

The Cognitive, Emotional and Behavioral Indicators of Dispositional Gratitude in Close Friendship: The Case of Turkey

Yakın Arkadaşlık İlişkisinde Minnettarlık Eğiliminin Bilişsel, Duygusal ve Davranışsal Göstergeleri: Türkiye Örneği

Canan Erdugan¹ , Arzu Araz² 



Bu çalışma, birinci yazarın ikinci yazar danışmanlığında hazırladığı yüksek lisans tezinden üretilmiştir. Elde edilen bulguların bir bölümü 11-14 Temmuz 2017 tarihleri arasında Amsterdam'da düzenlenen 15. Avrupa Psikoloji Kongresi'nde sözel bildiri olarak sunulmuştur.

¹Araş. Gör, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Psikoloji Bölümü, Ankara, Türkiye

²Doç. Dr., Dokuz Eylül Üniversitesi, Edebiyat Fakültesi, Psikoloji Bölümü, İzmir, Türkiye

ORCID: C.E. 0000-0002-9735-1215

A.A. 0000-0002-7510-917X

Corresponding author/Sorumlu yazar:

Canan Erdugan,
Orta Doğu Teknik Üniversitesi, Fen Edebiyat
Fakültesi, Psikoloji Bölümü, Beşeri Bilimler
Binası, 06800, Ankara, Türkiye
E-mail/E-posta: canane@metu.edu.tr

Submitted/Başvuru: 08.01.2019

Revision Requested/Revizyon Talebi:
21.06.2019

Last Revision Received/Son Revizyon:
20.07.2019

Accepted/Kabul: 23.07.2019

Published Online/Online Yayın: 25.10.2019

Citation/Atıf: Erdugan, C., Araz, A. (2019).

The cognitive, emotional and behavioral indicators of dispositional gratitude in close friendship: The case of Turkey. *Psikoloji Çalışmaları - Studies in Psychology*, 39(2): 321-344.
<https://doi.org/10.26650/SP2019-0001>

ABSTRACT

The aim of the current study is to investigate whether the perception of the value, cost and sincerity of a best friend's helping behaviors, the gratitude felt toward the best friend and general gratitude expression differ according to dispositional gratitude and gender. Moreover, situations in which people felt gratitude toward their best friends and their means of expressing gratitude were investigated. A total of 406 people, 230 female and 176 male, participated in this study. Gratitude, Resentment and Appreciation Test - Revised, Gratitude Expression Scale, Gratitude Cognitive Evaluation Form, Gratitude Adjective Scale and Demographic Information Form were used. In addition, participants were asked open-ended questions to write about an event where they were grateful to their friend and how they expressed their gratitude. The Multivariate Analysis of Covariance (MANCOVA) results indicated that those high in dispositional gratitude were more likely to have stronger (a) perceptions of the value, cost and sincerity of their best friend's helping behaviors, (b) feelings of gratitude toward their best friend, and (c) gratitude expression. Additionally, the levels of gratitude expression for women were higher than those for men. Content analysis showed that the participants felt most grateful after receiving psychological and financial support from their friends and expressed their gratitude using verbal expression, nonverbal expression, or other-oriented expression styles. In parallel with the literature, the results of the study suggested that those high in dispositional gratitude were more aware of the behaviors of their best friends, and felt and expressed gratitude to them.

Keywords: Dispositional gratitude, gratitude, gratitude expression, friendship, close relationships

ÖZ

Bu araştırmanın amacı en yakın arkadaşın yardım davranışları ile ilgili değer, bedel ve içtenlik algısının, en yakın arkadaşta hissedilen minnettarlık duygusunun ve genel olarak minnettarlık dışavurum düzeyinin, cinsiyete ve minnettarlık eğilimine göre farklılaşıp farklılaşmadığını incelemektir. Bir diğer amaç ise en yakın arkadaşla ilişki bağlamında hangi durumlarda minnettar hissedildiğini ve bu duygu sonrasında verilen tepkileri belirlemektir. Araştırmaya 230'u kadın ve 176'sı erkek olmak üzere toplam 406 kişi katılmıştır. Katılımcılara Yenilenmiş Minnettarlık, Memnuniyet ve Takdir Ölçeği, Minnettarlık Dışavurum Ölçeği, Minnettarlığın Bilişsel Değerlendirmesi Formu, Minnettarlık Sıfat Listesi ve Kişisel Bilgi Formu uygulanmıştır. Ayrıca katılımcılardan en yakın arkadaşlarına minnettar hissettikleri bir olay örneğini ve minnettarlıklarını nasıl dışavurdıklarını yazmaları için açık uçlu birer soru sorulmuştur. Çok Değişkenli Kovaryans Analizi (MANCOVA) bulgularına göre, minnettarlık eğilimi yüksek olanların (a) en yakın arkadaşlarının yardım davranışlarının değeri, bedeli ve içtenliğine yönelik algıları (b) en yakın arkadaşlarına yönelik minnettarlık hisleri ve (c) minnettarlık dışavurum düzeyleri minnettarlık eğilimi düşük olanlara kıyasla daha yüksektir. Ek olarak, kadınların minnettarlık dışavurum düzeyleri erkeklere kıyasla daha yüksektir. İçerik analizi bulgularına göre, katılımcılar kendilerini en çok, arkadaşlarının sağladığı psikolojik destek, maddi destek ve sağlık desteği sonrasında minnettar hissetmekte; minnettarlıklarını ise sözel dışavurum, sözel olmayan dışavurum veya öteki odaklı dışavurum tarzı ile ifade etmektedirler. Literatürle paralel olarak bu çalışma sonucunda minnettarlık eğilimi yüksek olan kişilerin en yakın arkadaşlarının yaptığı davranışların daha çok farkında oldukları ve bunları arkadaşlarının bir katkısı şeklinde algılayarak minnettarlık hissettikleri görülmüştür.

Anahtar Kelimeler: Minnettarlık eğilimi, minnettarlık duygusu, minnettarlık dışavurumu, arkadaşlık ilişkisi, yakın ilişkiler

Gratitude has evolved as a mechanism that promotes responsive behaviors among individuals and is placed at the center of important relationships in our daily lives (Algoe, 2012). Studies on building new relationships (Bartlett, Condon, Cruz, Baumann, & Desteno, 2012), maintaining relationships (Kubacka, Finkenauer, Rusbult, & Keijsers, 2011) or increasing the quality of relationships (Algoe, Fredrickson, & Gable, 2013) support the importance of the functions of gratitude in dyadic relationships.

