



Mindfulness, Valuing, and Emotion Regulation in the Prediction of Psychological Distress among University Students

Gökçen Aydın, Assist. Prof. Dr., Hasan Kalyoncu University, gokcenaydn@gmail.com

 0000-0003-0781-7817

Fatma Zehra Ünlü Kaynakçı, Assist. Prof. Dr., TED University, zehra.unlu@tedu.edu.tr

 0000-0002-9491-2750

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Abstract

The present study aims to examine the role of mindfulness, valuing (progress and obstruction), and strategies for emotion regulation (reappraisal and suppression) in prediction of psychological distress among university students. A total of 332 undergraduate students (237 females, 95 males) from the Faculty of Education of one state and one private university participated in the study. The data, which was analyzed by using hierarchical multiple regression, indicated that valuing and mindfulness were significant predictors of psychological distress. On the other hand, emotion regulation, which encompasses reappraisal and suppression, was seen to be an insignificant predictor of psychological distress. Among the variables, the obstruction subscale of valuing contributed most to the model. Overall, this study highlights that having a 'value-based life' and 'mindful living' are protective factors which may reduce the likelihood of experiencing high levels of psychological distress among university students. The results were discussed in the light of the literature.

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INTRODUCTION

“Compared with their grandparents, today's young adults have grown up with much more affluence, slightly less happiness, and, in fact, a much greater risk of depression and all kinds of social pathology” (Myers, 2000, p. 61). It can be seen from this quote from Myers that the conditions of modern life might be a cause of psychological distress for many people. Psychological distress is defined as stress and anxiety caused by internal conflicts that prevent people from realizing themselves and establishing healthy relationships with other people (Medical Dictionary). Among the many definitions of the condition, one of the most comprehensive was suggested by Chan (1993), who defines non-psychotic problems as those that result in health issues, sleep disturbance, worry, an unbalanced life or even attempted suicide. The concept of psychological distress can be considered as being composed of the following subtopics: health problems, including physiological disturbances such as low energy and fatigue; irregular sleep patterns, including problems such as oversleeping or insomnia; worries that might lead to reluctance to begin a task or to share a problem; balance problems which result in low self-esteem, indifference to society or an inability to enjoy day-to-day life; and ultimately, thoughts of suicide due to seeing no meaning to life. Even though the definition of psychological distress is complex and contains various possible causes, there is no doubt that overcoming psychological distress is essential to ensure well-being. It is, therefore, not surprising that psychological distress is a central concern of both psychological counselors, and of other groups who aim to improve mental health.

Research studies have claimed that there has been an increase in the reporting of developmental, academic, and relationship problems experienced by university students (e.g., Benton et al., 2003; Xiao et al. 2017). Studies indicate that university students experience higher distress than the community sample (e.g., Larcombe et al., 2016). It is also of note that psychological distress is common among women in most countries (e.g., Matud et al., 2015). In terms of age, while psychological distress increases starting from late adolescence and exists throughout life beyond that point (Caron & Liu, 2011), Schieman et al. (2001) suggest that psychological distress is most prevalent between the ages of 18-29. However, Pevalin (2000) argues that psychological distress is most common during middle age.

The struggles individuals encounter in their academic, social, and personal lives often lead to psychological problems. There are several different theories and approaches which provide different perspectives and solutions to these problems. One approach is Acceptance and Commitment Therapy (ACT), which focuses on taking individual steps in terms of the values of the individual, rather than seeking solutions to problems. This therapy aims to change how the problem is considered and increase psychological flexibility through cognitive defusion (Hayes et al., 2006). It can, therefore, provide practical interventions for people suffering from psychological distress. No matter the reason, it is suggested that students who experience psychological distress distance themselves from their thoughts. Doing so will prevent becoming trapped in a thought cycle and enable the taking of appropriate steps in line with their values. As adverse events in life cannot completely be eliminated, and are often difficult to change, changing one's relationship with the event can be used alternatively.

