Personality and Individual Differences 139 (2019) 337–342

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

The relationship between mindfulness and resilience: The mediating role of self compassion and emotion regulation in a sample of underprivileged Turkish adolescents☆

Zeynep Aydin Sünbül[a,*], Oya Yerin Güneri[b]

[a] Istanbul Medipol University, Istanbul Medipol Universitesi Guney Kampus Kavacık Kavşağı, 34810 Beykoz, İstanbul, Turkey
[b] Middle East Technical University, Üniversiteler Mah. Dumlupınar Bulv. No:1, Çankaya Merkez, Çankaya, Ankara, Turkey

ARTICLE INFO

Keywords:
Resilience
Mindfulness
Self-compassion
Difficulties in emotion regulation
Adolescents with low socio-economic status

ABSTRACT

The purpose of this study was to examine a mindfulness model of resilience through the mediating effects of self compassion and difficulties in emotion regulation among underprivileged Turkish adolescents. The sample of the study consisted of 752 students (426 female, 326 male) who aged 14–19 (M = 15.82, SD = 0.88). A path analysis was conducted in order to examine the proposed model. The results showed mindfulness to be a positive and significant predictor of self-compassion while negatively and significantly predicting difficulties in emotion regulation. Furthermore, self-compassion and difficulties in emotion regulation were found to be significant predictors of resilience. Indirect paths from mindfulness to resilience (via self-compassion and via difficulties in emotion regulation) were also significant in the model. The hypothesized model explained 21% of the variance in resilience scores.

1. Introduction

Puberty is a period of physical, cognitive, emotional and social changes - not to mention unique struggle and uncertainty. This transitional process is made doubly challenging by the onset of newly emerging roles and associations as well as the generation and cultivation of a distinctive personality and self-image in the individual. Furthermore, issues pertaining to psychological and physical adaptation and ambiguities over their future, make this stage in life uniquely turbulent time for the already-anxious adolescents (Coleman & Hagell, 2007). Thus, in such an atmosphere of increased tension and pressure, it is probable that adolescents may be exposed to various risks and adversities that can erode their functioning and well-being.

Despite these various forms of adversity, it is clear that the majority of adolescents are ultimately equipped to navigate their way through (Coleman & Hagell, 2007). However, young people with specific disadvantages such as mental disorders, disabilities, poor living conditions and a history of trauma may qualify as belonging to groups particularly vulnerable to succumbing to the added pressures of the age. None-theless, for the most part, these vulnerable young people can still find ways of coping with the added stress – leading one to ponder the reasons and mechanisms behind this. According to current literature, the key term here is *resilience* (Embury & Saklofske, 2014).

In order to determine that resilience has been manifest in the face of a challenging situation two fundamental processes must be present; a risk factor/s, and an adaptive developmental response. A risk factor is conceptualized as a specific circumstance or status which will likely lead to adverse or unfavorable consequences for individuals. Common risk factors which may influence an individual's functioning or development may include low socio-economic status from birth, a disability, or a traumatic life experience. In terms of resilience, the definition of an "adaptive response" is still largely under debate, though certain criteria, such as the relation of resilience to other developmental competencies (self-regulation, metacognition, etc.) and cultural values, form established standards of evaluating resilience as it manifests in the face of adversity (Masten, 2001).

The literature on resilience shows that at-risk groups of children and adolescents exhibit protective agents that are formed of various personal, familial and social factors. Moreover, the empowerment provided by accessing these protective agents – and the inhibition of unfavorable ones, may result in wellness and wholesome functioning (Stepleman, Wright, & Bottonari, 2009). This is to say that by; broadly

☆ This study was financially supported by The Scientific and Technological Research Council of Turkey (TÜBİTAK) under my PhD Thesis process. Prof. Oya Yerin Guneri, the second author of this article, was also the supervisor of my PhD Thesis.

* Corresponding author.
E-mail addresses: zsunbul@medipol.edu.tr (Z. Aydin Sünbül), guneri@metu.edu.tr (O. Yerin Güneri).

https://doi.org/10.1016/j.paid.2018.12.009
Received 8 June 2018; Received in revised form 2 November 2018; Accepted 5 December 2018
Available online 10 December 2018
0191-8869/

examining and cultivating all or each of the personal, familial and social resources as resilience targets one can provide adaptation and healing for young people suffering unique challenges.