In psychology literature, gratitude has been evaluated as an emotion or a trait. Both concepts are closely related but have different specifications. As an emotion, gratitude is experienced when “people affirm that something good has happened to them and when they recognize that someone else is largely responsible for this benefit” (Watkins, 2007, p. 383). Gratitude, however, as a trait or disposition, is “the generalized tendency to recognize and respond with grateful emotion to the roles of other people’s benevolence in the positive experiences and outcomes that one obtains” (McCullough, Emmons, & Tsang, 2002, p. 112). People with high dispositional gratitude are described by many theories and findings in the literature (e.g., McCullough et al., 2002; Wood, Froh, & Geraghty, 2010). In addition, some researchers have studied the cognitive appraisals of gratitude, that is, perceptions of helping behaviors (e.g., MacKenzie, Vohs, & Baumeister, 2014; McCullough et al., 2002; Tesser, Gatewood, & Driver, 1968; Tsang, 2006), and some researchers have studied gender differences in gratitude (e.g. Morgan, Gulliford, & Kristjánsson, 2017; Reckart, Huebner, Hills, & Valois, 2017; Froh, Yurkewicz, & Kashdan, 2009). Although the gratitude felt toward close others and toward strangers do not significantly differ from each other after experiencing a helping behavior (Ma, Tunney, & Ferguson, 2017), in the literature, the experience of gratitude is frequently studied at the beginning of friendships (Algoe, Haidt, & Gable, 2008; Williams & Bartlett, 2015) or in ongoing romantic relationships (Algoe et al., 2013; Algoe, Gable, & Maisel, 2010; Lambert & Fincham, 2011). However, to the best of our knowledge, no studies have investigated gratitude in close friendship relationships.

Therefore, in the current study, the relationships between dispositional gratitude, the cognitive, emotional, and behavioral aspects of gratitude (respectively, the perception of one’s best friend’s helping behaviors, feelings of gratitude toward one’s best friend, and gratitude expression in general) and gender are investigated. Unlike most of the research in the literature, the study aims to explore gratitude in the context of a close relationship in Turkey, which is a relatively collectivist culture (Hofstede, 1980). The study is based on the hypothesis

that even in a relatively collectivist culture, the cognitive, emotional and behavioral indicators of gratitude will be determined according to the high or low dispositional gratitude. Therefore, it might be regarded that the current study can provide valuable information to better understand the nature of gratitude and its relationship with friendship. The literature information about the variables used in this study is presented below.

Gratitude as an Emotion and the Expression of Gratitude

Gratitude is an other-oriented emotion that emerges in a social exchange between a helper and a beneficiary (Blau, 1964). Emmons (2007) conceptualizes gratitude as having two cognitive stages. To experience gratitude, one must be aware of the good in life and be aware of the role of others in it. Gratitude is generally sourced from the perceived positive outcome of another person's behavior and these outcomes do not have to be won or deserved (McCullough et al., 2002). Gratitude is experienced consistently and strongly when the behavior has value for the beneficiary and the helper does it purposely at a cost (McCullough, Kilpatrick, Emmons, & Larson, 2001).

Just like gratitude experience, the expression of gratitude is also important in human relationships (Algoe et al., 2013). Emotional expression provides the relationship between the external world and inner experiences. Gratitude expression also serves this purpose and forms communication among people (Trierwiler, Eid, & Lischetzke, 2002). Baumeister and Ilko (1995) note that gratitude is a communicative emotion and may not be expressed even if it is felt. However, beneficiaries often express their gratitude by thanking. The expression of gratitude influences how helpers perceive themselves in the social world (Grant & Gino, 2010). The experience and the expression of gratitude can have a positive effect on relationships because they imply that a person and his or her behaviors have been seen and approved. As with many types of emotional expression, gratitude expression can make a difference in the quality and maintenance of a relationship by influencing interaction and communication. Also, several studies have supported the link between gratitude and gender. Women express (Kashdan et al., 2009; Ventimiglia, 1982; Watkins, Woodward, Stone, & Kolts, 2003) and experience (Froh et al., 2009) slightly more gratitude than men.

Cognitive Appraisals of Gratitude (Perception of Helping Behaviors)

Tesser et al. (1968) argue that gratitude is the result of three cognitive appraisals: (a) the perceived cost of the helping behavior (e.g., time, effort, money, etc), (b) the

perceived sincerity of the helping behavior and (c) the perceived value of the helping behavior. It has been demonstrated that high cognitive appraisals of helping behavior may increase the possibility of gratitude (McCullough et al., 2002; Wood, Maltby, Stewart, Linley, & Joseph, 2008). Similarly, Tsang (2006) supports the proposal of cognitive appraisals; according to his study, if the intent of the helper is sincere, then there is a higher level of the emotion of gratitude. The unselfishness of the helper and the magnitude of the help also predict the emotion of gratitude.

Moreover, in experimental studies, it is reported that participants felt less grateful for the help when free will belief was reduced (MacKenzie et al., 2014). When it is thought that people are not behaving of their free will, their behavior is perceived as less sincere, and therefore, the level of gratitude decreases.

Dispositional Gratitude/Gratitude as a Trait

McCullough et al. (2002) describe gratitude as a trait and specify the characteristics of people with high dispositional gratitude. Their model suggests that those high in dispositional gratitude have four common characteristics: a) They feel more intense gratitude after having benefited than those low in dispositional gratitude, b) They experience gratitude more often, c) They do not limit their gratitude to one area of their lives (e.g., their profession) but also feel gratitude in different aspects of their lives (e.g., friends, family, health, etc.), d) They are grateful toward different sources in the context of a positive outcome.

According to Watkins et al. (2003, p. 436), those high in dispositional gratitude are inclined to have “a sense of abundance”, to “recognize the contributions of others to goodness”, to “appreciate simple pleasures in life” and to “acknowledge the importance of experiencing and expressing gratitude”. There are many good and beautiful things in their lives compared to people low in dispositional gratitude. Those high in dispositional gratitude can appreciate simple pleasures and beauty and do not need great events to feel grateful. In short, they see and appreciate life as a gift.

Similarly, Wood et al. (2010) define this disposition as a life orientation toward realizing and appreciating the positive things in life. They argue that the reason for this orientation is the *gratitude cognitive schema*, which becomes active more easily in those high in dispositional gratitude. It leads to a more gratifying perception of situations (Wood et al., 2008). Furthermore, many studies have demonstrated that dispositional

gratitude and gender are connected. Women, compared with men, have higher dispositional gratitude (Morgan et al., 2017; Reckart, et al., 2017; Sun & Kong, 2013; Yost-Dubrow & Dunham, 2017).

Friendship

Friendship is defined as “a voluntary interdependence between two individuals that includes the experience and satisfaction of various provisions (intimacy, support, self-validation) to varying degrees” (Demir, Özen, & Procsal, 2014, p. 2359). Friendship is a voluntary cooperation between two people and includes various types and degrees of companionship, intimacy, affection and mutual assistance (Hays, 1988). In the literature, friendship is studied in terms of *friendship quality*. A high-quality friendship is defined by high levels of pro-social behavior, intimacy and other positive characteristics (Berndt, 2002).

Research on friendship has mostly focused on children and adolescents. However, studies on adult friendships have been increasing in recent years. Adults evaluate support from friends, especially from their best friend, as unique and important (Blieszner & Roberto, 2004). Even if support from friendship fluctuates during adulthood, the tension in a friendship decreases over time (Birditt, Jackey, & Antonucci, 2009) and positive support remains constant or increases (Newsom, McFarland, Kaplan, Huguet, & Zani, 2005).