As the third wave of Cognitive-Behavior Therapy, ACT aims to work with existing psychological problems rather than focusing on finding solutions to them (Hayes et al., 2006). Psychological flexibility consists of six core features: acceptance, being present in the moment, cognitive defusion, consideration of life from a value-based perspective, committed action, and addressing the context of the self. The foundation of the theory is the process in which individuals separate their thoughts from the self and do not judge themselves based on events. The aim is, therefore, to manage psychological or social problems, rather than trying to reduce their number or even eliminate such problems. Instead, ACT advocates the embracing of emotions, an increase of psychological flexibility by accepting negative emotions, the observation of oneself, and the taking of committed action towards values. It

can be said that ACT is based on the determination of appropriate values and the taking of determined and appropriate steps in order to willingly move towards achieving them (Hayes & Lillis, 2012). According to Hayes et al. (2006), when people increase their psychological flexibility, they are better able to cope with problems, while avoiding dealing with such problems actually increases psychological distress (e.g., Hayes et al., 2006; Levin et al., 2012; Schwartz & Sortheix, 2018).

Although it is a central part of life, the concept of values is often neglected. This is especially true in collectivist cultures where individuality tends to be ignored and where community, rather than individual, values are prioritized. However, leading a life based on values facilitates the discovery of the meaning of life and the improvement of mental health (Hayes & Lillis, 2012). Thus, the discovering of one's values allows one to gain more profound and objective insight into oneself. It is for these reasons that this study emphasizes the re-discovering of values for people who are suffering from psychological distress and the redirecting of life based on such values.

ACT emphasizes values because the approach is based on the idea that problems are largely due to lack of undefined values, and that individuals become overwhelmed by the problems due to the distance between their actions and values (Hayes et al., 2003). However, it is important to emphasize that values should not be considered a product of society, but an internal part of one's life (Hayes et al., 2010). In ACT, values are considered as being activities that give meaning to life. In other words, values are not aims; rather, they provide directions that determine how we want to lead our lives (Hayes et al., 2006). Accordingly, ACT is based on the notion that when we discover, learn, or understand what values are, we are able to live a meaningful and satisfying life, even when we encounter negative events. As values are person-specific, individuals need to consider their internal processes in the areas of close relationships, working life, education, religion, citizenship, or well-being. It is due to this fundamental importance and priority of values in ACT studies (Ruiz, 2012). Even though the role of valued action on psychological distress has been compared between different cultures (individualistic and collectivist) in various studies (e.g., Drake et al., 2019), there is not a great deal of value-based living in ACT research (Reilly et al., 2019).

Living one's life in line with values, or "valued living," is credited for overcoming various types of problems, such as those connected with depression and anxiety (Vowles & McCracken, 2008) and physiological stress (Creswell et al., 2005). Very recent dairy-based research has indicated that value-based actions were negatively related to distress (Grégoire et al., 2021). Furthermore, following their work with patients suffering with chronic pain, Carvalho et al. (2018) concluded that factors related to both progress and obstruction (subscales of valuing) are correlated with anxiety, stress, and self-compassion. More specifically, they stated that the obstruction subscale is a predictor of depression, anxiety, and stress symptoms, with progress being positively associated with mindful awareness, self-compassion, and quality of life, and there being negative associations with depression, anxiety, and stress. Investigating values as a separate variable is a significant contribution to the literature (e.g., Carvalho et al., 2018; Rickardsson et al., 2019). Even though there is significant evidence of the success of the therapy, the use of ACT in the field of psychology is relatively new in Turkey. Despite the recent publication of correlational studies, there remains a need for additional studies that consider different variables, particularly those which are currently being neglected in psychological flexibility literature.

