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Relationship between Cognitive Intelligence, Emotional Intelligence and Humor Styles

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ABSTRACT

Humor includes cognitive and emotional experience. This study aimed to examine the relationships between cognitive intelligence, emotional intelligence, and humor styles. The sample of the study consisted of 319 undergraduate students. The humor styles questionnaire, The Revised Schutte Emotional Intelligence, and Raven Standard Progressive Matrices Test Plus were used to obtain the data. The results indicated that emotional intelligence is positively correlated with adaptive humor styles. Cognitive intelligence had no statistically significant relationship with humor styles except affiliative humor style. Additionally, it was found that emotional intelligence predicted both affiliative and self-enhancing humor. The results were discussed in the light of the relationships between humor styles, emotional intelligence, and cognitive intelligence.

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Keywords:
Cognitive intelligence, emotional intelligence, humor styles

Introduction

Humor means anything that people say or do that is viewed funny and leads to make others laugh. Humor is often considered as a positive quality, which has a positive effect on an individual's life. For instance, humor has potential to enrich interpersonal relationships (Cann, Zapata, & Davis, 2011). Studies also showed that humor has a positive influence on physical and psychological health, well-being, adaptation skills and development of interpersonal skills (Kazarian, & Martin, 2004). Bariaud (1988) suggested that humor includes cognitive process and affective experience. Humor involves both cognitive processes such as creating and perceiving an amusing stimulus, and affective processes such as enjoyment of this stimulus (Martin, 2007). Therefore, humor may be related both cognitive intelligence and emotional intelligence.

Bergson (1996) claimed that humor is not only associated with excitement but also refers to intelligence. It is evidenced that humor has been correlated with intelligence. Miller (2000) suggested that differences in general intelligence led to differences in humor production. Hauck and Thomas (1972) showed that humor measured by peer evaluation was highly correlated with intelligence and creativity, as measured by the Lorge Thorndike Intelligence Test and the Torrance Tests of Creativity. Wierzbicki and Young (1978) studied with a sample of college males and pointed out that there was a positive correlation between humor comprehension and IQ. Feingold and Mazzella (1991) examined verbal intelligence and humor in three samples and found moderate correlations (r = 0.31–0.52) between the Vocabulary Scale of the Multi-Aptitude Test and rater-judged humor production tasks. Howrigan and MacDonald (2008) found correlations (r = 0.12–0.23) between general intelligence, as measured by the Raven's Advanced Progressive Matrices, and judge-rated humor production tasks. In addition, they found that humorous pictures and stories created by

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individuals having higher on general intelligence are rated as funnier. Greengross and Miller (2011) found that intelligence predicts humor ability. In addition, the Stanford-Binet intelligence test contains items on 'comprehension of absurdities' that function as a good measure of general intelligence (Ziv & Gadish, 1990).

Salovey and Mayer introduced the term emotional intelligence by the early 1990s. They defined emotional intelligence as a form of social intelligence involving the ability to read one's own and others' emotions and use this reading to manage one's own thoughts and behaviors (Salovey & Mayer, 1990). Emotional intelligence has been considered as using the emotions properly and stressing on interaction between cognition and emotion (Mayer, Salovey, & Caruso, 2004; Schutte et al., 1998). According to Mayer and Salovey (1997), emotion makes thinking more intelligent and someone thinks intelligently about emotions. Therefore, emotional and social skills may lead to the development of cognitive functioning. Goleman (1995) claimed that cognitive intelligence typically predicts only about 20 percent (r = .45) of the variance that determines various domains of life success. He argued emotional intelligence can be more powerful than cognitive intelligence. Bar-On (2007) examined the relationship between emotional intelligence and cognitive intelligence. In his study, multiple regression analysis revealed a high correlation (r = .44) between two constructs. The participants were administered the EQ-i to measure emotional intelligence and the Standard Progressive Matrices to assess cognitive intelligence. Humor contributes social interactions with others by forming bonds and resolving interpersonal conflicts (Butzer & Kuiper 2008; Norrick & Spitz 2008). Lefcourt (2001) have stressed that humor plays an important role in interpersonal relationships, as a method of developing positive interactions, facilitating self-disclosure and social probing, defusing tension and conflict, saving face, and so on. These social advantages of humor mentioned above require emotional awareness and emotion regulation, which are considered as components of emotional intelligence.

