

THE RELATIONSHIP BETWEEN GRIT AND EMOTIONAL INTELLIGENCE IN UNIVERSITY STUDENTS

Abstract: The purpose of this research is to explore the relationship between grit and emotional intelligence among university students. The study group was composed of 230 students studying at Konya Selçuk University during the 2017-2018 academic year. Among them, 22 were female students, 208 were male students, 123 were students in the first year and 107 were students in the second year. The Short Grit Scale (Sarıçam, Çelik & Oğuz, 2015) and the Trait Emotional Intelligence Scale-Short Form (Deniz, Özer & Işık, 2013) are part of the study. These were methods of data collecting. The Pearson Product Moment Correlation Methodology has examined whether grit and emotional intelligence have a significant connection. Multiple regression analysis tested emotional intelligence's predictive value. It has been determined that there is a significant and constructive correlation between grit and emotional intelligence, according to the findings. The significance of the coefficients of regression is tested and it is shown that emotional intelligence's total score, self-control and emotionality are important predictors on grit.

Keywords: Grit, emotional intelligence, university students, the pearson product moment correlation methodology.

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INTRODUCTION

While emotions are common to all individuals, people express, organize and use their emotions differently (Petrides & Furnham, 2003). In various emotional intelligence definitions, properties such as understanding and using emotions to facilitate thoughts and manage emotions for emotional development stand out (Brackett, Mayer & Warner, 2004). In the explanation of emotional intelligence, two separate models are commonly used. Salovey and Mayer's mental capacity model is the first of these models (1990). According to this model, emotional intelligence is defined as the ability to process information about the thoughts and emotions of others. It is also the ability to use this understanding as a reference for the thoughts and acts of one (Salovey & Mayer, 1990). The other model is the model of traits. As for features, emotional intelligence mainly deals with the understanding of the emotional environments and personal skills of individuals. The traits of emotional intelligence (EQ) are understood as emotion-related self-perceptions and are rooted in the concept of personality. In the use of perception, manipulation, and control, the attribute of EQ emphasizes personal tendencies and also involves characteristics that contribute to one's own internal assessment. Revealing itself in those actions or traits, such as consistent attitudes, confidence, assertiveness, self-expression and empathy in various situations (Petrides & Furnham, 2001).

Individuals with a high EQ have the personal knowledge required to identify their important aspects and have a range of mechanisms to deal with challenging circumstances in terms of the analytical and evaluative features of EQ. High EQ allows people to select adaptive methods and minimize and substitute negative emotions with positive emotions (Mikolajczak & Luminet, 2008). Individuals with high emotional maturity are more capable of acquiring, using, knowing, and handling the emotions of their own and others and promoting life satisfaction and subjective well-being. In addition, people with higher EQ are better able to regulate their emotions, evaluate social signals, and establish social relationships, and are more welcomed by others (Mavroveli, Petrides, Sangareau, & Furnham, 2009). In addition, high EQ people are excellent at stress management and assessment,

as well as describing and controlling their emotions (Petrides & Furnham, 2001). Emotion management skills is related with a tendency to get an experimentally induced positive mood which has obvious implications for preventing burn out (Alnaggar, 2014). Individuals with high EQ are people that are more effective in demonstrating their results and have more satisfaction with life and less dissatisfaction (Petrides & Furnham, 2000). With regard to emotional intelligence in some studies done, it has been found that emotional intelligence is related to psychological resilience (Özer & Deniz, 2014), forgiveness and perfectionism (Kaya & Peker, 2016), core self-evaluation and life satisfaction (Özer, Hamarta & Deniz, 2016), domain specific creativity (Şahin, Özer & Deniz, 2016), stress and coping styles in university students (Deniz & Yılmaz, 2006), burn out (Alnaggar, 2014), problem solving abilities (Karabulutlu, Yılmaz & Yurtaş, 2011), communication skills (Çetinkaya & Alparslan, 2011), Managing Stress and Anxiety (Demershdah, 2012), job performance (Mohammed, 2015), Perfectionism (Saracaloğlu, Saygı, Yenice, & Altın, 2016). There are also studies determined to the mediating role of emotional intelligence. For example, perceived social support and cyberbullying victimization (Elkady, 2019), conscious awareness and psychological well-being (Deniz, Erus, & Büyükbeci, 2017). In terms of their emotional intelligence, the purpose of this study is to analyze the grit variable in university students.