Another concept to increase psychological flexibility which relates to "the awareness that emerges through paying attention to purpose, both in the present moment and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145) is the use of mindfulness strategies. Mindfulness, namely an awareness of the present moment, is a strategy of ACT and is based on the notion of focusing attention on oneself. As mindfulness requires one to face all weaknesses, risks, and strengths, using mindfulness strategies is suggested in dealing with problems such as depression and anxiety (White et al., 2013). Moreover, mindfulness might help individuals regulate their emotions (Hayes & Feldman, 2004). Bishop et al. (2004) agree and argue that self-regulation is a requirement to reach a mindful state, pointing out that the definition of mindfulness includes "a

process of regulation attention” (p. 234). On the other hand, researchers also argue that mindfulness and suppression can be seen as being opposing emotional strategies. While suppression focuses on the avoidance of emotions, mindfulness is mostly related to their acceptance (Chambers et al., 2009). Researchers have also found that increasing mindfulness helps individuals decrease their level of psychological distress, and that higher mindfulness scores are associated with lower levels of psychological distress among university students (e.g., Baroni et al., 2018; Duan, 2016; Eşkisü et al., 2020; Harnett et al., 2016).

The term “emotion regulation” refers to “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). Individuals use different strategies (such as rumination, avoidance, and suppression) to regulate their emotional responses, some of which have been evaluated as being protective, while others are now considered to be risk factors. According to definitions provided by Gross and John (2003) for two of the most commonly used strategies for regulating emotion, which are reappraisal and suppression, reappraisal refers to changing how one evaluates an event in order to alter its emotional impact (Gross, 1998), while suppression is defined as an attempt to prevent oneself from expressing emotions (Gross & John, 2003). Research has claimed that reappraisal is an “adaptive,” but suppression is a “maladaptive” strategy for regulating emotion (e.g., Hu et al., 2014). For instance, it was found that university students who suppress emotions experience more exhaustion and distress; whereas students who use the reappraisal strategy more frequently experience less exhaustion and less distress (Isaacs, 2018). Emerging research has also revealed that reappraisal has a crucial role to understand the relationship between mindfulness and well-being (Hanley et al., 2021). More specifically, the study has indicated that mindfulness training helps individuals increase their level of well-being via facilitating reappraisal skills.

Although many past studies support the idea that reappraisal is an “adaptive” and suppression is a “maladaptive” strategy for emotion regulation, there are some studies that have contradictory findings. For instance, some research indicates that suppression may provide relief in the short term (e.g., Butler et al., 2007), whereas another study which aimed to examine the role of mindfulness, reappraisal, and suppression in daily life among college students (Brockman et al., 2016) has found that mindfulness is associated with more positive and fewer negative emotions, and that reappraisal and suppression are related to more positive emotions and are not related to negative emotions. Some researchers have also claimed that reappraisal may be an unnecessary strategy for decreasing psychological distress, and that what is important is changing one’s relationship with his/her thoughts and feelings, rather than changing their content (Hayes & Feldman, 2004). Furthermore, a meta-analytic review that is related to emotion regulation strategies has found that higher reappraisal is associated with fewer psychological problems (anxiety, depression, eating, and substance-related disorders), but it has a small effect size (Aldao et al., 2010). There are also studies that have found a non-significant direct relationship between reappraisal and psychological distress among university students (e.g., Ünlü Kaynakçı & Yerin Güneri, 2022).

The increase in ACT-based research has shown recently that values and mindfulness are essential concepts to be considered when alleviating psychological distress, as well as for many other problems. In order to improve the way ACT is implemented so that it can be more effectively used in counseling, it is critical to examine the relationships between these variables. More specifically, while emotion regulation (reappraisal and suppression) has been mostly linked to psychological distress, there is a shortage of studies in the literature which investigate how mindfulness, values, and emotion regulation strategies are integrated. The current study, therefore, addresses that shortage by investigating the role of mindfulness, valuing, and emotion regulation strategies (reappraisal and suppression) in the prediction of psychological distress among university students. Based on the related literature, the following hypotheses were tested in the current study:

Hypothesis 1: Mindfulness is a significant predictor of psychological distress.

Hypothesis 2: Valuing (progress and obstruction) is a significant predictor of psychological distress.

Hypothesis 3: Emotion regulation strategies (reappraisal and suppression) are significant predictors of psychological distress.

METHOD

RESEARCH DESIGN

This study was based on a correlational design in which the relationship between variables was tested; that is, no attempt was made to change them. The dependent variable was psychological distress, and the independent variables were mindfulness, valuing, and emotion regulation (reappraisal and suppression).

