observed in the social loneliness score if the participant uses psychiatric medication. There is a negative correlation between relations with the mother and social loneliness, and when this variable increases by 1 point, the social loneliness score decreases by an average of 0.3 (0.299±0.071) points. The marginal effect of world perception and future perception variables on social loneliness scores is lower than gender and psychiatric drug use, and world perception and future perception variables

have a positive correlation with social loneliness. While other variables are constant, only when the world perception score increases by 1 point, the social loneliness score increases by an average of 0.141±0.017 points. When there is only a 1 point increase in the perception of the future, the social loneliness score increases by an average of 0.047±0.016 points.

Table 6. Social Loneliness Level Regression Model

Variables	non-standardized coefficients		Std. coefficients	t	p	95% CI
	B	**Std. Error**	**B**			
Invariant	6.664	0.740		9.008	<0.001	(5.209, 8.119)
Gender (Female vs. Male)	-0.855	0.270	-0.131	-3.162	0.002	(-1.387, -0.323)
Use of Psychiatric Drugs (Yes vs. No)	-1.101	0.466	-0.095	-2,360	0.019	(-2.018, -0.183)
World perception	0.141	0.017	0.454	8.141	<0.001	(0.107, 0.175)
Future perception	0.047	0.016	0.153	2,894	0.004	(0.015, 0.079)
Relations with mother	-0.299	0.071	-0.192	-4.198	<0.001	(-0.439, -0.159)

7.3.2.   Regression Model of Emotional Loneliness Level

It is seen that the 6-variable (age, sense of self, world-perception, future-perception, relations with mother and family environment relations) model obtained is statistically significant [$F_{(6, 334)}=38.975$, $p<0.001$, R = 0.642, Adjusted R^2 =0.401, Durbin Watson=1.950].

There is a negative correlation between the emotional loneliness score and the relationship with the mother score. While the values of other variables are constant, when only the relationship with the mother score increases by 1 point, the emotional loneliness score decreases by an average of 0.321±0.106 points. Family environment relations, on the other hand, has a positive correlation with emotional loneliness. While other variables are constant, an average increase of 0.244±0.109 points is observed in the emotional loneliness score when it increases by 1 point. There is a negative correlation between the age variable and the emotional loneliness score. While the other variables are constant, the emotional loneliness score decreases by 0.288±0.147 points on average

when the age category is advanced by 1 group. Emotional loneliness scores are less affected by cognitive triad inventory dimensions than other variables. The emotional loneliness score increases by an average of 0.065±0.028 points when only the sense of self score increases by 1 unit, while the world perception score increases by 1 unit, by an average of 0.143±0.024 points, and by an average of 0.056±0.024 points when only the future perception score increases by 1 unit.

Table 7. Emotional Loneliness Level Regression Model

Variables	non-standardized coefficients		Std. coefficients	t	p.	95% CI
	B	**Std. Error**	**B**			
Invariant	5,910	1.093		5.405	<0.001	(3,759, 8,061)
Age	-0.288	0.147	-0.085	-1.957	0.051	(-0.577, 0.001)
Sense of self	0.065	0.028	0.149	2.324	0.021	(0.010, 0.119)
World perception	0.143	0.024	0.380	5,931	<0.001	(0.096, 0.191)
Future perception	0.056	0.024	0.150	2.325	0.021	(0.009, 0.104)
Relations with mother	-0.321	0.106	-0.170	-3.017	0.003	(-0.530, -0.112)
Family environment relations	0.244	0.109	0.133	2.239	0.026	(0.030, 0.459)

7.3.3. Regression Model of Total Loneliness Level

The three-variable (world perception, future perception, mother-relations) regression model obtained was found to be statistically significant [$F(3,337)=114.310$, $p<0.001$, R=0.710, R=0.710, Adjusted R2=0.500]. As a result of the EKK model assumption checks, it was found that there is a linear relationship between the predicted and predictor variables (R=0.710), the error terms are normally distributed with a mean of 0 ($\bar{X}=0$, D(341)=0.031, p>0.200), they are unrelated (Durbin). Watson=1.869) and has constant variance ($\chi 2(1)=0.087$, p=0.768).

Among the three independent variables, the variable of relations with the mother has the highest effect on the total loneliness score. There is a negative correlation between them. While the other variables are kept constant, when the relationship with the mother score increases by 1 point, there is an average of 0.442±0.133 points decrease in the total loneliness score. There is a positive correlation between the total loneliness score and the perception of the world and the future. While other variables are constant, when the world perception score increases by 1 point, the total

loneliness score increases by an average of 0.297±0.033 points, and when the future perception score increases by 1 point, the total loneliness score increases by an average of 0.131±0.031 points.