In addition to positive social functions of humor, it has some potential negative social functions such as deriding others, sarcasm and teasing (Lefcourt, 2001). Apparently people have various amounts and styles of humor. Humor styles that people use may be beneficial or harmful to themselves or others. Martin and colleagues (2003) suggested a model of humor styles. They proposed four humor styles, two of which are considered to be potentially useful to relationships and emotional well-being (affiliative and self-enhancing humor), and two of them can be potentially harmful (aggressive and self-defeating humor). Affiliative humor is related the tendency to enhance a healthy relationships with others in a self-accepting way; self-enhancing humor is considered the tendency to enhance the self tolerantly; aggressive humor used to hurt one's relationships with others, and self-defeating humor is used to detriment self. These humor styles have been found to be related to social competence and the quality of social interactions (Nezlek & Derks, 2001; Yip & Martin, 2006). For instance, adaptive styles (affiliative and self-enhancing humor) have been positively correlated with interpersonal adjustment and emotional well-being, whereas maladaptive humor styles (aggressive and self-defeating humor) have been found as correlated with hostility, negative emotions, low self-esteem, and low social support (Kuiper, Grimshaw, Leite, & Kirsh, 2004; Martin et al., 2003). It was also observed that adaptive humor styles (affiliative and self-enhancing) tend to be positively correlated with extraversion and openness to experience. On the other hand, the maladaptive humor styles (aggressive and self-defeating humor) tend to be correlated with low levels of agreeableness and high levels of neuroticism (Greengross & Miller, 2009; Martin et al., 2003).

In recent years, there has been a growing body of literature about relationship between humor styles and some other variables in Turkey, especially with university students. For instance, Avşar (2008) examined the relationships between humor styles and sex-roles of university students and found that self- enhancing humor, affiliative humor, and aggressive humor were correlated with sex-role, whereas self-defeating humor was not correlated with sex-role. Sümer (2008) stated that university students' mean scores of adaptive humor styles (affiliative and self-enhancing) were higher than those of maladaptive humor styles (aggressive and self-defeating). A recent study among university students indicated that adaptive humor styles were negatively correlated with shyness and automatic thoughts; self-defeating humor was positively correlated with automatic thoughts; and aggressive humor was positively correlated with two subscales of automatic thoughts (Başak & Can, 2014). Besides, a review of the humor literature revealed that research on humor styles among university students were associated with subjective well-being (İlhan, 2005), coping strategies (Sarı & Aslan, 2005), perceived personality and popularity (Saltuk, 2006), loneliness (Çeçen, 2006),

anxiety, anger (Bilge & Saltuk, 2007), depression and stress (Yerlikaya, 2009), interpersonal relationship styles (Erözkan, 2009), problem-solving, and self-respect (Traş, Arslan, & Taş, 2011).

Another variable that is associated with humor styles may be emotional intelligence. Vernon and colleagues (2008) found that individuals who had high emotional intelligence tended to use affiliative and self-enhancing humor, whereas individuals who lacked emotional intelligence tended to employ aggressive and self-defeating humor. Greven, Chamorro-Premuzic, Arteche, and Furnham (2008) pointed out positive correlations between total emotional intelligence scores and the two adaptive humor styles (affiliative r = .41; self-enhancing r = .48) and negative correlations with the two maladaptive humor styles (aggressive r =- .18; self-defeating r = -.35). Tümkaya, Hamarta, Deniz, Çelik and Aybek (2007) demonstrated that emotional intelligence predicted affiliative, self-enhancing, aggressive, and self-defeating humor styles in a sample of academic staff. Yip and Martin (2006) examined the relationships between humor styles and emotional intelligence among university students. They found positive correlation *(r* = .24) between emotional management (a component of emotional intelligence) and self-enhancing humor.

Humor is a feature that contains social, affective and cognitive aspects. It is possible to state that the level of emotional intelligence and cognitive intelligence have an important role on inclination to positive or negative humor in interpersonal relationships. Therefore, these positive and negative styles of humor would be related to emotional intelligence and cognitive intelligence in different ways. Although there are some studies about the relationship between emotional intelligence and humor styles as mentioned in the previous paragraphs, it was observed that there is a lack of research that examines the relationship between emotional intelligence, cognitive intelligence and humor styles altogether in the literature. Therefore, the present study can fill the gaps in this area. A study about this topic may contribute to deeper understanding of humor used by university students, and this understanding therefore may lead to increase in students' academic achievement and motivation. The study was conducted with university level students because university students generally start working after university education that is vital for their life satisfaction. Therefore, this study may provide considerable conclusions that illuminate the students' working lives. The aim of this study was to examine the relationships between university students' humor styles and their emotional intelligence and cognitive intelligence. For this purpose, the study attempted to answer the following questions:

1. To what extent are humor styles, emotional intelligence, and cognitive intelligence interrelated among university students?
2. To what extend emotional intelligence and cognitive intelligence predict humor styles among university students?

Method

Participants

This study was a relational study. The participants were conveniently selected on a voluntary basis among the students attended to Faculty of Education in Kocaeli University. Because of the fact that data can be more easily collected by using convenience sampling, researchers more often preferred this sampling method (Kemper, Stringfield, & Teddlie, 2003). The study included 319 university students who studied in different programs in Faculty of Education in Kocaeli University in the fall semester of the 2013-2014 academic years. While 64.3% of the participants were females, 35.7% of them were males. All of the participants were senior students. The age of participants ranged from 18 to 24.