The transition from being an acquaintance to being a friend and to being one’s best friend is determined by the increase in relationship characteristics such as intimacy, trust, support and loyalty. The stages of closeness involve interaction with the other, emotional closeness, helping and sharing more intimate knowledge step by step (Blieszner & Adams, 1992). In addition, most best friendships are same-sex friendships (Demir & Özdemir, 2010).

Close relationships, particularly friendships, serve functions of intimacy and social support including help, emotional closeness and validation of values (Monsour, 2002). Wright (1978) has identified five main benefits of friendship based on the concept of self: Utility, ego support, self-affirmation, stimulation and security. Utility means providing financial resources for each other or helping with obligations, while ego support means emphasizing successes without considering failures. Self-affirmation is acting in a way that reinforces a friend’s valued qualities. Stimulation means proposing new ideas and activities to each other, while security means forming an unquestionable sense of trust and safety.

According to Mendelson and Aboud (1999), friendship has six functions: Stimulating companionship (having fun together, doing exciting things), help (giving guidance), intimacy (being sensitive to one's needs, being open to honest expression), reliable alliance (accessibility and loyalty), self-validation (encouraging and reassuring one's self-image as a worthy person), and emotional security (relief and confidence in new or threatening situations). All these dimensions are effective in the formation of a high or low friendship quality perception.

Aims and Hypotheses

Since reciprocal help and support have an important place in friendship (Markiewicz, Doyle, & Brendgen, 2001), dispositional gratitude is thought to be related to friendship. The primary aim of this study is to investigate whether the perception of the value, cost and sincerity of the best friend's helping behaviors, the gratitude felt toward the best friend and general gratitude expression differ according to dispositional gratitude and gender. A secondary aim is to determine the situations in which people feel grateful toward their best friend and their reactions with regard to how they express gratitude.

Based on the opinions of both McCullough et al. (2002) and Watkins et al. (2003) on dispositional gratitude, the cognitive, emotional and behavioral indicators of gratitude in the relationship with the best friend are expected to be higher for those high in dispositional gratitude.

Hypothesis 1: The perception of the value, cost, and sincerity of the best friend's helping behaviors, the emotion of gratitude toward the best friend and gratitude expression will differ according to dispositional gratitude.

The literature indicates that women and men do not differ in terms of many experienced emotions, but women express their feelings more than men (Ciarrochi, Hynes & Crittenden, 2005; Kashdan, Mishra, Breen, & Froh, 2009; Kring & Gordon, 1998). Based on these findings, women are expected to differentiate from men only in terms of behavioral indicator of gratitude and not in terms of cognitive appraisals and emotion of gratitude.

Hypothesis 2: Expression levels of gratitude reported by women will be higher than men.

Based on the first and second hypothesis, it is expected that gratitude and gender have a common effect on the expression of gratitude.

Hypothesis 3: The expression of gratitude will be higher for women with high dispositional gratitude than men with high dispositional gratitude.

METHOD

Participants

The study was conducted with 422 adults volunteering to participate in the research from different cities across Turkey. In this study, the accidental sampling method was used, where all individuals with a best friend and over 18 years of age could participate. The data from two of the participants were missing, and 14 of them were outliers. Therefore, the sample of the study consisted of a total of 406 individuals (230 female and 176 male). The ages of the participants ranged from 18 to 76 years old, with a mean age of 30.98 ($SD = 9.69$). Fifty-six percent of the participants were under 30 years of age, while 43.8% of them were 30 years of age and above. A total of 7.1% of the participants had graduated from primary education, 23.4% from high school, and 50.3% from university, and 19.2% had a graduate educational level. Forty-six percent of the participants were currently studying for undergraduate, graduate or doctoral degrees. A total of 64% of the participants were single, and 36% were married.

In the current study, 22.2% of the data were collected by paper-and-pen, and 77.8% were collected with an online survey.

Measures

The Gratitude, Resentment, and Appreciation Test-Revised (GRAT-R). To measure gratitude as a disposition, the short-form GRAT-R developed by Watkins et al. (2003) and subsequently revised by Thomas and Watkins (2003) was used. This scale consists of three factors using a 5-point Likert-type scale: Sense of abundance, simple appreciation, and appreciation of others. The Cronbach's Alpha value of the scale is .92. There are 5 inverse items. The higher the score is, the higher the dispositional gratitude. The Turkish adaptation study was conducted by Erdugan (2016). The findings of the confirmatory factor analysis showed similarity with the original scale and provided evidence of construct validity. The criterion validity of the scale was demonstrated with the well-established Gratitude Questionnaire (McCullough et al., 2002). The Cronbach's alpha value was .77. The Cronbach's Alpha value is also .77 in this study.

Gratitude Expression Scale (GES). The GES was developed by Araz and Erdugan (2017) to identify the level of gratitude expression. The GES consists of eleven items (e.g. “*I express my gratitude*”) using a 4-point rating scale ($1 = \text{never}$, $4 = \text{always}$). Higher scores mean higher levels of gratitude expression. The scale has been demonstrated to have adequate validity and reliability in the Turkish population. Construct validity and criterion validity was proven with three sub dimensions of Five Factor Personality Inventory (Somer, Korkmaz, & Tatar, 2004), Subjective Happiness (Lyubomirsky & Lepper, 1999) and Optimisim Scale (Scheier & Carver, 1987). The Cronbach’s Alpha value was .84 for the scale. In this study, the Cronbach’s Alpha value is .80.

Cognitive Appraisal Form of Gratitude (CAFG). The CAFG was developed to determine the cognitive aspects of the helping behavior of one’s best friend. It consists of six items concerning the value, cost and sincerity of helping behavior and has been used by many researchers (e.g., MacKenzie et al., 2014; Tesser et al., 1968; Wood et al., 2008). The participants were asked to write the names of their same-sex best friend and were then asked to complete the CAFG with their friends in mind. They were asked to respond considering the helping behavior of the friend in general. The questions were answered using a 5-point rating scale. Value is designed to determine how important and valuable the helping behavior is, and it is measured by two items (Example: “*How valuable do you think that your friend’s help was to you?*”). Cost is how much effort is assessed for the helping behavior and is measured by two items (Example: “*How much did it cost your friend to help you (in terms of time, effort, financial costs, etc.)?*”). Sincerity, on the other hand, determines how much the friend’s behavior was perceived as voluntary, without the expectation of anything in return; it is measured by two items (Example: “*To what extent was your friend motivated by a sincere desire to help you?*”). The perceptions of value, cost and sincerity are calculated separately by taking the mean values of the questions related to these constructs. For the current study, psychometric properties of the scale have been demonstrated in a Turkish sample. Exploratory factor analysis results showed a three-factor structure ($KMO = .73$; Bartlett’s $\chi^2(15) = 925.12$, $p < .001$) explaining 82.93 % of variance and provided evidence for construct validity. The Cronbach’s Alpha value was .83 for perception of value, .67 for perception of cost, and .81 for perception of sincerity. For the perceptions of value, cost and sincerity, higher scores mean higher levels of perception of the best friend’s helping behavior.