PARTICIPANTS

The participants of the study are 332 undergraduate students of a state and of a private university in Turkey. Among the participants, 237 (71.4%) are female and 95 (28.6%) are male. The participants' ages range between 18 and 30 ($M = 21.33$, $SD = 1.90$). All the participants are students in the Faculties of Education: with 115 from guidance and psychological counseling, 33 from social sciences teaching, 31 from special education, 53 from elementary education, and 100 from the Turkish teaching program. Among the participants, 88 (26.5 %) are freshmen, 14 (4.2%) are in the second grade, 110 (33.1%) are in the third grade, and finally, 116 (34.9%) are senior undergraduate students. There are four students whose stage of education has not been identified. Purposive sampling has been used to assess the participants.

DATA COLLECTION INSTRUMENTS

DEMOGRAPHIC INFORMATION FORM

This form, which has been prepared by the researchers, included demographic information such as gender, age, and department.

PSYCHOLOGICAL DISTRESS SCALE (PDS)

The scale was developed by Chan (1993) to measure psychological distress and consists of 20 items rated on a 5-point Likert-type Scale (1 = strongly disagree, 5 = strongly agree). A total score can be obtained from the scale and the scores range between 20 and 100. PDS has five dimensions: health concerns, sleep problems, anxiety, dysphoria, and suicidal ideas. Internal consistency values for the original version ranges from .64 to .85 for the subscales (Chan, 2005). The scale was adapted into Turkish by Çelik and Turunç (2011) to measure psychological distress, and the researchers calculated the Cronbach's alpha coefficients ranging from .83 to .94 for the subscales. For the present study, the internal consistency for the total scale has been calculated as .82.

THE MINDFULNESS ATTENTION AWARENESS SCALE (MAAS)

The scale was developed by Brown and Ryan (2003) and includes 15 items rated on a 6-point Likert-type Scale (1 = almost always, 6 = almost never), to provide a single total score. The scores range between 15 and 90. Özyeşil et al. (2011) adapted the scale into Turkish. Internal consistency for the original version is .82 (Brown & Ryan, 2003), and .80 for the Turkish version (Özyeşil et al., 2011). For the present study, the internal consistency has been calculated as .83.

VALUING QUESTIONNAIRE (VQ)

The scale, developed by Smout et al. (2014) to measure how far a person's life is based on values, consists of 10 items and two subscales: progress and obstruction, with five items in each subscale. The

items are rated on a 7-point Likert type scale (0 = not at all true to 6 = completely true), and the scores for each subscale range between 0 and 30. The “progress” subscale measures the awareness of important things in one’s own life, while the “obstruction” subscale measures the lack of having a value-based life. From a sample of undergraduate students, the progress and obstruction subscales have a high internal consistency of .87 and .87 respectively (Smout et al., 2014). The scale was adapted into Turkish by Aydın and Aydın (2017) with a sample of university students, and the researchers have calculated Cronbach alpha values for progress and obstruction as .77 and .76 respectively. For the present study, the internal consistency has been calculated as .77 and .74 for the progress and obstruction subscales.

EMOTION REGULATION QUESTIONNAIRE (ERQ)

This 10-item scale was developed by Gross and John (2003) to measure two emotion regulation strategies: reappraisal (six items) and suppression (four items). Items are rated on a 7-point Likert-type Scale (1 = strongly disagree to 7 = strongly agree). In terms of reappraisal, the scores range between 6 and 42; and for suppression, they range between 4 and 28. The “reappraisal” scale measures the regulation of emotion by altering thoughts, while the “suppression” scale measures an individual’s tendency to prevent themselves from expressing emotions. Yurtsever (2004) adapted the Turkish version of ERQ and reported that the scale had satisfactory internal reliability. Cronbach alpha values for reappraisal and suppression are .83 and .72 in the current study respectively.