Instruments

In the present study, Humor Styles Questionnaire was used to measure individual differences in humor use and The Revised Schutte Emotional Intelligence Scale was employed to assess emotional intelligence. Cognitive intelligence was measured with Raven Standard Progressive Matrices Test Plus. Detailed information about the data collection tools was given below.

The Humor Styles Questionnaire (HSQ). The HSQ contains 32 items developed by Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003) to measure four styles of humor (affiliative, self-enhancing, aggressive,

and self-defeating). For each item, participants rated the extent to which they agreed with different statements about their humor use on a 7-point scale anchored by 1 = Totally Disagree and 7 = Totally Agree. The scale is composed of four factors including 8 items: Affiliative humor (e.g., "I don't have to work very hard at making other people laugh"), Self-enhancing humor (e.g., "I don't need to be with other people to feel amused), Aggressive humor (e.g., "When telling jokes or saying funny things) and Self-defeating humor (e.g., "I let people laugh at me more make fun at my expense more than I should."). Martin et al. (2003) showed strong psychometrics for this scale with internal reliability coefficients for all four subscales (ranging from .77 to .81). There are 11 reverse items in the scale. The Turkish adaptation study of the questionnaire was conducted by Yerlikaya (2003). The Turkish form of the scale also has four factors which is the same with the original scale and factor loadings of items changed from .32 to .75. The Cronbach alpha coefficients scores were .74, .78, .69, and .67 (affiliative, self-enhancing, aggressive, self-defeating humor respectively). The higher scores obtained from the subscales means that the humor style is used more (Yerlikaya, 2003). The minimum and maximum scores from each subscale ranged from 8 to 56 points. In the present study, the Cronbach alpha coefficient was found as .81 for overall scale, and it changed from .69 to .82 for subscales.

The Revised Schutte Emotional Intelligence Scale (SSEIT-R). Schutte et al. (1998) at first developed Schutte Emotional Intelligence Scale (33 items), and then it was revised by Austin, Saklofske, Huang and McKenney (2004) (41 items). This scale was based on Salovey and Mayer's (1990) emotional intelligence model. This model included four basic components: the ability to recognize and express emotion; the ability to access and use emotions to enable thought; the ability to understand emotions; and to manage emotions. High scores in the scale show more characteristic of emotional intelligence and low scores indicate that the person does not have much emotional intelligence. Respondents rate themselves on the item using the five point scale. The scale was adapted to the Turkish population by Tatar, Tok and Saltukoğlu (2011). The Cronbach-alpha internal consistency coefficient for the entire scale was 0.82. The scale contains 41 items with a 5 points Likert-type scale; it gives an overall emotional intelligence score and 3 subscales scores: optimism/mood regulation, utilizations of emotions and appraisal of emotions. Many researchers (Bastian, Burns & Bauld, & Brown, 2009; Grisham, Steketee, & Frost, 2008; Nettelbeck, 2005) have used the scale with single factor and the overall total score in their studies. In this study the overall score will be used. For this study, the Cronbach alpha coefficient was found as .78 for the overall scale.

Raven Standard Progressive Matrices plus Test (SPM+). SPM+ is an updated version of Raven Standard Progressive Matrices Test. Both standard and advanced versions (Raven, Raven, & Court, 1993) are considered as the tests of individuals' general reasoning ability. The test provides one of the most reliable measures of *g* (Carpenter, Just & Shell, 1990). There are 5 sets (A, B, C, D and E) each of which consists of 12 items and total 60 items in SPM+ test booklet. There is an individual score for each set and a total score taken from the sum of all scores. The highest possible score on the test is 60. SPM+ test is applicable on a wide range of individuals from early childhood period to the elderly. The validity, reliability and norms studies of the test for the different age groups were carried out by Acar (2007), Kaplan (2008), Kurt (2008), Tunalı (2007) and Tuna, (2010) in Turkey.

Data Analysis

Following informed consent, participants were administered to the abovementioned data collection tools. Participants were assured of total confidentiality with regard to their ratings. After completion of the questionnaires, participants were awarded with course credit. Descriptive statistics, Pearson's product-moment correlation coefficient, and simple and multiple regression calculations were calculated during the analysis. $p < .05$ was taken as the critical level of significance. The enter method of multiple regression analysis was used.

Results

The findings obtained from the statistical analysis on the data collected according to research purposes were included in this section. Before Pearson product-moment correlations, descriptive statistics obtained from the scales that were used in the study were given in Table 1.