Gratitude Adjective List. This instrument consists of three questions focused on gratitude, thankfulness and appreciation that were used by Emmons and McCullough (2003) to determine the level of gratitude. The Cronbach's Alpha value of Gratitude Adjective List ranged from .86 to .92. For the current study, the questions were adapted by the authors with regard to best friendship. The participants were asked to respond according to their friendship in general with the friend they specified before (Example: "*When you consider your friendship, how grateful do you feel toward your friend?*"). The scale involves a 5-point rating scale. For the current study, Gratitude Adjective List demonstrated adequate psychometric properties. The Cronbach Alpha value was .81. Higher scores mean higher levels of feelings of gratitude toward the best friend.

Demographic Information Form. The participants were asked to respond to demographic questions such as gender, age, marital status, and educational level.

In addition, given the secondary purpose of this study, two open-ended questions were asked to determine in what circumstances the person was grateful toward his or her best friend and the reactions given after feeling grateful: (1) *Briefly write and respond by choosing one of your experiences in which you felt grateful toward your best friend. What made you feel grateful?* (2) *What did you do after feeling grateful? How did you react?*

Procedure

After the required permissions were obtained from the Ethics Committee of Dokuz Eylül University, Faculty of Arts, the study was conducted with the participation of volunteers over 18 years of age. The data were obtained both via the paper-and-pen method and via an electronic questionnaire. The participants were asked to sign the informed consent form or to indicate their choice on the form that they were consenting to participate. The scales were balanced for sequence effect. The application lasted approximately 15 minutes.

Data Analysis

The data from the paper-and-pen sample and the online sample were combined. For the data analyses, SPSS 23.0 was used. First, whether or not the scales had appropriate values for analysis was evaluated. Then, the correlations among the variables were analyzed. Multivariate analysis of covariance (MANCOVA) was applied to assess whether the participants differed in terms of the variables according to their level of dispositional gratitude and gender. The mean scores of all measurement instruments were used.

For the two open-ended questions, content analysis was conducted. First, the themes that emerged in the answers were determined for each question. The event examples and gratitude expressions of 335 respondents were independently evaluated by the researchers. The Cohen kappa coefficient was calculated to determine the consistency of the categories determined by the evaluators. For the examples of gratitude, inter-rater reliability scores varied .63 and .79 ($p < .001$). The Cohen kappa values, which were found to be within the adequate range (.61 - .80) according to Landis and Koch (1977), indicated that the inter-rater reliability was sufficient. The Cohen kappa values for the expressions of gratitude for the help of the best friend ranged from .69 to .89 ($p < .001$). The Cohen kappa values, which are satisfactory (.61 - .80) and excellent (.81 - 1.0), demonstrated that the inter-rater reliability was adequate.

RESULTS

Correlation coefficients, means, standard deviations, lowest and highest scores of the variables were calculated (see Table 1).

Table 1. Correlation Coefficients, Means, Standard Deviations, Lowest and Highest Scores of the Variables

	Mean	Standard Deviation	Lowest-Highest	1	2	3	4	5	6
1. GRAT-R	3.54	0.57	1.56-4.75	-	.27*	.16*	.23*	.24*	.18*
2. Value	4.25	0.62	2-5		-	.47*	.48*	.38*	.62*
3. Cost	3.45	0.96	1-5			-	.25*	.23*	.50*
4. Sincerity	4.51	0.59	3-5				-	.23*	.45*
5. Gratitude Expression	3.19	0.47	1.73-4					-	.37*
6. Gratitude Emotion	3.90	0.74	1.33-5						-

* $p < .01$

Note: GRAT-R: The Gratitude, Resentment, and Appreciation Test-Revised

Correlation Analysis Results

Correlation analysis showed that the scores for dispositional gratitude, perceptions of the value, cost and sincerity of the best friend's behaviors, gratitude toward the best friend and gratitude expression were positively correlated ($ps < .01$). The coefficients of the correlations of the scales with each other are presented in Table 1.

MANCOVA Results

In this part of the study, to determine whether the value, cost and sincerity perceptions of the best friend's helping behaviors, the level of gratitude felt toward the best friend

and gratitude expression differed according to gender and dispositional gratitude, a 2×2 MANCOVA was applied, controlling for age and educational level.

Low and high dispositional gratitude groups were formed by using the median score (3.56). A total of 193 participants were in the low dispositional gratitude group, and 213 were in the high dispositional gratitude group. There were 96 females and 97 males in the low dispositional gratitude group. In contrast, there were 134 females and 79 males in the high dispositional gratitude group.

The mean and standard deviation values of the male and female participants for the dependent variables according to dispositional gratitude are presented in Table 2. Statistically,

Table 2. Mean and Standard Deviation Values of Male and Female Participants for Dependent Variables According to Dispositional Gratitude

	Dispositional Gratitude	Gender	Mean	Standard Deviation	N
Value	Low	Female	4.058	.6435	96
		Male	4.000	.7395	97
		Total	4.029	.6915	193
	High	Female	4.492	.5055	134
		Male	4.275	.5902	79
		Total	4.383	.5478	213
Cost	Low	Female	3.252	.9644	96
		Male	3.273	.9382	97
		Total	3.262	.9513	193
	High	Female	3.597	1.0195	134
		Male	3.583	.8194	79
		Total	3.590	.9194	213
Sincerity	Low	Female	4.400	.6747	96
		Male	4.293	.7864	97
		Total	4.346	.7305	193
	High	Female	4.643	.5077	134
		Male	4.525	.6236	79
		Total	4.584	.5656	213
Gratitude Emotion	Low	Female	3.824	.7972	96
		Male	3.632	.7599	97
		Total	3.728	.7785	193
	High	Female	4.047	.6902	134
		Male	3.970	.7369	79
		Total	4.008	.7135	213
Gratitude Expression	Low	Female	3.178	.4888	96
		Male	2.972	.4959	97
		Total	3.075	.4923	193
	High	Female	3.322	.4189	134
		Male	3.219	.3967	79
		Total	3.270	.4078	213

the significance level after Bonferroni correction was set at .025 instead of .05 to be able to reduce the probability of Type 1 errors and to compare groups of different numbers.

Although age as a control variable had a significant effect (Wilks' $\lambda = .96$, $F(5, 394) = 3.17$, $p = .01$, $\eta^2 = .04$), educational level did not have a significant effect (Wilks' $\lambda = .98$, $F(5, 394) = 1.32$, $p = .25$). The results of the analysis showed that gender (Wilks' $\lambda = .97$, $F(5, 394) = 2.85$, $p = .02$, $\eta^2 = .04$) and dispositional gratitude (Wilks' $\lambda = .91$, $F(5, 394) = 7.82$, $p < .001$, $\eta^2 = .09$) had significant main effects on gratitude toward the best friend, the perceived value, cost and sincerity of the best friend's helping behaviors and gratitude expression. However, gender and dispositional gratitude did not have a significant interaction effect.

According to the findings of this study, age as a control variable had a significant effect on gratitude expression ($F(1, 406) = 9.06$, $p = .003$, $\eta^2 = .02$). Accordingly, as age increases, the level of gratitude expression increases. However, perceptions of the value ($F(1, 406) = 0.54$, $p = .81$), cost ($F(1, 406) = 3.74$, $p = .05$), and sincerity ($F(1, 406) = 0.18$, $p = .66$) of the best friend's helping behavior and the level of gratitude toward the best friend did not vary with age ($F(1, 406) = 0.06$, $p = .80$).