DATA ANALYSIS

The descriptive statistics have been presented using the software program SPSS 23. All assumptions including normally distributed errors, homoscedasticity, independent errors, no perfect multicollinearity, and influential observations have been tested before the main analysis, and the relationships between variables have been tested using Hierarchical Multiple Regression. The variables were entered into the model based on the literature. This design is preferred because predictors were entered into the equation in an order specified by the researcher, based on causal priority, and with consideration of the literature. Supposedly, ACT variables, namely mindfulness and valuing, were entered in the first step, according to the related literature which advocated that psychological distress could be predicted by ACT. During the second step, subscales of emotion regulation (reappraisal and suppression) were entered into the model.

PROCESS

After approval was obtained from the ethical committee, data was collected in person by the researchers from two universities. Classrooms and library within the university were visited to obtain student research volunteers, who were then required to complete all the measurements in the data package, following the order of PDS, WAAS, VQ, and ERQ. Data was collected in a paper-pencil format in spring 2019 via a questionnaire that took approximately 15 minutes to complete.

RESULTS

The present study aims to examine the predictors of psychological distress. Firstly, descriptive analysis results, and then the results of hierarchical multiple regression were reported. Descriptive analysis results, including means, standard deviations, and bivariate correlations, were presented in Table 1. As shown in Table 1, the strongest positive correlation was between obstruction and psychological distress, and that the strongest negative correlation was between mindfulness and obstruction. Furthermore, no significant relationship between suppression and reappraisal was observed.

Table 1. Means, Standard Deviations, and Correlations of Variables

Variables	1	2	3	4	5	6
1. Psychological Distress	–					
2. Mindfulness	-.37**	–				
3. Progress	-.41**	.24**	–			
4. Obstruction	.49**	-.52**	-.40**	–		
5. Reappraisal	-.27**	.14*	.40**	-.24**	–	
6. Suppression	.16*	-.22**	-.19**	.26**	.01	–
Range	20-97	19-85	2-30	0-30	6-42	4-28
M	42.70	60.01	19.79	13.38	31.07	14.47
SD	16.04	11.48	5.43	6.32	6.54	4.88

Note. * $p < .05$, ** $p < .01$.

Before conducting hierarchical multiple regression, the main assumptions of hierarchical regression analysis, namely normally distributed errors, homoscedasticity, independent errors, no perfect multicollinearity, and influential observations, were all checked. Regarding normally distributed errors, histogram and p-p plot of residuals were checked, and the results indicated that errors were normally distributed. In terms of homoscedasticity assumption, the scatterplot was checked, and this assumption was not violated. For multicollinearity, VIF and tolerance values were examined, and the range of VIF values in the present study ranged from 1.37 to 1.58; and tolerance values were between .63 to .90. Independent errors assumption was tested through the Durbin-Watson value, and was found as 1.78. Lastly, for influential observation assumption Cook’s distance test was checked, and cook’s distance values ranged between .00 and .036. Therefore, all the assumptions of hierarchical multiple regression analysis were met. After this procedure was completed, it was concluded that hierarchical regression analysis could be conducted with the current data. Hierarchical multiple regression was then used to examine the predictors of psychological distress. The predictor variables have been grouped into two stages, the first being mindfulness and valuing, and the second reappraisal and suppression.

In the first stage, Hypothesis 1 was tested, and the results indicated that mindfulness significantly predicted psychological distress ($\beta = -.14, p < .05$). Hypothesis 2 postulated that valuing (progress and obstruction) was a significant predictor of psychological distress. Correspondingly, progress was found as a significant predictor that reduced the level of psychological distress ($\beta = -.25, p < .001$), and obstruction was a significant and positive predictor of psychological distress ($\beta = .32, p < .001$). Therefore, both Hypotheses 1 and 2 were supported.

In the second stage, Hypothesis 3, which asked whether emotion regulation strategies (reappraisal and suppression) were significant predictors of psychological distress was tested. Nonetheless, the results revealed that neither reappraisal ($\beta = -.09, p > .001$) nor suppression ($\beta = .01, p > .001$) significantly predicts psychological distress. Therefore, Hypothesis 3 was rejected.