Table 1. The descriptive statistics of humor styles, SPM+, and SSEIT-R

Variables	N	Min.	Max.	$\overline{x}$	*SS*
SPM+	319	29	53	41.24	5.50
SSEIT-R	319	119	184	149.81	14.72
Affiliative	319	19	56	43.02	8.33
Self-enhancing	319	15	54	35.71	8,16
Aggressive	319	8	49	21.62	7.59
Self-defeating	319	10	46	28.50	8.12

Table 1 show that the mean scores obtained from the measurement in the study. The participants' mean scores of adaptive humor (affiliative=43.02 and self-enhancing=35.71) were higher than those of maladaptive humor style (aggressive=21.62 and self-defeating= 28.50). Students' mean score of cognitive intelligence (SPM+) was 41.24 ±5.50. Emotional intelligence score (SSEIT-R) of the participants was 149.81 ±14.72. In order to reveal the relationships of humor styles (affiliative humor, self-enhancing humor, aggressive humor and self-defeating humor), emotional intelligence and cognitive intelligence, the correlation analysis was conducted. Information about the correlation analysis was presented in Table 2.

Table 2. The relationship between humor styles, emotional intelligence and cognitive intelligence

Variables	1	2	3	4	5
1 SSEIT-R	1				
2- SPM+	,323**	1			
3-Affiliative	,431**	,114*	1		
4-Self-enhancing	,475**	,084	,459**	1	
5-Aggressive	-,099	-,051	,039	-,006	1
6-Self-defeating	,035	,011	,283**	,197**	,295**

N = 319 **p<.01, *p<.05

When Table 2 was examined, it can be seen that inter-correlations among five variables ranged from -.006 to .475. First of all, emotional intelligence was positively correlated with cognitive intelligence (*r*= .32; *p*<.01), affiliative humor *(r*= .43; p<.01) and self-enhancing humor (*r*= .47; p<.01) but was not significantly correlated with aggressive humor (*r*= -.099; p>.05) and self-defeating humor (r= .03; p>.05). Cognitive intelligence had only positive correlation with affiliative humor *(r*= .11; *p*<.05) among humor styles. Adaptive humor styles (affiliative and self-enhancing humor) were correlated with each other. Similarly maladaptive humor styles (aggressive and self-defeating humor) had positive relations with each other. Self-defeating humor had significant correlations with all of the humor styles. The results showed that the correlation coefficient of all variables was below 0.475, which appears to be lower than 0.80 that is criterion of multicollinearity. The variables having medium and high levels of relationships between themselves as a result of the correlation analysis were included in the regression analysis. The findings about the regression analysis are presented in Table 3 and Table 4. Firstly, because of the fact that there was a positive correlation between affiliative humor and emotional and cognitive intelligence, the multiple regression analysis was used to determine the prediction relationship between cognitive intelligence, emotional intelligence and affiliative humor style within the scope of this study. The results of the regression analysis about affiliative humor are presented in Table 3.

According to Table 3, emotional intelligence and cognitive intelligence together explained 18% of the total variance in affiliative humor style. When the results of *t*-test about the significance of regression coefficients were analyzed, emotional intelligence was seen to be the variable to explain affiliative humor significantly (β=.440, p<.01). Accordingly, as emotional intelligence increases, the individuals' affiliative humor levels increase. On the other hand, it can be seen that in Table 3, cognitive intelligence did not have a significant effect on affiliative humor (β= -.028). The other humor style which had a significant relationship with emotional intelligence was self - enhancing humor as a result of the correlation analysis. Therefore,

Table 3. The Results of the regression analysis to explain affiliative humor

Variables	B	Standard error	β	t	p	Dual correlation	Partial correlation
Emotional Intelligence	.249	.030	.440	8.218	.000	.431	.419
Cognitive Intelligence	-.043	.081	-.028	-.527	.599	.114	-.030

$R=.43$, $R^2=.18$, $F_{(2\text{-}317)}=36.2$, $p < .01$

simple linear regression analysis was used in order to examine the impact of emotional intelligence on self-enhancing humor. The results of regression analysis about self-enhancing humor are presented in Table 4.

Table 4. The result of the regression analysis to explain self-enhancing humor

	R	R^2	F	B	Std. Error	β	t	p
Emotional Intelligence	.47	.22	92.7	.264	.027	.475	9.633	.000

In Table 4, it can be seen that emotional intelligence could predict self-enhancing humor significantly ($R=047$; $R^2=.22$; $F=92.7$; $p< .01$). In addition, emotional intelligence could explain approximately 22% of the variance in self-enhancing humor ($R^2 = .22$).