The findings showed that gratitude expression differs depending on gender ($F(1, 406) = 11.04$, $p = .001$, $\eta^2 = .03$). The level of gratitude expression of women ($M = 3.26$, $SD = 0.45$) was higher than that of men ($M = 3.08$, $SD = 0.47$). However, according to the perceptions of the value ($F(1, 406) = 4.77$, $p = .03$, $\eta^2 = .01$), cost ($F(1, 406) = 0.01$, $p = .93$) and sincerity ($F(1, 406) = 3.07$, $p = .08$) of the best friend's helping behavior, there was no gender difference. In addition, the level of gratitude felt by women and men toward their best friends did not differ ($F(1, 406) = 2.70$, $p = .10$).

It was found that dispositional gratitude had a significant effect on gratitude expression ($F(1, 406) = 20.55$, $p < .001$, $\eta^2 = .05$) and perceptions of the value ($F(1, 406) = 29.57$, $p < .001$, $\eta^2 = .07$), cost ($F(1, 406) = 8.30$, $p = .004$, $\eta^2 = .02$) and sincerity ($F(1, 406) = 12.58$, $p < .001$, $\eta^2 = .03$) of the best friend's helping behavior. According to this result, those high in dispositional gratitude had higher levels of gratitude expression ($M = 3.30$, $SD = 0.41$) than those low in dispositional gratitude ($M = 3.07$, $SD = 0.49$). Those high in dispositional gratitude ($M = 4.42$, $SD = 0.55$) found their best friend's helping behaviors to be more valuable than those low in dispositional gratitude ($M = 4.05$, $SD = 0.67$). Additionally, those high in dispositional gratitude ($M = 3.58$, SD

= 0.96) perceived their best friend's help as costlier than did those low in dispositional gratitude ($M = 3.30$, $SD = 0.94$). People high in dispositional gratitude ($M = 4.61$, $SD = 0.53$) thought that their best friend's help was generally more sincere (good will) than did people low in dispositional gratitude ($M = 4.35$, $SD = 0.73$).

In addition, the level of gratitude toward one's best friend ($F(1, 406) = 13.27$, $p < .001$, $\eta^2 = .03$) differed according to dispositional gratitude. Those high in dispositional gratitude ($M = 4.02$, $SD = 0.71$) felt more gratitude toward their best friend than did those low in gratitude ($M = 3.74$, $SD = 0.77$).

Content Analysis Results

A content analysis was conducted on two open-ended questions that asked the participants for an example of an event in which they felt grateful toward their best friends and how they expressed this feeling. Content analysis was performed on the data of 335 respondents who answered the open-ended questions. The responses were examined, and six categories of gratitude events and five categories for gratitude expression were determined. An effort was made to determine the gratitude events according to the type of help delivered by the friend. These categories were called *psychological support*, *financial support*, *health support*, *responsibility sharing*, *self-serving* and *other*. Responses were coded into more than one category according to their content.

Psychological support describes the support given when a person is going through a difficult period or experiencing an event that psychologically affects them. For example, "*supported me in my grief process*" and "*even if I did not show when I was depressed, did everything to make me feel better*" expressions are evaluated as belonging to this category. Financial support reflects situations in which a person's financial needs, such as those involving money or shelter, were met. For example, "*shared her money although she needs it*" and "*opened her house to me at a time when I was in a difficult situation in my college years and offered a room for free*" expressions appear in this category. The health support category describes help behaviors exhibited when a person was ill. Explanations such as "*when I got sick, he took me to his house and took care of me*" and "*took me to the emergency room*" are included in this category. The responsibility sharing category is created to describe the fulfillment or sharing of responsibility by the best friend. "*I had a very difficult test. Despite being out of town, to help with this test, she lectured on video from Skype, and I passed that exam with a very*

high score” and “*while I was not there, he did my girlfriend’s and her mother’s chores patiently and carefully*” expressions are evaluated as belonging to this category. Examples of events in which the friend made a positive contribution to the person’s self-perception are included in the self-serving category. For example, “*I am grateful to him because he never judged me, because he accepted me with my faults, and because, no matter what it is, he has always asked and learned the truth from me*” and “*before I get into trouble, she criticized me directly when she saw me doing something wrong*” expressions are evaluated as belonging to this category. In the category of other, expressions of the beautiful qualities that the friend has or the expressions of satisfaction originating from knowing the friend are included. For example, “*I am grateful to her for being good, clear and honest*” and “*for being sincere and friendly*” answers are included in this category.

The responses after the experiences of gratitude were categorized as *verbal expression, nonverbal expression, other-oriented expression, helping* and *others*. The verbal, nonverbal, and other-oriented categories were structured in parallel to the GES. The verbal expression contains expressions that were orally expressed to the person toward whom gratitude is felt. For example, the statement “*I thanked them and indicated that I was very pleased*” is in this category. The nonverbal expression category includes behaviors showing gratitude toward the friend with behaviors such as smiling and hugging. For example, “*hugged and kissed each other*” and “*I smiled*” explanations fall into this category. In the other-oriented expression category, there are expressions that elevate the value of the other person. For example, “*I pray that she will be happier every day*” and “*I said he/she was one of the people I trust most in this life*” statements belong to this category. The helping category includes statements with regard to helping to the friend in return or helping in a similar way. For example, “*I was also with her in her most difficult times*” and “*I did not do anything special for that, but later, I always tried to be with him*” statements are included in this category. In the category of other, considering oneself to be lucky, buying a gift for the friend, and ordering a meal are included. For example, “*I offered to get something to eat together*” and “*I tried to be the person whom she treated me as*” statements belong to this category.

According to the content analysis, 55.0% of the events concerned psychological support, 24.0% financial support, 18.5% health support and 29.0% responsibility sharing. Eighteen percent concerned self-serving, and 5.4% were in the category of

other. Fifty-four percent of the expressions of gratitude were verbal expressions, 12.2% were nonverbal expressions, 9.0% were other-oriented expressions, 20.4% were helping and 20.8% were in the category of other.

DISCUSSION

The current study first examined whether the perceptions of the value, cost and sincerity of the best friend's helping behaviors, the emotion of gratitude toward the best friend and gratitude expression differ according to dispositional gratitude and gender. A second aim was to determine in which situations a person feels grateful toward his or her best friend and the reactions given after that feeling.

When the results are evaluated as a whole, it is understood that while the first and second hypotheses are confirmed, the last hypothesis is not. These findings are discussed below. The MANCOVA results showed that the level of gratitude expression varied according to age and that the feeling of gratitude toward the best friend and the perceptions of the value, cost and sincerity of best friend's helping behaviors did not change. As a control variable, educational level had no effect on any of the variables.

