COVID-19 OUTBREAK: MITIGATING ROLE OF COLLEGE STUDENTS' EMOTIONAL INTELLIGENCE IN THE RELATIONSHIP BETWEEN PSYCHOLOGICAL DISTRESS AND SATISFACTION WITH LIFE

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SUMMARY

Background: While much of the world's attention is focused on the effects of SARS-CoV-2 on physical health, the virus's psychological impacts must not be disregarded. Therefore, it is important to understand and document the role of emotional intelligence as a mitigating variable in the relationship between psychological distress and life satisfaction.

Subjects and methods: This correlational study was carried out with the participation of 483 college students. Their ages ranged from 18 to 31 (X=20.89, Sd=2.27).

Results: The hierarchical regression analysis results revealed that both emotional intelligence and psychological distress were statistically significant predictors of the participants' levels of satisfaction with life. Moreover, emotional intelligence was a significant moderator in the relationship between psychological distress and life satisfaction.

Conclusion: Researchers and practitioners may find the findings of this study useful in better understanding the role of emotional intelligence in making cognitive assessments of life in the face of hardship.

Key words: emotional intelligence - psychological distress - life satisfaction

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INTRODUCTION

Previous research has clearly shown that college students are prone to further worsening of psychological problems such as anxiety, depression, substance abuse, eating disorders, and behavioral problems (Hunt & Eisenberg 2010, Kitzrow 2009, Pajević et al. 2020, Pedrelli et al. 2015). Unfortunately, college students have faced a variety of psychological and academic challenges during the COVID-19 outbreak (Aslam & Ahmed 2020, Lazzari et al. 2020). The pandemic has escalated, and it has threatened the welfare of college students due to social isolation, uncertainty, and unforeseen transitions compared to the general population (Zhai & Du 2020). The COVID-19 pandemic and their deprivation of their social support systems and extracurricular activities in their university lives might create significant risk factors for mental health problems including psychological distress, impaired life satisfaction, and well-being among college students (Bailey & Miller, 1998, Marum et al. 2014). Furthermore, major adverse life events force individuals to make wide-ranging readjustments in their lives. An overabundance of such changes in a short period may put a strain on a person's ability to cope. The ability to overcome major negative events generally depends on many intrinsic factors including emotional intelligence. These factors may operate as protective factors against the onset of mental health issues (Ciarrochi et al. 2002, Danielsen et al. 2009, Shabani et al. 2010, Zeidner & Matthews 2016).

Emotional intelligence refers to a hierarchically defined competency for identifying, regulating, and processing emotions in both self and others (Matthews et al. 2004). Emotional intelligence has been explained in the literature as both a trait and an ability, equivalent to personality traits like optimism and conscientiousness (Mayer et al. 2004, Neubauer & Freudenthaler 2005). Van Rooy and Viswesvaran (2004) stated that emotional intelligence was partly independent of other dimensions of personality and intellect. Furthermore, compared to established measures of academic intelligence and personality, emotional intelligence has incremental validity in predicting academic and social life outcomes, life satisfaction, and happiness (Furnham & Petrides 2003, Gannon & Ranzijn 2005). Schutte et al. (2002) conducted a meta-analysis study to understand and document the impact of emotional intelligence on mental, physical, and psychosomatic health. In particular, they showed that emotional intelligence was statistically and significantly linked with individual mental health outcomes and psychological well-being. Similarly, emotional intelligence was found to be associated with life satisfaction (Austin et al. 2005), subjective well-being (Brackett & Mayer 2003), and pleasant moods (Schutte et al. 2002).

Lazarus and Folkman (1984) pointed out that negative emotions referred to stress-related responses to personal, situational, and environmental threats. The presence of unpleasant emotions such as anxiety and stress can be described as a state of distress (Lazarus & Folkman 1984). It may be claimed that anxiety and stress feed off of each other, generating a feedback loop that leads to a higher level of misery. In their interaction model of anxiety, stress, and coping, Endler and Parker (1990) proposed the idea that individual variables such as stable personality traits or features interacted with stressor conditions to cause state anxiety. However, an individual's emotional intelligence may have a substantial role in reducing the influence of negative life events on individuals' lives by moderating the relationship between psychological distress and life satisfaction (Bhullar et al. 2012).