Discussion

The current research examined the relationships between emotional intelligence, cognitive intelligence and the four humor styles measured by the HSQ. The overall results of the present study lead to the conclusion that emotional intelligence was highly correlated with adaptive humor styles. In the study, emotional intelligence was positively and significantly correlated with adaptive humor but was not significantly correlated with maladaptive humor. This result is consistent with previous studies conducted about emotional intelligence and humor styles. For instance, Gignac, Karatamoglou, Wee and Palacios (2014) observed positive correlations between typical emotional intelligence performance and adaptive humor styles in their investigation. Also Greven et al. (2008) pointed out positive correlations between emotional intelligence scores and the two adaptive humor styles (affiliative $r = .41$; self-enhancing $r = .48$), and negative correlations with the two maladaptive humor styles (aggressive $r = -.18$; self-defeating $r = -.35$). In this study, although emotional intelligence had a negative relationship with aggressive humor, there was no significant correlation between emotional intelligence and maladaptive humor. This finding from the study suggests that adaptive and maladaptive humor may have different affective constructs and consequences. Adaptive humor (affiliative and self-enhancing humor) was associated with higher levels of relationship satisfaction (Cann et al., 2011), self-esteem (Stieger, Formann, & Burger, 2011), and resiliency (Veselka, Schermer, Martin, & Vernon, 2010). Also these constructs like relationship satisfaction, self-esteem, and resiliency may be associated with emotional intelligence. Using humor especially adaptive styles may be considered as a general aspect of management and emotion regulation and as a way of having positive view on coping with difficulties. Students' education level may also ffect the relationship between emotional intelligence and adaptive humor styles. University students may realize the importance of adaptive behaviors and emotional intelligence for the social acceptance and social life.

Another result of the study was that cognitive intelligence had no significant correlation with humor styles except affiliative humor. One plausible explanation for this finding is that humor researchers have conceptualized sense of humor in different ways, such as humor creation ability, enjoyment of particular types of humorous stimuli, tendency to tell jokes and amuse others, to laugh frequently, and so on (see Martin, 2007). So it can be concluded that intelligence may be related to appreciation of humor structure not

humor content. Humor styles may be more related with humor content. For instance, there was a relationship between humor production and intelligence (Feingold & Mazzella, 1991; Masten, 1986). This study revealed no relationship with humor styles except affiliative style. Individuals use this affiliative humor style to decrease interpersonal difficulties and increase establishment and maintenance of relations. Also cognitive intelligence may contribute to solve interpersonal conflict and facilitate development of relationships.

As a result of the analysis conducted within the scope of this study to investigate the predictive role of emotional and cognitive intelligence on affiliative humor style, emotional intelligence and cognitive intelligence together explained 18% of the total variance in affiliative humor style, but cognitive intelligence did not have a significant effect on affiliative humor. This means that when emotional intelligence increases at the same time, the individuals' affiliative humor levels increase. This result suggests that individuals who are higher on emotional intelligence tend to engage in humor to enhance their social relationships with others. Theoretically, affiliative humor is an interpersonal form of humor (Martin et al., 2003). Affiliative humor functions as a way of facilitating relations. If individuals want to create friendships and overcome distress they need to understand the emotions of others, and to manage their own emotions. Using affiliative humor may require high emotional intelligence. So this prediction was not surprising. High emotional intelligence increases in optimism, courage and sympathy (Goleman, 1995). These traits also may influence on affiliative humor. Vernon et al. (2008) found that affiliative and self-enhancing humor both are correlated positively with extraversion and openness-to-experience, which may help to explain relationship between affiliative humor and emotional intelligence.

Also, emotional intelligence could predict self-enhancing humor significantly in the study. Yip and Martin (2006) observed that there was a positive correlation between emotional management and self-enhancing humor. This brings in mind that individuals who manage their own emotions which lead to high emotional intelligence may use humor as a coping mechanism. People who use self-enhancing humor have an inclination to be friends with individuals who employ adaptive humor styles (Martin et al., 2003). Therefore building a friendship or maintaining interpersonal relations may require emotional intelligence. Saklofske, Austin, and Minski (2003) showed a negative relationship between emotional intelligence and depression-proneness, and a positive relationship between emotional intelligence and subjective happiness and life satisfaction. In a similar vein, self-enhancing humor was positively related to well-being and negatively associated with anxiety and depression (Thorson, Powell, Ivan and William, 1997). People who have high emotional intelligence are generally optimistic, flexible, realistic, and successful at solving problems and coping with stress (Bar-On, 1997). These characteristics may contribute to self-enhancing humor. Also such results suggest that these two adaptive humor styles (affiliative and self-enhancing humor) are similar to each other in terms of their interpersonal content.

Findings from the present study clearly suggested that there was an important role of emotional intelligence on humor styles, but the findings also indicate that cognitive intelligence did not have effect on humor styles. So it can be concluded that humor styles were not linked with cognitive intelligence, they were associated with social intelligence or interrelationships. Theoretically, humor styles mean ways people use humor in their interactions with others (Martin et al., 2003). Also emotional intelligence can have different effects on humor styles. For instance, emotional intelligence was related with adaptive humor styles but not with maladaptive humor styles because of the fact that humor is a multidimensional concept.