As indicated in Table 2, the tested model accounted for 30% of the total variance in psychological distress. While mindfulness, progress, and obstruction accounted for 30% of the variance (Step 1), the second model, in which the reappraisal and suppression were included (Step 2) after mindfulness and valuing were controlled, did not contribute significantly to the model. Overall, the variance observed in the entire model was explained only by the first model. The main contributing variable to the model was obstruction ($\beta = .32, p < .001$), and then progress ($\beta = -.25, p < .001$).

Table 2. Summary of Hierarchical Regression Analysis for Psychological Distress by Mindfulness, Valuing (Progress and Obstruction), Reappraisal, and Suppression

Predictor Variable	B	SE	β	t	sr ²	R ² -change	ΔF
Step 1						.30	48.74**
Mindfulness	-.20	.07	-.14	-2.61*	-.14		
Progress	-.72	.15	-.25	-4.88**	-.26		
Obstruction	.81	.15	.32	5.63**	.30		
Step 2						.007	1.71
Mindfulness	-.19	.07	-.14	-2.58*	-.14		
Progress	-.62	.16	-.21	-3.90**	-.21		
Obstruction	.80	.15	.31	5.88**	.29		
Reappraisal	-.23	.12	-.09	-1.85	-.10		
Suppression	.03	.16	.01	.16	.01		

Note. * $p < .05$, ** $p < .001$

DISCUSSION, CONCLUSION, AND IMPLICATIONS

The present study examined mindfulness, values (progress and obstruction), and emotion regulation (reappraisal and suppression) as predictors of psychological distress. The results revealed that the first and second hypotheses were confirmed while the third hypothesis was not. That is, the results suggested that mindfulness and values (both progress and obstruction) were predictors of psychological distress, but suppression and reappraisal did not predict psychological distress. The most significant variable was values.

In terms of mindfulness, the results of the study suggest that mindfulness is more likely to facilitate reductions at the level of psychological distress. This result is consistent with numerous studies that show that mindfulness significantly and negatively predicts psychological distress (e.g., Baroni et al., 2018; Partoa & Besharatb, 2011). Roemer et al. (2021) investigated the differential contributions of mindfulness facets to distress and well-being with a sample of young adults, and they concluded that mindfulness explained distress.

Mindfulness helps to discover values (Brown & Ryan, 2003), and clarifying values is crucial in order to find meaning in life (Schwartz & Sortheix, 2018). A growing body of literature indicates that defined values or valued- actions could be associated with less psychological distress (e.g., Ford et al., 2017; Grégoire et al., 2021). The findings of the present study replicate the previous research that there is a negative correlation between valued living and psychological distress (e.g., Miller & Orsillo, 2020); that is, having a value-based life is related to having less psychological distress. Furthermore, a valued-living based research study between distressed and normative people presents a striking finding that values are less notable for distressed individuals, and the distressed people take an active role on the way of valued-behavior less (Cotter, 2011).

An ACT-based group intervention (including values) has shown promising results on psychological distress (Dindo et al., 2020). Moreover, Davis et al. (2017) has tested the effectiveness of a self-help ACT-based intervention for psychological distress. The authors report a medium change in psychological distress in the follow up. Those studies encourage further testing of ACT concepts to deal with psychological distress. However, as far as the researchers are aware, the literature lacks studies that basically focus on the two factors of valuing (progress and obstruction).

The current study concludes that mindfulness and values are significant predictors of psychological distress, but reappraisal and suppression are not found as significant predictors. These results are supported by certain previous studies that show a non-significant relationship between reappraisal, suppression, and psychological distress (e.g., Brockman et al., 2016). Furthermore, Brummer et al. (2014) have found that using suppression is not associated with increased psychological distress. Similarly, Partoa and Besharatb (2011) mentioned a non-significant relationship between emotion regulation and psychological distress, while mindfulness is found as a significant predictor of psychological distress. On the other hand, these results are not confirmed by numerous studies that have revealed a significant negative relationship between reappraisal and psychological distress, or a negative relationship between reappraisal and well-being (e.g. Hanley et al., 2021; Richmond et al., 2017), and a positive relationship between suppression and psychological distress (e.g., Brummer et al., 2014).