There were diverse results in a small number of studies involving the age variable, which is significantly associated with only gratitude expression. Both the research result showing a positive relationship between age and gratitude expression (Araz & Erdugan, 2017) and the finding that people suppress their emotions less as their age increases (John & Gross, 2004) also support that gratitude, similar to other emotions, is expressed more with age. However, the findings suggest that there is no association between chronological age and dispositional gratitude and that if a person perceives more opportunities and time ahead, then he or she feels more grateful (Allemand & Hill, 2016). Therefore, the relationship between gratitude and age must be examined in more detail. Conducting studies with homogeneous samples such as students can be considered one of the reasons for the contradictory findings, as there is very little chance to compare different age groups. Furthermore, the relationship between gratitude expression and age, supported by the results of this study, might be related to the idea that people become more mature as they age. It may be noted that they begin to see life as more other-oriented and that they suppress their feelings less frequently and express them more often.

Perceptions of the value, cost and sincerity of the best friend's helping behaviors did not vary depending on gender when age and educational level were controlled. Similarly, in terms of feeling gratitude toward the best friend, there was no difference according to gender. In other words, when the subject was the best friend, the perceptions of women and men regarding their best friend's helping behavior and the gratitude that they felt were similar. In contrast though, women had a higher level of gratitude expression than men. Many studies have shown that gratitude expression is different between genders and that women express their gratitude more (Kashdan et al., 2009; Ventimiglia, 1982; Watkins et al., 2003). In this study, there was a gender difference in the expression of gratitude, while there was no difference for feelings of gratitude toward one's best friend. This result is consistent with the finding that women tend to express their emotions more often and more intensely than men and that women and men do not differ in terms of the emotions that they experience (Ciarrochi et al., 2005; Kring & Gordon, 1998). Current studies in the literature are also in line with the finding that women have a higher level of gratitude expression than men. For example, in one study (Sommers & Kosmitzki, 1988), it is claimed that American men prefer to hide their gratitude instead of expressing it, which may also be true for men from Turkey's culture. Traditional gender roles encourage men to express their feelings less often. In particular, gratitude is less accepted in terms of traditional gender roles since it requires recognizing the contribution of someone else and expressing it. It has been demonstrated that males do not express their emotions less than females when they are born and that gender norms influence their experience over time (Brody, 1999). Furthermore, the idea claiming that women express more gratitude than men can be explained by women's placing greater value on gratitude (Kashdan et al., 2009). Rotkirch, Lyons, David-Barrett, and Jokela (2014) argue that women attach more importance to gratitude and that men associate gratitude more with obligation and anxiety and report less benefits from gratitude. Additionally, men associate gratitude with more indebtedness than women (Watkins, Scheer, Ovnicek, & Kolts, 2006). Here, the interpretation is that women can distinguish their gratitude better than indebtedness. Moreover, the difference in the gratitude expression between women and men needs further investigation since it potentially creates different communication patterns among friends. These studies may help to explain some friendship differences between men and women since gratitude expression may play a role in friendship dynamics.

The findings that the emotion of gratitude does not differ between women and men while the expression of gratitude differs may also originate from the measurement of the variables. In this study, the level of gratitude expression in general was measured, while the emotion of gratitude specific to the best friend was measured.

The results of the study revealed that those with higher dispositional gratitude felt more gratitude toward their best friends. McCullough et al. (2002) specified that people with higher dispositional gratitude have lower thresholds for experiencing gratitude in everyday life and feel gratitude toward more people, more often, and more intensely. Similarly, Watkins (2014) suggested that people high in dispositional gratitude are more likely to be positive about other people, see more goodness in others, and be more likely to appreciate them. In the present study, consistent with the literature, people with higher dispositional gratitude felt more gratitude toward their best friends. As in the study by Watkins et al. (2003), who revealed three aspects of gratitude (simple appreciation, appreciation of others, sense of abundance), in this study, those high in dispositional gratitude were more aware of the behaviors of their best friends and evaluated these behaviors as their contribution and felt gratitude toward them. This result suggests that the appreciation of others dimension of gratitude emerges in the relationship with one's best friend.

Cognitive appraisals of gratitude play a mediator role between dispositional gratitude and the emotion of gratitude (Wood et al., 2008). The perception of helping behavior and dispositional gratitude are effective in the emergence of gratitude. In this case, as expected, those high in dispositional gratitude had a higher perception of the value, cost and sincerity of helping behaviors and a higher feeling of gratitude afterward. The transfer of a similar evaluation pattern and similar emotions to the best friendship can be observed in this study. Moreover, those high in dispositional gratitude expressed more gratitude than those low in dispositional gratitude. It is anticipated that the disposition to feel gratitude is likely to change with the tendency to express this emotion.

The content analysis results for the open-ended questions show the diversity of the events in which people felt gratitude toward their best friends and the subsequent gratitude expression. People experience gratitude not only for the psychological, financial and health support provided by their best friends but also after the sharing of responsibilities or a positive behavior boosting their self-worth. In addition to all of

these factors, the personality of the best friend – because of the positive emotion created by having that kind of friend – can also be a contributing factor in situations that create a sense of gratitude. The gratitude of the participants in this study mostly followed receiving psychological support from their best friends, followed by the sharing of responsibilities and financial and health support. These findings support the help, intimacy, reliable alliance, self-validation and emotional security (Mendelson & Aboud, 1999) functions of friendship and show that they have important roles in the feeling of gratitude. Moreover, the content of these gratitude inducing behaviors may help future studies to develop different vignettes or situations to test gratitude in different types of relationships or cultures. Which behaviors arouse a gratitude feeling in which level of closeness might reveal the different functions of gratitude and relationships.

Furthermore, the content analysis findings for gratitude expression showed that gratitude expression can take various forms. The gratitude felt toward a best friend could be expressed by verbal expressions, nonverbal behaviors, praising expressions, trying to respond in a similar way, giving gifts, or ordering meals, among other responses. The verbal expression of gratitude, which has been observed frequently in other studies in the field (Baumgarten-Tramer, 1938; Freitas, Pieta, & Tudge, 2011), was also the most frequently used style in this study. After verbal expressions, the most commonly used forms of gratitude expression were those of the others category, followed by helping and nonverbal expressions. The rarest expression of gratitude toward the best friends was other-oriented expression, including praising and placing them in a higher position. It can be argued that this situation can be concluded because the intimacy of the relationship established with the best friend does not require these praising rituals after each favor.

The present study is significant in the context of being the first known study on the gratitude dynamics of close friendships in Turkey. When factors related to gratitude such as well-being, life satisfaction, low stress level, and contribution to maintaining the relationship are considered, it is crucial to conduct research on the concept of gratitude in Turkish culture. Future studies related to this subject (e.g. investigating the relationship between friendship quality and gratitude) will be valuable in terms of contributing to the field by testing the information available in the field of gratitude and evaluating it in a different culture and from a different perspective. The study revealed the importance of dispositional gratitude in every step of gratitude dynamics in even a

relatively collectivist culture and demonstrated that researchers need to consider it in gratitude studies. Also, since gratitude is linked to positive personal and relational consequences, the inclusion of different components of the gratitude might help to reveal processes leading to these outcomes.