Limitations

Although significant findings are found, several limitations should be noticed in the present study. The most obvious limitation is that all of the participants in this study were from a single faculty, which is Faculty of Education. Such a limitation reduced the generalizability of the findings. Relatively high educational level of the sample may influence perception of humor. Therefore, larger and more diverse sample size in the future studies may provide better understanding. In the present study, two variables' relationships with humor styles were examined. However, more variables such as education level, social status, gender, and age should be investigated in future studies. Although data about gender were collected in this research, gender was not examined because it was not included in the scope of the present study. Finally, the collected data were self-reported measure, so it is probable for participants to answer the

questions in a socially desirable way. Experimental, longitudinal, and qualitative research designs are recommended for future studies to enable better understanding on how contextual factors interact with humor styles.

References

Acar, S. (2007). *Raven spm plus testi ve roets liderlik değerlendirme ölçeğinin 10–11 yaş geçerlik, güvenirlik, ön-norm çalışmalarına göre üstün zekâlı olan ve olmayan öğrencilerin liderlik özelliklerinin karşılaştırılması. [The validity, reliability and pre-norm study of Raven's SPM Plus Test and Roets Leadership Rating Scale for the ages 10-11 and comparison of gifted and non-gifted students in terms of their leadership skills].* Unpublished master's thesis, İstanbul University, İstanbul.

Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenney, D. (2004). Measurement of trait emotional intelligence: testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, *36*, 555-562.

Avşar, V. (2008). *Öğretmen adaylarının mizah tarzları ve cinsiyet rolleri ilişkisi [The relationship between preservice teachers' humor styles and their gender roles].* Unpublished master's thesis. Marmara Üniversitesi, Eğitim Bilimleri Enstitüsü, İstanbul.

Bariaud F. (1988). Age differences in children's humor. J*ournal of Children in Contemporary Society, 20(1–2),* 15–45.

Bar-On R. (2007). The impact of emotional intelligence on giftedness**.** *Gifted Education International, 23,* 122-137.

Bar-On, R. (1997). *The emotional quotient inventory (eq-i): technical manual*. Toronto: Multi-Health Systems.

Bastian, V.A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences*, *39(6),* 1135-45. doi: 110.1016/j.paid.2005.04.006.

Başak B.E and Can, G. (2014*). The Relationships Between Humor Styles, Shyness And Automatic Thoughts Among University Students.* Education and Science, *39 (174),* 365-376. doi:10.15390/EB.2014.2619

Bauld, R., & Brown, R. (2009). Stress, psychological distress, psychosocial factors, menopause symptoms and physical health in women. *Maturitas*, *62(2),* 160-5. doi: 110.1016/j.maturitas.2008.12.004.

Bergson, H. (1996). *Gülme: Komiğin anlamı üstüne deneme* [*Laughter: An essay on the meaning of the comic]* (Y. Avunç Çev.). İstanbul: Ayrıntı Yayınları.

Bilge, F. & Saltuk, S. (2007). Humor styles, subjective well-being, trait anger, and anxiety among university students in Turkey. *World Applied Sciences Journal, 2(5), 464–469.*

Butzer, B., & Kuiper, N. A., (2008). Humor use in romantic relationships: The effects of relationship satisfaction and pleasant versus conflict situations. *The Journal of Psychology: Interdisciplinary and Applied,* 142, 245–260. doi: 110.3200/JRLP.142.3.245-260.

Cann, A., Davis, H. B., & Zapata, C. L. (2011). Humor styles and relationship satisfaction in dating couples: Perceived versus self-reported humor styles as predictors of satisfaction. *Humor: International Journal of Humor Research 24(1).* 1–20. doi: 110.1515/humr.2011.001

Carpenter P.A., Just M.A., & Shell P. (1990). What one intelligence test measures: A theoretical account of the processing in the Raven Progressive Matrices Test *Psychological Review*, *97*, 404‑431. doi:110.1037/0033-295X.97.3.404

Çeçen A.R. (2007). Humor styles in predicting loneliness among Turkish university students. *Socıal Behavıor and Personalıty, 35(6), 835-844.*

Erözkan, A. (2009). Üniversite öğrencilerinin kişiler arası ilişki tarzları ve mizah tarzları [Interpersonal relationship styles and humour styles of university students*]. Dokuz Eylül University, Journal of Buca Faculty of Education, 26*, 56-66.

Feingold, A., & Mazzella, R. (1991). Psychometric intelligence and verbal humor ability. *Personality and Individual Differences*, *12*, 427–435.

Gignac, G. E., Karatamoglou, A., Wee, S., & Palacios, G. (2014). Emotional intelligence as a unique predictor of individual differences in humour styles and humour appreciation. *Personality and Individual Differences*, *56*, 34-39. doi: 110.1016/j.paid.2013.08.020.

Goleman, D. (1995). *Emotional intelligence*, New York: Bantam book.