Together, the EQ trait and holding on to a target build an interrelated method. The features of people with high emotional intelligence, such as making every effort to be efficient and effective, who do not hesitate to do more challenging tasks, to deal with the difficulties they face, are very similar to the features found in gritty people. In Positive Psychology, Grit, a significant term, is characterized as a trait that corresponds to the strength of patience and perseverance. Duckworth, Peterson, Matthews, & Kelly (2007) modelled grit and described it as a successful personality attribute.

As a definition, grit implies the determination by individuals of long-term ambitions, and the engagement and dedication they sustain in achieving the future they want to have, translating this ambition into action without giving up on

their goals. Grit is important as a characteristic of attitudes and behaviors of an individual (Duckworth and Quinn, 2009).

Grit consists of two blocks of buildings:

1- Passion: the desire of a person in a particular job to conquer obstacles; desire, eagerness and determination; a special reason to which one is committed; and excitement for long-term goals (patience and perseverance). Grit comprises the long-term interests of a person and the associated short-term purposes and behavior.

2- Persistence: goal-oriented efforts, continuity of efforts (to make sacrifices for this purpose, even in difficult times, and to devote time and energy to long-term objectives), to work hard and to sustain effort and interest, to complete the work begun, and to gain pleasure from missions accomplished.

Determined people (those with grit) have good self-control, can resist their impulses and concentrate on their future objectives, and are persistent in pursuing long-term personal, academic and professional objectives. In addition, these types of people concentrate heavily on their task at hand, pay great attention to actively working, and assume that high-quality work and goods should be made (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011). In the absence of constructive feedback, highly determined individuals set long-term targets and do not give up on them (Duckworth et al., 2007). In addition, these people reflect on the elements that they can improve in their lives rather than on those they can not, and they aspire to achieve their goals, become more inspired by participating in events, find purpose in life as opposed to pleasure, and have a high sense of gratitude (Kleiman, Adams, Kashdan, & Riskind, 2013), life satisfaction (Li, Fang, Wang, Sun and Cheng, 2018).

They are people who, instead of ignoring or delaying them, prefer to deal successfully with ongoing stressful circumstances and strive to address these situations directly and proactively (Burkhart, Tholey, Guinto, Yeo, & Chojnacki, 2014). In tough times and circumstances, they strive hard towards their long-term goals and maintain their promises. People with long-term ambitions and values that can fulfill them have more optimistic attitudes towards themselves (Maddi, Erwin, Carmody, Villarreal, White and Gundersen, 2013).

personality, in that it affects the manners, A new definition in positive psychology was Grit, which is a component in this research, which was studied for a relatively short period. There are also small numbers of studies with university students, conducted in Turkey. It was concluded that grit is significantly related to life satisfaction (Akbağ and Durmuş, 2017), depression, anxiety and stress (Özhan and Boyacı, 2018), academic success and motivation (Reraki, Çelik and Sarıçam, 2015; Beyhan, 2016), the level of happiness (Ekinci & Hamarta, 2020), strengths, self-efficacy and psychological resilience (Çelik, Sarıçam & Sönmez, 2018).

As the literature is reviewed, no study has been seen to establish that the two factors that are grit and emotional intelligence are examined together. In terms of their emotional intelligence, this present research is to analyze the grit variable in university students and to contribute to the literature. Within the scope of this aim, examining the relationship between the sub-dimensions of the grit variable – “Consistency of Interest (CI)” and “Perseverance of Effort (PE)” – and the sub-dimensions of the trait emotional intelligence variable – “Well-being (WB)”, “Self-Control (SC)”, “Emotionality (EM)” and “Sociability (SOC)” – was tested.