The present study also had some limitations. First, the scales used in the study were self-reports and the participants were likely to give desirable answers. In Turkey, since the literature on gratitude is limited to small number of studies (e.g., Sivis-Cetinkaya, 2013; Oguz-Duran & Tan, 2013) and these instruments were used for the first time, comparison with other research findings is not possible, creating another limitation of this research. Additionally, in this study, the relationship between friends was considered unilaterally, and the factors that could affect the gratitude dynamics were not evaluated from the perspective of the best friend. Given the principle of reciprocity, the fact that this study presents a unilateral and momentary view of friendship is another limitation. In future studies, a more holistic perspective can be obtained by setting a benchmark on the criterion of the best friend. Additionally, the consideration that the participants may have a biased recall triggering their previous experiences (Nutt & Lam, 2011) creates another limitation since the participants' emotions, which could positively or negatively affect the evaluations of their friends, were also not controlled.

Since the study is correlational, it is necessary to avoid making causal inferences about the relationships between the variables. Future experimental studies can lead to inferences regarding causality. Future studies should also consider the partners in a romantic relationship or kinship relationships to test whether the study results are specific to the dynamics of best friend relationships. Future research with variables that consider the influence of socialization and cultural context, such as perceptions of helping behaviors, gratitude and gratitude expression, will make it possible to discover the cultural and universal aspects of gratitude.

Grant Support: The authors received no financial support for this work.

References

- Algoe, S. B. (2012). Find, remind, and bind: The functions of gratitude in everyday relationships. *Social and Personality Psychology Compass*, 6(6), 455–469. doi: 10.1111/j.1751-9004.2012.00439.x
- Algoe, S. B., Fredrickson, B. L., & Gable, S. (2013). The social functions of the emotion of gratitude via expression. *Emotion*, 13(4), 605–609. doi: 10.1037/a0032701

- Algoe, S. B., Gable, S. L., & Maisel, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships*, *17*, 217–233. doi: 10.1111/j.1475-6811.2010.01273.x
- Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships. *Emotion*, *8*(3), 425–429. doi: 10.1037/1528-3542.8.3.425.
- Allemand, M., & Hill, P. L. (2016). Gratitude from early adulthood to old age. *Journal of Personality*, *84*, 21–35. doi: 10.1111/jopy.12134.
- Araz, A., & Erdugan, C. (2017). Minnettarlık dışavurum ölçeği geliştirme çalışması [Developing a scale for measuring the expression of gratitude]. *Nesne*, *5*(11), 404-425. doi: 10.7816/nesne-05-11-04.
- Bartlett, M. Y., Condon P., Cruz, J., Baumann, J., & Desteno, D. (2012). Gratitude: Prompting behaviours that build relationships. *Cognition and Emotion*, *26*(1), 2-13. doi: 10.1080/02699931.2011.561297.
- Baumeister, R. F., & Ilko, S. A. (1995). Shallow gratitude: Public and private acknowledgement of external help in accounts of success. *Basic and Applied Social Psychology*, *16*(1), 191-209. doi: 10.1080/01973533.1995.9646109
- Baumgarten-Tramer, F. (1938). "Gratefulness" in children and young people. *Journal of Genetic Psychology*, *53*, 53-66. doi: 10.1080/08856559.1938.10533797.
- Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science*, *11*, 7-10. doi: 10.1111/1467-8721.00157.
- Birditt, K. S., Jackey, L. M. H., & Antonucci, T. C. (2009). Longitudinal patterns of negative relationship quality across adulthood. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *64B*(1), 55–64. doi: 10.1093/geronb/gbn031.
- Blau, P. M. (1964). *Exchange and power in social life*. New Brunswick, USA: Transaction Publishers.
- Blieszner, R., & Adams, R. G. (1992). *Adult friendship*. Newbury Park, CA: Sage Publications.
- Blieszner, R., & Roberto, K.A. (2004). Friendship across the life span: Reciprocity in individual and relationship development. In F. R. Lang, & K. L. Fingerman (Eds.), *Growing together: Personal relationships across the lifespan* (pp. 159–182). Cambridge: Cambridge University Press.
- Brody, L. R. (1999). *Gender, emotion, and the family*. Cambridge, MA, US: Harvard University Press.
- Ciarrochi, J., Hynes, K., & Crittenden, N. (2005). Can men do better if they try harder: Sex and motivational effects on emotional awareness. *Cognition and Emotion*, *19*(1), 133-141. doi:10.1080/02699930441000102.
- Demir, M., Özen, A., & Proscal, A. D. (2014). Friendship and happiness. In A. C. Michalos (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 2359-2364). Dordrecht, Canada: Springer
- Demir, M., & Özdemir, M. (2010). Friendship, need satisfaction and happiness. *Journal of Happiness Studies*, *11*(2), 243-259. doi: 10.1007/s10902-009-9138-5
- Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier*. Boston, MA: Houghton-Mifflin.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, *84*(2), 377-389. doi: 10.1037/0022-3514.84.2.377.
- Erdugan, C. (2016). *Yakın arkadaşlık ilişkisinde minnettarlığın bilişsel, duygusal ve davranışsal göstergeleri* (Unpublished Master's Thesis). Dokuz Eylül Üniversitesi, İzmir.
- Freitas, L. B. L., Pieta, M. A. M., & Tudge, J. R. H. (2011). Beyond politeness: The expression of gratitude in children and adolescents. *Psicologia: Reflexão e Crítica*, *24*(4), 757-764. doi: 10.1590/S0102-79722011000400016.

- Froh, J. J., Yurkewicz, C., & Kashdan, T. B. (2009). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence*, *32*(3), 633–650. doi: 10.1016/j.adolescence.2008.06.006
- Grant, A. M., & Gino, F. (2010). A little thanks goes a long way: Explaining why gratitude expressions motivate prosocial behavior. *Journal of Personality and Social Psychology*, *98*(6), 946–955. doi: 10.1037/a0017935.
- Hays, R. B. (1988). Friendship. In *Handbook of personal relationships* (pp. 391-408). London: John Wiley & Sons.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications
- John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, *72*, 1301–1334. doi: 10.1111/j.1467-6494.2004.00298.x
- Kashdan, T. B., Mishra, A., Breen, W. E., & Froh, J. J. (2009). Gender differences in gratitude: Examining appraisals, narratives, the willingness to express emotions, and changes in psychological needs. *Journal of Personality*, *77*(3), 691-730. doi: 10.1111/j.1467-6494.2009.00562.x.
- Kring, A. M., & Gordon, A. H. (1998). Sex differences in emotion: Expression, experience, and physiology. *Journal of Personality and Social Psychology*, *74*, 686-703. doi: 10.1037/0022-3514.74.3.686.
- Kubacka, K. E., Finkenauer, C., Rusbult, C. E., & Keijsers, L. (2011). Maintaining close relationships: Gratitude as a motivator and a detector of maintenance behavior. *Personality and Social Psychology Bulletin*, *37*(10), 1362–1374. doi: 10.1177/0146167211412196.
- Lambert, N. M., & Fincham, F. D. (2011). Expressing gratitude to a partner leads to more relationship maintenance behavior. *Emotion*, *11*(1), 52–60. doi: 10.1037/a0021557.
- Landis, J. R., & Koch, G. G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics*, *33*(2), 363-374. doi: 10.2307/2529786
- Lyubomirsky, S., & Lepper, H. S. (1999). A Measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, *46*, 137-155. doi: 10.1023/A:1006824100041
- MacKenzie, M. J. Vohs, K. D., & Baumeister, R. F. (2014). You didn't have to do that: Belief in free will promotes gratitude. *Personality and Social Psychology Bulletin*, *40*(11), 1423–1434. doi: 10.1177/0146167214549322.
- Markiewicz, D., Doyle, A. B., & Brendgen, M. (2001). The quality of adolescents' friendships: Associations with mothers' interpersonal relationships, attachments to parents and friends, and prosocial behaviors. *Journal of Adolescence*, *24*, 429–445. doi: 10.1006/jado.2001.0374.
- Ma, L. K., Tunney, R. J., & Ferguson, E. (2017). Does gratitude enhance prosociality?: A meta-analytic review. *Psychological Bulletin*, *143*(6), 601-635. doi: 10.1037/bul0000103
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: Conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*(1), 112-127. doi: 10.1037//0022-3514.82.1.112
- McCullough, M. E., Kilpatrick, S. D. Emmons, R. A., & Larson, D. A. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*, 249–266. doi: 10.1037/0033-2909.127.2.249
- Mendelson, M. J., & Aboud, F. (1999). Measuring friendship quality in late adolescents and young adults: McGill friendship questionnaires. *Canadian Journal of Behavioural Science*, *31*, 130-132. doi: 10.1037/h0087080