Greengross, G., & Miller, G. (2011). Humor ability reveals intelligence, predicts mating success, and is higher in males. *Intelligence*, *39*, 188–192. doi: 110.1016/j.intell.2011.03.006

Greengross, G., & Miller, G. F. (2009). The big five personality traits of professional comedians compared to amateur comedians, comedy writers, and college students. *Personality and Individual Differences, 47*, 79–83.

Greven, C., Chamorro-Premuzic, T., Arteche, A., & Furnham, A. (2008). A hierarchical integration of dispositional determinants of general health in students: The Big Five, trait emotional intelligence and humour styles. *Personality and Individual Differences, 44*, 1562–1573.

Grisham, J., Steketee, G., & Frost, R. (2008). Interpersonal problems and emotional intelligence in compulsive hoarding. *Depression and* Anxiety, *25(9),* 63-71.

Hauck, W. E., & Thomas, J. W. (1972). The relationship of humor to intelligence, creativity, and intentional and incidental learning. *The Journal of Experimental Education*, *40,* 52-55.

Howrigan, D. P., & MacDonald, K. B. (2008). Humor as a mental fitness indicator. *Evolutionary Psychology*, *6*, 652–666.

İlhan, T. (2005). *Öznel iyi oluşa dayalı mizah tarzları modeli [A model of humor styles based on subjective well-being]* Unpublished master's thesis. Gazi University, Ankara.

Kaplan, A. (2008). *Raven'ın ilerleyen matrisler plus testinin 12-13 yaş çocukları üzerinde geçerlik, güvenirlik ve ön norm çalışmalarına göre üstün zekâlı olan ve olmayan öğrencilerin mantıksal düşünme yeteneklerinin karşılaştırılması. [Raven's Spm Plus version Sets Test results' relations to the logical thinking ability of gifted and non-gifted students through validity, reliability and norm studies for the students aged between 12-13].* Unpublished master's thesis, İstanbul University, İstanbul

Kazarian, S. S., & Martin, R. A. (2004). Humour styles, personality, and well-being among Lebanese university students, *European Journal of Personality, 18*, 209-219. doi: 110.1002/per.505

Kemper, E., Stringfield, S, & Teddlie, C. (2003). Sampling strategies in social science research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 273-296). Thousand Oaks, CA: Sage.

Kuiper, N. A., Grimshaw, M., Leite, C., & Kirsh, G. (2004). Humor is not always the best medicine: Specific components of sense of humor and psychological well-being. *Humor: International Journal of Humor Research, 17*,135–168. doi: 110.1515/humr.2004.002

Kurt, E. (2008). *Raven spm plus testi 5.5-6.5 yaş geçerlik, güvenirlik, ön-norm çalışmalarına göre üstün zekalı olan ve olmayan öğrencilerin erken matematik yeteneklerinin karşılaştırılması [The validity, reliability and pre-norm study of raven Standard Progressive Matrices (SPM) Plus Test for 5.5 – 6.5 ages and an examination of the early mathematics ability of gifted and normal students].* Unpublished master's thesis, İstanbul University, İstanbul

Lefcourt, H. M. (2001). *Humor: The psychology of living buoyantly*. New York: Kluwer Academic.

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the humor styles questionnaire. *Journal of Research in Personality,* 37, 48–75. doi: 110.1016/S0092-6566(02)00534-2

Martin, R.A. (2007). *The psychology of humor. An integrative approach*. Burlington: Elsevier Academic Press.

Masten, A. S. (1986). Humor and competence in school-aged children. *Child Development, 57*, 461-473. doi: 110.2307/1130601.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D.J. Sluyter (Eds.), *Emotional development and emotional intelligence* (pp. 3-31). NewYork: Basic Books.

Mayer, J. D., Salovey, P. & Caruso, D. R. (2004). Emotional intelligence: Theory, findings and implications. *Psychological Inquiry, 15*, 197-215. doi: 110.1207/s15327965pli1503_02.

Miller, G. F. (2000). *The mating mind: How sexual choice shaped the evolution of human nature.* New York: Doubleday.

Nezlek, J. B., & Derks, P. (2001). Use of humor as a coping mechanism, psychological adjustment, and social interaction. *Humor*, *14 (4),* 395-413.

Norrick, N. R., & Spitz, A. (2008). Humor as a resource for mitigating conflict in interaction. *Journal of Pragmatics, 40*, 1661–1686. doi: 10.1016/j.pragma.2007.12.001.

Raven. J., Raven, J. C., & Court J. H. (1993). Ma*nual for Raven's Progressive Matrices and Mill Hill Vocabulary Scales.* Oxford: Oxford Psychologists Press.

Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences*, *34*, 707-721.

Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9(3),* 185-211.

Saltuk, S. (2006). *Üniversite öğrencilerinin mizah tarzları [Humor styles of university students]* Unpublished master's thesis, Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü.