METHOD

RESEARCH DESIGN

This study was designed as a correlational study to establish the relationship between the related variables using quantitative methods (Karasar, 2005). Correlation studies analyze the relationship between two or more variables (Fraenkel, Wallen, & Hyun, 2011; Karasar, 2005). This research examined the relationship between grit and EQ variables.

STUDY GROUP

The study group was made up of 230 students studying at Konya Selçuk University during the 2017-2018 academic year. Among them, 22 were female and 208 were male, with 123 being first year students and 107 being second year students.

Table 1. Demographic Information of the Participants

		Number
Gender	Woman	22
	Men	208
Class	1st year students	123
	2nd year students	107
Total		230

DATA COLLECTION

In this study the Short Grit Scale (Grit-S) developed by Duckworth and Quinn (2009), translated by Sariçam, Çelik and Oğuz (2016) and Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF) developed by Petrides and Furnham (2000, 2001) and adapted by Deniz, Özer and Işık (2013) to Turkish were used as methods for data collection.

THE SHORT GRIT SCALE:

The Short Grit Scale (Grit-S) was developed by Duckworth and Quinn (2009). This scale encompasses 8 items and two subscales; consistency of interest (four items; e.g. “I often set a goal but later choose to pursue a different one”) and perseverance of effort (four items; e.g. “I am a hard worker”). Each item was rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). It was adapted to Turkish by Sariçam, Çelik & Oğuz (2015). The goodness of fit index values of the model were ($\chi^2/df=2.06$, RMSEA= .046, CFI=.95, GFI=.94, AGFI=.93, SRMR=.047).

Significant relationships ($r=.68$) between the Motivational Persistence Scale (Constantin, Holman & Hajbota, 2011) and the Short Grit Scale was investigated in the concurrent validity. Cronbach's alpha internal consistency coefficient was found as .83 for the whole scale, .80 for sub-dimension of consistency of interest, .71 for sub-dimension of the perseverance of effort. The test-retest reliability coefficient was .69 for the whole scale. Corrected item-total correlations ranged from .33 to .65 (Sariçam, Çelik & Oğuz, 2015).

Trait Emotional Intelligence Questionnaire–Short Form (SF): Trait Emotional Intelligence Questionnaire-SF form was developed by Petrides and Furnham (2000) and it was adapted to Turkish by Deniz, Özer and Işık (2013). This form can be applied within groups and

independently to determine the degree of perception of the person related to emotional

competence. The high point of the total scale shows that emotional skills are perceived to be high and the low points mean that emotional skills are perceived to be low. Positive correlations were backed by the language validity and equivalence of scale through the points obtained from Turkish forms.

In order to test the structure validity of the scale, a four-factor structure (well-being self-control, emotionality and sociability) with 20 elements was obtained as a result of explanatory factor study. The results of the confirmatory factor analysis to understand whether this structure was nicely obtained on the basis of the sample data showed that the sample agreement in which the scale was used was fine. The all of the internal consistency

reliability coefficient scale of TEQue-SF was founded as 0.81 and test-retest reliability coefficient was found as 0.86 (Deniz, Özer & Işık, 2013).

DATA ANALYSIS

A number of different rules govern the determination of sample size; these include the following: it should be at least 200 (Kline, 2015); or $N > 50 + m$ (number of independent variables) (Tabachnick & Fidell, 2012); or at least 10 times the number of observed variables (VanVoorhis & Morgan, 2007), or over 200 in large samples, with the chi-square value being at a significant probability level (Schumacker & Lomax, 2010); or the minimum sample size for the maximum likelihood method should be between 100 and 150 (Hair et al., 2006). In the present study, after satisfying the relevant assumptions, the sample size was determined as 230. The data group was tested to determine whether there was any missing data. Completion of the end value analysis

showed that there were no missing data in the study group. After determining extreme values, the z-scores were checked to identify whether any data were deviating beyond the +3 or -3 data points.