Life satisfaction is a cognitive assessment and judgment process that may be considered as a measure of psychological adaptability to stressors in one's life (Diener 1994). The positive psychology movement has made life satisfaction a main focal point (Diener 1994). It is a comprehensive cognitive assessment of one's entire life (Schwarz & Strack 1991). It has been shown that important situational circumstances, such as stressful life experiences, might influence the overall assessment process of life satisfaction (Schwarz & Strack 1991). A growing body of research has indicated that individuals are more likely to perceive their life to be better under favorable and predictable conditions when their perceived life circumstances more or less coincide with their expectations. It is therefore intriguing to see if people's life satisfaction can be maintained in uncertain and unfavorable circumstances, like the current pandemic period. Furthermore, the concepts of life satisfaction and emotional intelligence are mutually supportive. According to Bhullar et al. (2012), while life satisfaction can help mitigate the dissonance caused by threats from a hostile environment, a higher level of emotional intelligence allows one to reconcile with the threats by changing existing beliefs, values, goals, and assumptions to rebuild a more adaptive world (Park et al. 2010). Recent findings showed that stress related to COVID-19 had a strong predictive effect on life satisfaction among Turkish young people (Arslan & Allen 2021). Researchers have pointed out that life satisfaction is a dynamic system that helps one sustain a happy state of mind by regulating perturbing disturbances from actual or potential risks, rather than just an outcome or by-product of other activities (Shmotkin & Shrira 2012, Yildirim et al. 2020). Therefore, it was important to understand and document the role of the psychological distress and emotional intelligence levels of Turkish college students in their life satisfaction during the COVID-19 pandemic. Additionally, the aim of the study was to investigate the moderator role of emotional intelligence in the relationship between the psychological distress and life satisfaction levels of Turkish college students. Specifically, the present study examined the following hypotheses:

Psychological distress and emotional intelligence had significant predictor role in satisfaction with life;

Emotional intelligence moderates the relationship between psychological distress and satisfaction with life.

SUBJECTS AND METHODS

Participants and procedure

The convenience sampling method was used in this study. Data were collected from 483 university students (74.5% females and 24.5% males) in Trabzon, Turkey between April 2020 and May 2021. The ages of the participants ranged from 18 to 31 (X=20.89, Sd=2.27). The demographic results were detailed in Table 1. Before approaching the participants, the researchers provided the necessary consent forms that informed the individuals regarding the potential risks and benefits of this study. All individuals willing to take part in the research process signed the consent forms. The researchers emphasized that there was no pressure to participate in the study. The participants' responses to the data collection forms were anonymous. In other words, the study was undertaken in compliance with the principles of the Declaration of Helsinki in 1995.

Table 1. Descrit	otive statistics	of the resear	rch participants

Variable	N	0/	
Level	IN	%	
Gender			
Female	359	74.5	
Male	124	24.5	
Grade Level			
1	62	12.8	
2	69	14.3	
3	200	41.4	
4	145	30.1	
SED			
0-1999 TL	75	15.5	
2000-4000 TL	216	45.2	
4000-6000 TL	120	24.8	
6000 TL and above	72	14.9	
Receiving Psychological Help			
Yes	111	23.2	
No	371	76.8	
Medicine Use			
Yes	70	14.5	
No	406	84.1	
Total	483	100	

Instrumentation

Personal Information Form

The researchers developed the personal information form to collect data regarding demographic characteristics such as gender, class year, socio-economic status (SED), the status of receiving psychological help, and the use of medication.

Emotional Intelligence

The Schutte Self-Report Emotional Intelligence Test (SSEIT) is a 33-item self-report measure using a scale of 1 (strongly disagree) to 5 (strongly agree) for responses (Schutte et al. 1998). It was developed to assess an

individual's general emotional intelligence (EI), using four subscales: emotion perception, utilizing emotions, managing self-relevant emotions, and managing others' emotions (Schutte et al. 1998). The psychometric adaptation study of SSEIT for Turkish culture was conducted by Tatar et al. (2017). The Cronbach's alpha internal consistency coefficient for the whole test was calculated as 0.86. Higher scores in the scale indicate higher levels of emotional intelligence.