Table 8. Total Loneliness Level Regression Model

Variables	non-standardized coefficients		Std. coefficients	t	p.	95% CI
	B	Std. Error	B			
Invariant	11,676	1,279		9,131	<0.001	(9.161, 14.191)
World perception	0.297	0.033	0.478	8,918	<0.001	(0.231, 0.362)
Future perception	0.131	0.031	0.212	4.203	<0.001	(0.069, 0.192)
Relations with mother	-0.442	0.133	-0.142	-3.317	0.001	(-0.705, -0.180)

8. Discussion

When the social loneliness levels of the participants are examined in this study, it is concluded that the social loneliness scores show a significant difference according to gender. When the literature is examined, it is seen that there are studies with similar results (De Jong Gierveld, Broese van Groenou, Hoogendoorn, & Smit, 2009; Salim, 2011). When the emotional loneliness and total loneliness scores are examined, it is seen that there is no significant difference between the genders. There are studies parallel to this finding (Clinton, & Anderson, 1999; Özkan, 2019) as well as studies that reach opposite findings (Galanaki & Kalantzi-Azizi, 1999; Liu, Zhang, Yang & Yu, 2020; Salo, Junttila, & Vauras, 2020).

While it is seen that the emotional loneliness scores of the participants do not show a significant difference within the scope of the age variable, it is among the findings that the participants in the 26-33 age group have significantly higher scores than the participants in the 42-49 age group in terms of social loneliness and total loneliness scores. It is seen that there are studies with different results on the relationship between age and loneliness in the literature (Ngyuen, Lee, Daly, Tsung-Chin Wu, Tang, Tu, Van Patten, Jeste, & Palmer, 2021; Victor, & Yang, 2012).

It is seen that the social loneliness scores of the participants who stated that they were working differed significantly compared to the groups that stated that they did not work. However, when the distribution of the participants as working and non-working and their score ranges are

examined, it can be said that the reason for this difference is due to this distribution. It is seen that studies with findings parallel to this finding take place in the literature (Yıldırım, Engin, & Yıldırım, 2011; Yılmaz, 2017). It is among the findings that the emotional loneliness scores of the participants who use psychiatric drugs are higher than the participants who do not use psychiatric drugs. The existence of similar studies supports this finding (Boehlen, Herzog, Quinzler, Haefeli, Maatouk, Niehoff, Saum, Brenner, & Wild, 2015; von Soest, Luhmann, & Gerstorf, 2020).

It is seen that the social loneliness and total loneliness scores of the participants who received care from their grandparents differ significantly compared to the participants who received care from their parents, and they have a higher level of loneliness. Likewise, it was concluded that the total loneliness scores of the participants who received care from their grandparents were higher than those who received care from their mothers. Considering that loneliness may differ depending on the expectations and needs of individuals, the fact that the participants who received care from their grandparents had higher levels of loneliness compared to the participants who were cared for by their parents can be explained by unmet needs and expectations. It is seen that the total scores of the loneliness scale of the participants who do not have children differ significantly from the participants who have 2 children, and the loneliness level of the participants who do not have children is at a higher level.

Regression analyzes conducted to examine the relationship between the level of loneliness and the cognitive triad reveal that the world and future perception sub-dimension scores have a positive effect on the loneliness scores, and the world perception sub-dimension has a significant predictive role in terms of social, emotional and total loneliness scores. Beck, Rush, Shaw, & Emery (1979) state that individuals with a negative perception of the world and the future look at their lives from a hopeless window. The existence of studies with parallel results on hopelessness and loneliness in the literature supports this finding (Joiner, & Rudd, 1996; Niu, Jia, Ma, Wang, Sun, Zhang, & Zhou, 2020; Ruchkin, Eisemann, & Hägglöf, 1999). It is also among the research findings that emotional loneliness is predicted by sense of self. As the scores of the sense of self sub-dimension decrease, it is concluded that a more positive sense of self is observed and that a low-level of positive sense of self predicts loneliness. Considering that the Low Self-concept, which Young (1982) defined among the loneliness groups, is related to feelings of worthlessness and that it is one of the ways of experiencing loneliness, it is seen that the result is in the expected direction. It is seen that world perception has the strongest predictive effect on all loneliness scores.

As a result of the regression analyzes carried out to examine the relationship between the level of loneliness and the relationship with the family-of-origin, it was found that the scores of the relations with the mother sub-dimension were negatively correlated with the loneliness scores (social, emotional and total loneliness).It was observed that while the scores of the relations with the mother sub-dimension increased, there was a decrease in the loneliness scores. It is seen that the relations with the mother sub-dimension plays a significant predictive role in terms of loneliness scores. Researchers emphasize that dysfunctional attachment processes in childhood and disconnections in parent-child relationship are associated with loneliness (Ewen, 2014; Sullivan, 2013; Hecht, & Baum, 1984). When the family environment relations sub-dimension was examined, it was concluded that it was a significant predictor only in terms of emotional loneliness sub-dimension. Contrary to the relations with the mother sub-dimension, the scores of the family environment relations sub-dimension have a positive correlation with the scores of the emotional loneliness sub-dimension. This finding can be explained by the fact that Large (1989) concluded in his study on the source of loneliness in the family that different domestic sources could cause loneliness.

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