"Mahalanobis Distances" were calculated to determine the multivariate extreme values. Only one missing value without a multivariate extreme value was removed from the research data set. Univariate and bivariate normality tests were used to test multivariate normality. The Kolmogorov Smirnov (KS) test was applied for univariate normality. A significance level above .05 indicates that normality is not achieved. If the KS test results do not show normality, then the skewness and kurtosis coefficients are examined, and if the skewness coefficient is between +1 and -1, this indicates that univariate normality is achieved. Except for the SOC variable, which the KS test results showed not to have significance when the coefficients of skewness were examined (CI=-.11 PE=-.97, SC=-.27, EM=-.22, SOC=-.12, WB=-.41), univariate normality was observed, as

these values were within the range of +1 and -1. In the scattered diagram matrix created to confirm bivariate normality, a linear relationship was observed between the pair of variables. Variance inflation factor (VIF) and tolerance values were examined under the control of the multicollinearity assumption (Cohen, Cohen, West, & Aiken, 2013). Given that the VIF value was not equal to or greater than 10 and the tolerance value was not smaller than .10 (CI=-1.298/.770, PE=-.1.361/.735, SC=-1.503/.665, SOC=1.236/.809, EM=1.216/.822, SOC=1.224/.817, WB=1.269/.788) it was confirmed that there was no multi collinearity problem in the study.

RESULTS

The Pearson Product Moment Correlation Technique has tested whether there is a positive connection between grit and emotional intelligence. Table 2 provides the results of the monitoring of these relationships.

Table 2. Pearson's Correlation Levels Regarding the Relationship Between Grit and Emotional Intelligence

		Well-being	Self-control	Emotionality	Sociability	EQ Total
Grit	r	.333***	-.015	-.001	.225**	.274***
Total	p	.000	.828	.984	.001	.000
Score	N	230	230	230	230	230

***p<.001

It has been determined that there is a significant and positive relationship between the variables of well-being (r = .333, p <.001), sociability (r = .225, p <.01) and emotional intelligence total score (r = .274, p <.001), and the variable of the grit total

score. Accordingly, it is understood that while the total scores of well-being, sociability and emotional intelligence increased, the total score of grit also increased. Multiple regression analysis evaluated the predictive power of emotional intelligence, and the findings are given in Table 3.

Table 3. Multiple Regression Analysis Results Regarding the Determination Power of Emotional Intelligence

Variable	B	Standart Error	β	t	p	Binary	Partial Error
Constant	20.612	2.132	-	9.670	.000	-	-
Well being	-.057	.122	-.058	-.469	.639	.307	-.034
Self control	-.446	.133	-.378	-3.363	.001	-.038	-.236
Emotionality	-.309	.124	-.239	-2.488	.014	.026	-.177
Sociability	-.141	.147	-.116	-.962	.337	.232	-.069
EQ Total	.277	.088	.748	3.138	.002	.274	.221

R=.410,R²=.168,F(5,192)=7.770,p=.000

When Table 3 is examined, it is seen that the variable of emotional intelligence has a high level and significant relationship with grit (R=0.41, R²=0.17, p<.001). Accordingly, emotional intelligence explains 17% of the total variance in grit. The relative significance order of predictor variables on grit is as follows, according to the standardized regression coefficient (β); total score of emotional intelligence, self-control, emotionality, sociability, well-being. When the t-test findings on the significance of the regression coefficients are tested, it is shown that total score, self-control and emotionality of emotional intelligence are important (significant) predictors on grit.

DISCUSSION AND CONCLUSION

In terms of their emotional intelligence, the main aim of this research is to analyze the grit variable in university students. The results of the study showed that in university students there is a connection between grit and emotional intelligence (EQ). There are a few studies in the literature that explicitly examine the relationship between emotional intelligence and grit (Hamilton, 2020; Brown, 2017).