- Monsour, M. (2002). *Women and men as friends: Relationships across the life span in the 21st century*. Mahwah, NJ: Erlbaum.
- Morgan, B., Gulliford, L., & Kristjánsson, K. (2017). A new approach to measuring moral virtues: The Multi-Component Gratitude Measure. *Personality and Individual Differences, 107*, 179-189. doi: 10.1016/j.paid.2016.11.044
- Wright, P. H. (1978). Toward a theory of friendship based on a conception of self. *Human Communication Research, 4*, 196–207. doi: 10.1111/j.1468-2958.1978.tb00609.x.
- Newsom, J. T., McFarland, B. H., Kaplan, M. S., Huguet, N., & Zani, B. (2005). The health consciousness myth. Implications of the near independence of major health behaviors in the North American population. *The Journals of Gerontology, 60*(6), 304-312. doi: 10.1016/j.socscimed.2004.05.015.
- Nutt, R. M., & Lam, D. (2011). A comparison of mood-dependent memory in bipolar disorder and normal controls. *Clinical Psychology and Psychotherapy, 18*, 379- 386. doi: 10.1002/cpp.778.
- Oguz-Duran, N., & Tan, Ş. (2013). Minnettarlık ve yaşam amaçları yazma çalışmalarının öznel iyi oluşa etkisi [The effects of gratitude and life goals writing tasks on subjective well-being]. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 5*(40), 154-166. doi: 10.17066/pdrd.37862.
- Scheier, M. F., & Carver, C. S. (1987). Dispositional optimism and physical well-being: The influence of generalized expectancies on health. *Journal of Personality, 55*, 169-210.
- Sivis-Cetinkaya, R. (2013). Turkish college students' subjective wellbeing in regard to psychological strengths and demographic variables: Implications for college counseling. *International Journal for the Advancement of Counselling, 35*(4), 317-330. doi:10.1007/s10447-013-9185-9
- Somer, O., Korkmaz, M., & Tatar, A. (2004). *Kuramdan uygulamaya Beş Faktör Kişilik Modeli ve Beş Faktör Kişilik Envanteri (5FKE)*. İzmir: Ege Üniversitesi Basımevi.
- Sun, P., & Kong, F. (2013). Affective mediators of the influence of gratitude on life satisfaction in late adolescence. *Social Indicators Research, 114*(3), 1361-1369. doi: 10.1007/s11205-013-0333-8
- Reckart, H., Huebner, E., Hills, K. J., & Valois, R. F. (2017). A preliminary study of the origins of early adolescents' gratitude differences. *Personality and Individual Differences, 116*, 44-50. doi: 10.1016/j.paid.2017.04.020.
- Rotkirch, A., Lyons, M., David-Barrett, T., & Jokela, M. (2014). Gratitude for help among adult friends and siblings. *Evolutionary Psychology, 12*(4), 673-686. doi: 10.1177/147470491401200401.
- Sommers, S., & Kosmitzki, C. (1988). Emotion and social context: An American-German comparison. *British Journal of Social Psychology, 27*, 35–49. doi:10.1111/j.2044-8309.1988.tb00803.x.
- Tesser, A., Gatewood, R., & Driver, M. (1968). Some determinants of gratitude. *Journal of Personality and Social Psychology, 9*(3), 233-236. doi: 10.1037/h0025905.
- Thomas, M., & Watkins, P. (2003, May). *Measuring the grateful trait: Development of revised GRAT*. Paper presented at the Annual Convention of the Western Psychological Association, Vancouver, BC.
- Trierweiler, L. I., Eid, M., & Lischetzke, T. (2002). The structure off emotional expressivity: Each emotion counts. *Journal of Personality and Social Psychology, 82*, 1023-1040. doi: 10.1037/0022-3514.82.6.1023.
- Tsang, J. (2006). The effects of helper intention on gratitude and indebtedness. *Motive, 30*, 199–205. doi: 10.1007/s11031-006-9031-z
- Ventimiglia, J. C. (1982). Sex roles and chivalry: Some conditions of gratitude to altruism. *Sex Roles, 8*, 1107-1122. doi:10.1007/BF00290967
- Watkins, P. C. (2007). Gratitude. In R. F. Baumeister, & K. D. Vohs (Eds.), *Encyclopedia of social psychology* (pp. 383-384). Thousand Oaks, California: SAGE.

- Watkins, P. C. (2014). *Gratitude and the good life: Toward a psychology of appreciation*. Dordrecht: Springer.
- Watkins, P. C., Scheer, J., Ovnicek, M., & Kolts, R. (2006). The debt of gratitude: Dissociating gratitude and indebtedness. *Cognition and Emotion, 20*(2), 217-241. doi: 10.1080/02699930500172291
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality, 31*(5), 431-451. doi: 10.2224/sbp.2003.31.5.431
- Williams, L. A., & Bartlett, M. Y. (2015). Warm thanks: Gratitude expression facilitates social affiliation in new relationships via perceived warmth. *Emotion, 15*(1), 1-5. doi: 10.1037/emo0000017.
- Wood, A. M., Froh, J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*(7), 890-905. doi: 10.1016/j.cpr.2010.03.005.
- Wood, A. M., Maltby, J., Stewart, N., Linley, P. A., & Joseph, S. (2008). Social-cognitive model of trait and state levels of gratitude. *Emotion, 8*(2), 281-290. doi: 10.1037/1528-3542.8.2.281.
- Yost-Dubrow, R., & Dunham, Y. (2017). Evidence for a relationship between trait gratitude and prosocial behaviour. *Cognition & Emotion, 32*(2), 397-403. doi: 10.1080/02699931.2017.1289153