Psychological Distress

This study used the Brief Symptom Inventory (BSI) to assess psychological distress (Sahin & Durak 1994). BSI is a 53-item self-report measure using a scale of 0 (not at all) to 4 (very much) for responses. The score range is 0-212. Higher total scores indicate higher severity of symptoms and psychological distress. In criterion validity studies of the scale, BSI was found to have correlation coefficients between -0.14 and -0.34 with the Social Encounter Scale, 0.16 and 0.42 with the Submissiveness Scale, 0.13 and 0.36 with the UCLA Loneliness Scale, 0.34 and -0.57, and between 0.34 and 0.70 with the Beck Depression Inventory (Sahin & Ugurtas 2002). The Cronbach's alpha values of the subscales were reported as 0.87 for the anxiety dimension, 0.88 for the depression dimension, 0.87 for the negative self-concept dimension, and 0.87 for the somatization dimension 0.75 and 0.76 for the hostility dimension (Şahin & Durak 1994).

Life Satisfaction

The Satisfaction with Life Scale was developed by Diener et al. (1985). The adaptation of the scale to Turkish culture was carried out by Dağlı and Baysal (2016). The scale is a 5-point Likert-type scale consisting of five items. The Cronbach's alpha value of the scale was reported as 0.88 (Dagli & Baysal 2016). Higher scores denote higher levels of life satisfaction for the respondent.

Statistical analysis

The collected data were analyzed by the researcher using the SPSS 22.0 software (IBM Corp., Armonk, NY). The continuous data are presented as mean \pm standard deviation (SD) values, while discrete data are presented as frequencies and percentages. Pearson's correlation coefficients were calculated to analyze the relationships between variables. To determine whether the relationship between psychological distress and satisfaction with life was moderated by trait emotional intelligence, the researcher conducted a regressionbased moderation analysis. In particular, the moderating role of emotional intelligence on the effect of psychological distress on the participants' life satisfaction levels was tested by hierarchical regression analysis by controlling for the variables of gender, medication history, and status of receiving psychological help. The procedure suggested by Baron and Kenny (1986) was used to test the moderating effect. First, the interaction term was computed with the mean-centering scores. Second, emotional intelligence was entered in Step 1 of the hierarchical regression model. Third, psychological distress was entered simultaneously in Step 1 of the hierarchical regression model. Finally, the interaction term that was calculated by the researchers was included in Step 2 of the hierarchical regression model by controlling the aforementioned variables to understand any significant moderating effect that could be seen when the interaction term accounted for an additional significant variance of life satisfaction. The level of statistical significance was accepted as p<0.05 for the analyses. The hypothetical moderated model was shown in Figure 1 below.



EI = Emotional Intelligence; PD = Psychological Distress; LS = Life Satisfaction

Figure 1. The hypothesized moderation model

RESULTS

For the preliminary data analysis, the researcher checked the existence of data entry problems and other problems and identified missing cases to prepare the data for descriptive and inferential analyses. The researchers calculated the mean, standard deviation, minimum, and maximum values. The skewness and kurtosis values of the data were in the acceptable ranges (Groeneveld & Meeden 1984). Accordingly, the data were normally distributed. The descriptive analysis results are summarized in Table 2.

The correlational findings showed that psychological distress was significantly and negatively correlated with emotional intelligence (r=-0.13, p<0.01) and life satisfaction (r=-0.24, p<0.01). Emotional intelligence was positively and significantly related to life satisfaction (r=0.70, p<0.01).

Hierarchical multiple regression analysis was conducted to examine the main effects and interaction effect of the participants' emotional intelligence (EI) and psychological distress (PD) scores on their life satisfaction (LS) levels. The results of the hierarchical regression analysis are presented in Table 3. Regarding the main effects of EI and PD on LS, the Step 1 model was found statistically significant (F(1.483)=452.96, p<0.01). The regression analysis results showed that EI was a significant predictor of LS (β =0.696, p<0.01). According to the Step 1 model, EI accounted for 48% of

Variables	Ν	Μ	SE	Skewness	Kurtosis	Minimum	Maximum
EI	483	126.17	13.89	-0.677	1.120	69	157
PD	483	57.09	34.71	0.565	-0.587	22	160
LS	483	15.54	3.87	-0.253	-0.240	5	25

Table 2. Descriptive Statistics of the Study Variables

Table 3. Results of	of hierarchical	regression	analyses	in p	redicting	life	satisfaction

Predictor Variables	В	β	t
Model 1			
Emotional Intelligence (EI)	2.760	0.696	21.28*
Model 2			
Emotional Intelligence (EI)	2.680	0.676	20.97*
Psychological Distress (PD)	-0.622	-0.157	-4.86*
Model 3			
Emotional Intelligence (EI)	2.560	0.645	18.56*
Psychological Distress (PD)	-0.633	-0.159	-4.96*
EI X PD (Moderation-Interaction)	0.279	0.094	2.49*