According to Acceptance and Commitment Therapy (ACT) and mindfulness, avoiding negative emotions or changing the content of thoughts, are not necessary to alleviate psychological distress. What is important in ACT is to accept both positive and negative emotions or experiences with a non-judgmental attitude, and to maintain distance between thoughts (e.g., Hayes et al., 2006). Therefore, the findings of the current study are consistent with the perspective of mindfulness and ACT. The present work has expanded past studies by indicating that reappraisal and suppression may not be significant predictors of psychological distress because of a theoretical reason. This finding can be interpreted in a way that mindfulness is a method of regulating current attention to accept the feeling as it is, but reappraisal and suppression represent an attempt to change the present emotion.

According to the results of the present study, living in the present moment, or being mindful and living according to values, assist students in decreasing their level of psychological distress. Furthermore, increasing reappraisal skills or decreasing suppression, may not assist students in decreasing their level of psychological distress. In accordance with the previous literature (e.g., Liverant et al., 2008), the present findings lead to the conclusion that an ACT-based approach is a more practical method of recovery than suppression and reappraisal because both mindfulness and values predict psychological distress, while reappraisal and suppression do not.

In light of these findings, it is suggested that university counseling centers focus on mindfulness and values in their methods of prevention and interventions when dealing with psychological distress. It is also suggested that doing so is a better approach than focusing on decreasing suppression and increasing reappraisal. In addition, practitioners in the field of counseling and psychology should consider the results of the present study as a contribution to using ACT interventions when dealing with psychological distress. While dealing with such distress in individual and group counseling, one can, therefore, rely on using mindfulness and discovering values. As this study confirms that ACT focuses on taking individual steps in line with the values of the individual, rather than seeking solutions to problems (Hayes et al., 2006), an awareness of the benefit of ACT can allow valuable interventions for people suffering from psychological distress. In other words, anyone, including students who experience psychological distress should aim to increase their mindfulness and become aware of their personal values. Doing so will not only prevent sufferers from becoming stuck with unwanted thoughts, it will also empower the taking of further steps in line with their personal determined values.

LIMITATIONS AND FUTURE DIRECTIONS

Certain limitations of this study need to be pointed out. To start with, the sample of this study is limited to students from the Faculty of Education. Second, because of the cross-sectional nature of the present study, causality cannot be inferred. Furthermore, connections should not be made between the concurrent associations in the present study and longitudinal prediction. Third, while this study has examined predictors of psychological distress, including mindfulness, valuing, and emotion regulation strategies (reappraisal and suppression), it must be emphasized that psychological distress

might be affected by many other factors of ACT, such as cognitive diffusion and acceptance. It must, therefore, be emphasized that this study has limited predictors in understanding psychological distress. Lastly, different types of measurements have been used to assess psychological distress in each study, and it should therefore be noted that, in the present study, psychological distress has been operationalized by using Psychological Distress Scale (PDS; Chan, 1993).

As the present study demonstrates that suppression and reappraisal were not significant predictors of psychological distress, additional research is needed to also clarify those relationships with other samples. Furthermore, Dryman and Heimberg (2018) have conducted a systematic review research about suppression and reappraisal; and the researchers state that the measurement used in studies, namely Emotion Regulation Questionnaire, may change the role of suppression in distress. Therefore, future studies should aim to replicate this study by using other tools to measure suppression and reappraisal, such as the Regulation of Emotion Systems Survey (De France & Hollenstain, 2017). Furthermore, emotion regulation studies also state that “context” is an important factor to understand whether an emotion regulation strategy is an adaptive strategy or not. For example, reappraisal can be a helpful strategy for emotion regulation when the situation is perceived as being uncontrollable, or it may not be helpful when the situation is perceived as being controllable (Troy et al., 2003). However, in the present study, the researchers have not collected data about how, when, and where participants have used suppression and reappraisal. In this regard, future studies may consider the context to understand the role of suppression and reappraisal in psychological distress.

AUTHOR CONTRIBUTION

- The first author has made substantial contributions to conception and design, acquisition of data, analysis and interpretation of data, revising the manuscript.
- The second author have been involved in acquisition of data, analysis and interpretation of data as well as drafting the manuscript.

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