It was concluded that there is a connection between emotional intelligence and grit in the study conducted by Hamilton (2020). The path of emotional intelligence and grit can be established with applications, guidance and training (Hamilton, 2020). Furthermore, the finding of a significant relationship between grit, growth attitude and emotional intelligence confirms the study's results (Brown, 2017).

The results of this study are consistent with different research findings that explore the relationship between grit and self-control, which is the EQ sub-dimension. The findings of the current research showing a close link between "self-control" and grit are confirmed by the results of the Duckworth et al. study (2007). Their studies have shown that highly gritty people set long-term goals and do not give up on them, even in the absence of constructive feedback (Duckworth et al., 2007). It is an anticipated outcome that these individuals with grit have features such as strong self-control, emphasis on their future goals, and are vigilant in pursuing long-term personal, academic, and professional goals.

In addition, these types of people concentrate heavily on their tasks at hand, pay great attention to working tirelessly and feel that high-quality work and goods should be made (Duckworth, Kirby, Tsukayama, Berstein & Ericsson, 2011). Gritty individuals strive tirelessly toward their long-term ambitions and, in times and circumstances of hardship, keep their promises. People with long-term objectives and values that will fulfill them have more optimistic attitudes toward themselves (Maddi, Erwin, Carmody, Villarreal, White & Gundersen, 2013). The results of another study are close to these outcomes. Gritty people concentrate on the elements they can improve in their lives rather than on those they can not, and they are more inspired by participation in events to achieve their goals (Kleiman, Adams, Kashdan and Riskind, 2013). Other study results have supported this inference. Individuals with long-term ambitions and values have a more optimistic outlook towards themselves to

accomplish this, which has a positive effect on their satisfaction with life (Özhan and Boyacı, 2018). Similar research findings have shown that grit is one of the important predictors of young adults' subjective well-being (Akbağ and Ümmet, 2017). Findings from other research, such as a significant positive relationship between the levels of grit and happiness (Hamarta & Ekici, 2020), a significant positive relationship between the confidence in self-efficacy and the level of grit of individuals (Çelik, Sarıçam, Sönmez, 2018), a positive relationship between emotional intelligence and character strength (Morente, Mora, Nadal, Belled and Berenguer, 2018), are close to the study findings. Gritty people who prefer to deal successfully with ongoing difficult circumstances rather than avoiding or delaying them, and who strive directly and proactively to overcome these situations (Burkhart et al., 2014). In people with high emotional intelligence, similar characteristics are seen. High EQ individuals are excellent at stress control and assessment, as well as describing and controlling their emotions (Petrides & Furnham, 2001). Individuals with high EQ have a good propensity to see the better sides of the situation in the event of unpleasant circumstances. Besides, they have insight into how to deal with the negative situation in question. High EQ helps people select coping strategies and minimize and substitute negative emotions with positive emotions. Similarly, gritty people when dealing with a negative situation use adaptive coping strategies.

SUGGESTIONS

Such research adds to the area in which a positive relationship has been formed between EQ and grit. Although these two variables are being evaluated together, there have been no other instances of such studies like this. Therefore, this outcome can be extended both theoretically and functionally to literature. Based on the findings, implementations can be arranged to increase awareness of the importance of sub-dimensions of emotional intelligence (self-control, sociability, emotionality, and well-being). The literature claims that grit can be produced as a characteristic (Duckworth, 2016). For preventive and therapeutic purposes of psychological counselling, different services and practices can be designed for grit. Activities can be coordinated to raise awareness among students of

the significance of sub-dimensions of emotional intelligence (self-control, sociability, emotionality and well-being) in grit. To improve self-control skills, which are very important for their academic, social and emotional development, various motivating strategies can be used.

There are certain drawbacks to this study. As this thesis is being carried out with students studying at a university in the province of Konya, the generalizability of the analysis may be at issue. Therefore, related studies involving students from various universities and faculty are suggested.

Grit was a new concept in positive psychology, one of the variables in this research, which was researched for a relatively short period of time. In Turkish culture, there is also a small amount of grit-covering research carried out. It is therefore considered important to equate the results with studies to be carried out in various cultures.

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