 R^2 =0.48 for Model 1; p<0.01; $R\Delta^2$ =0.04 for Model 2; p<0.01; $R\Delta^2$ =0.01 for Model 3; p<0.01; Total R^2 =0.53, p<0.01, *p<0.01



EI = Emotional Intelligence; PD = Psychological Distress; LS = Life Satisfaction

Figure 2. The moderating effect of emotional intelligence on the relationship between psychological distress and life satisfaction

the total variance in LS. For Step 2, the model was also statistically significant (F(2.483)=248.93, p<0.01), and PD accounted for approximately 4% of the total variance in LS. Individually, PD was a statistically significant predictor of LS (β = -0.157, p<0.01). For moderation, the researcher entered the interaction term. The Step 3 model showed that the interaction term was a statistically significant predictor of LS (F(3.483)=169.80, p<0.01). The interaction between EI and PD accounted for an additional approximately 1% of the total variance in a positive direction (β =0.09, p<0.01).

The researcher then conducted the simple slope test recommended by Aiken and West (1991) to examine the direction of interaction after a significant moderating effect was found. The result of this test is shown in Figure 2. The findings indicated that as emotional intelligence levels increased, the negative relationship between psychological distress and life satisfaction became weaker (for low levels of EI, β = -0.024, *p*<0.01 and for high levels of EI, β = -0.01, *p*<0.05).

DISCUSSION

The goal of this study was twofold. The first aim was to explain the role of psychological distress and emotional intelligence in satisfaction with life during the COVID-19 pandemic. The second aim was to investigate the moderating role of emotional intelligence in the relationship between psychological distress and satisfaction with life. The results showed that both psychological distress and emotional intelligence were statistically significant predictors of the participants' levels of satisfaction with life. Consistent with previous research, a higher level of emotional intelligence was linked with a greater life satisfaction level among the Turkish college students who were included in this study (Bhullar et al. 2012, Palmer et al. 2002, Schutte et al. 2002). Furthermore, this study showed that EI was found to be the strongest predictor of life satisfaction accounting for the majority of the variance. Previous research has shown that higher emotional intelligence levels help individuals develop better perception, understanding, and management of emotion (Landa et al. 2006). In turn, those with higher emotional intelligence levels may prevent the development of higher psychological distress levels and may increase their satisfaction with life (Bhullar et al. 2012). Additionally, in parallel with recent studies, psychological distress was a statistically significant predictor of satisfaction with life among the participants of this study (Bhullar et al. 2012, Ciarrochi et al. 2002, Duong 2021, Satici et al. 2021).

The findings of this study also showed the moderating effect of emotional intelligence on the relationship between psychological distress and life satisfaction. Accordingly, individuals with greater levels of emotional intelligence are more likely to rate their life satisfaction favorably, even when confronted with stressful situations. Consistent with previous research, trait emotional intelligence reduced the strength of the link between life stressors and mental health (Ciarrochi et al. 2002). Individuals with higher emotional intelligence have more positive moods and are more able to recover from the onset of a negative mood (Schutte et al. 2002). Similarly, the results of this study showed that emotional intelligence (EI) mitigated the detrimental impact of psychological distress on life satisfaction, such that the participants with higher EI levels had alleviated negative emotions that were stress-related responses to personal, situational, and/or environmental threats and challenges. Therefore, the participants with lower EI levels had less satisfaction with life and more psychological distress than their peers with higher EI levels.

There were some limitations of this study. First, the data were collected using a non-clinical sample. As a result, the findings may not be generalizable to a clinical sample. Second, this study's findings were based on self-reported data, which might have led to source bias. Third, this study used a correlational design, and therefore, the findings were not sufficient to discuss the causality relationships among the variables that were examined in the study. Future research may utilize an experimental approach to understand and document the mitigating role of EI in the relationship between psychological distress and life satisfaction.

CONCLUSION

In conclusion, the findings of this study revealed that those with higher trait emotional intelligence levels may be able to offset the harmful effects of psychological distress on life satisfaction. Researchers and practitioners may find the findings of this study useful in a better understanding of the role of adaptive emotional intelligence in making cognitive assessments of life in the face of hardship.

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