Sarı, T., ve Aslan. H. (2005). *Mizah tarzları ile başa çıkma stratejileri arasındaki ilişki [Relationship between humor styles and coping strategies]* VIII. Ulusal Psikolojik Danışma ve Rehberlik Kongresi Özet Kitabı [Abstract Proceedings of 8th National Psychological Counseling and Guidance Congress (s.105– 106). İstanbul: Marmara Üniversitesi Atatürk Eğitim Fakültesi.

Schutte, N. S., Malouf, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J. & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177. doi: 110.1016/S0191-8869(98)00001-4.

Stieger, S., Formann, A. K., & Burger, C. (2011). Humor styles and their relationship to explicit and implicit self-esteem. *Personality and Individual Differences*, *50*, 747-750.

Sümer, M. (2008). *Okul öncesi öğretmenliği öğrencilerinin stresle başa çıkma stilleri ve bazı değişkenlere göre mizah tarzlarının karşılaştırılması [Pre-service early childhood educators' styles of stress management and a comparison of their humor styles according to some variables].* Unpublished master's thesis, Selçuk Üniversitesi, Sosyal Bilimler Enstitüsü, Konya.

Tatar, T., Tok, S., & Saltukoğlu, G. (2011). Adaptation of the revised Schutte emotional intelligence scale into Turkish and examination of its psychometric properties, *Bulletin of Clinical Psychopharmacology*, *21(4),* 325-338.

Thorson, J. A., Powell, F. C., Ivan, S., & William, P. H. (1997). Psychological health and sense of humor. *Journal of Clinical* Psychology, 53, 605–619.

Traş, Z., Arslan, C., & Taş, A. M. (2011). Öğretmen adaylarında mizah tarzları, problem çözme ve benlik saygısının incelenmesi [Analysis of humor styles, problem solving and selfesteem of prospective teachers]. *International Journal of Human Sciences, 8(2),* 716-732.

Tuna, C. (2010). *Raven'ın ilerleyen matrisler plus testinin 14-15 yaş çocukları üzerinde geçerlik, güvenirlik ve ön norm çalışmalarına göre üstün olan ve üstün olmayan öğrencilerin duygusal zeka düzeylerinin karşılaştırılması [Comparison of gifted and non-gifted students' emotional intelligence based on the validity, reliability, and the pre-standardization of raven standard progressive matrices plus test for the 14-15 age group].* Unpublished master's thesis, İstanbul University, İstanbul.

Tunalı, S. (2007). *Somut işlemsel dönemdeki üstün ve normal zekâlı çocukların somut düşünme yeteneklerinin incelenmesi ve raven standart ilerleyen matrisler testi' nn 8- 9 yaş çocukları üzerinde geçerlilik, güvenilirlik, ön norm çalışması [The validity, reliability and pre-norm study of raven standart progressive matrices (spm) plus test for 8- 9 ages and an examination of the concrete reasoning ability of gifted and normal].* Unpublished master's thesis, İstanbul University, İstanbul.

Tümkaya, S., Hamarta, E., Deniz, M. E., Çelik, M., & Aybek B. (2007). Duygusal zekâ mizah tarzı ve yaşam doyumu: Üniversite öğretim elemanları üzerine bir araştırma [Emotional intelligence, humor style and life satisfaction: A study on university academic staff]. *Türk Psikolojik Danısma ve Rehberlik Dergisi*, *3(30*), 16-18.

Vernon, P. A., Martin, R. A., Schermer, J. A., & Mackie, A. (2008). A behavioral genetic investigation of humour styles and their correlations with the Big-5 personality dimensions. *Personality and Individual Differences*, *44,* 1116–1125. doi: 110.1016/j.paid.2007.11.003.

Veselka, L., Schermer, J. A., Martin, R. D., & Vernon, P. A. (2010). Laughter and resiliency: A behavioral genetic study of humor styles and mental toughness. *Twin Research and Human Genetics*, *13*, 442-449. doi: 110.1375/twin.13.5.442.

Wierzbicki, M., & Young, R. D. (1978). Relation of intelligence and task-difficulty to appreciation of humor. *Journal of General Psychology*, *99(1),* 25–32. doi: 110.1080/00221309.1978.9920891

Yerlikaya, E. (2009). *Üniversite öğrencilerinin mizah tarzları ile algılanan stres, kaygı ve depresyon düzeyleri arasındaki ilişkinin incelenmesi* Unpublished master's thesis. Çukurova University, Adana, Turkey.

Yerlikaya, E. (2003). *Mizah tarzları ölçeği uyarlama calışması [Adaptation study of the Humor Styles Questionnaire*]. Unpublished master's thesis, Cukurova University, Adana.

Yip, J. A., & Martin, R. A. (2006). Sense of humor, emotional intelligence, and social competence. *Journal of Research in Personality*, *40*, 1202–1208.

Ziv, A., & Gadish, O. (1990). Humor and giftedness. *Journal for the Education of the Gifted, 13,* 332-345.