1.1. Mindfulness and resilience

Mindfulness is defined as intentionally directing attention to the present reality through an accepting stance (Germer, 2005). In order to investigate the role of mindful attention in the resilience process, conceptual and practical overlaps between these mechanisms should be clearly specified. At the conceptual level, resilience and mindfulness have been discovered to share close mechanisms to one another. According to Grabbe, Nguy, and Higgins (2012) resilient people hold an accepting stance toward their life experiences – a key factor in overcoming trauma. Self-acceptance is a crucial aspect of awareness – not-to-mention a transcendent sense of self, flexibility and adaptability (Germer, 2005). Furthermore, mindful awareness requires one to accept oneself and one's private experiences with a non-judgemental approach. Likewise, compassion toward oneself is also a valuable component in the process of nurturing resilience and wellness (Kabat-Zinn, 2005). Effective regulation of emotions and cultivation of broadly affirmative emotions in particular, are essential in handling negative experiences and facilitating resilience. In order to adapt to negative life situations, affect regulation and enactment of positive affect are also regarded as important experiences emphasized in mindfulness practice (Rogers, 2013).

As well as conceptual overlaps, a number of studies have unearthed direct relations between mindful awareness and resilience. Pidgeon and Keye (2014), have indicated that mindfulness and academic self-efficacy are significant protective factors of resilience. Similarly, the mediating effects of certain therapeutic processes have also been examined in terms of mapping the relationship between mindfulness and resilience. The majority of these studies point to effective regulation of the self (Parto & Besharat, 2011) and emotions (Southwick & Charney, 2012), self-compassion (Bluth & Blanton, 2014) and self-confidence (Bajaj, Gupta, & Pande, 2016) as factors influencing the resilience process in tandem with mindful awareness.

1.2. The mediating role of self-compassion

The current literature on mindfulness and resilience, show shared processes and mechanisms within both these phenomena. One such interrelated process proposed in the current study is self-compassion. Gleaned through the scope of mindfulness, self-compassion can be described as a tolerant and empathetic acceptance of spontaneous experiences accompanied by mindful awareness (Kabat-Zinn, 2005). Self-compassion involves the ability to approach suffering and negative events without holding a harsh and critical attitude toward one's own self. The term is applied to individuals who have compassion for themselves, accept suffering and experiences as a natural part of living, and view their afflictive emotions and thoughts through the lens of mindful awareness (Neff, 2003a). Self-compassion ought to be accepted as a characteristic which facilitates functional coping, experiential stability and well-being (Kabat-Zinn, 2005).

1.3. The mediating role of emotion regulation

Within the scope of the assumption of self-compassion playing a role in the relationship between mindfulness and resilience, emotion regulation may also be considered a relative individual factor operative. The resilience framework underlines that traumatic and difficult conditions may duly evoke equally inflated emotional responses. In this sense, handling such supremely affective states is a fundamental step in developing a resilient state (Lazarus, 1999). A similar assumption over the therapeutic role of regulating emotions is thus an inherent aspect of mindfulness literature. Emotions, especially painful ones, are apt targets of mindful attention, which ought to be cultivated and accepted without judgment. The aim of this particular cultivation is to adapt more wholesome and functional emotional processing in lieu of prioritizing ruminative feelings and cognitions. Furthermore, accepting feelings of pain, as they manifest themselves, facilitates a therapeutic equanimity toward coping and wellness (Teper, Segal, & Inzlicht, 2013).

All in all, taking the therapeutic overlaps between mindfulness and resilience into consideration, this study forwards mindfulness and the relevant healing factors of self-compassion and emotion regulation as possible protective factors in the manifestation of resilience in the individual. Moreover, a mindfulness-based model of resilience for a group of at- risk adolescents was predicted as being suitably able to offer a mindfulness-based protective factor to the cannon of resilience literature. Thus, the research question of this study was formulated as *"To what extent is resilience explained by the proposed mindfulness model as being mediated by self-compassion and difficulties in emotion regulation among adolescents?"* The hypotheses under examination included the claims that a) mindfulness is directly related to self-compassion, emotion regulation and resilience; b) self-compassion and emotion regulation will be directly related to resilience; and c) that mindfulness will have indirect relations to resilience through the mediating effects of self-compassion and difficulties in emotion regulation.

2. Method

2.1. Participants

The participants of this study were made up of 752 9th, 10th and 11th grade students (426 female, 326 male) from low socio-economic districts in Istanbul. The age group of the participants ranged between 14 and 19 (M = 15.82, SD = 0.88). For the sample selection process, a purposive sampling method was utilized. The frequencies regarding socio-demographic characteristics of students are presented in Table 1.

Based on current economic indicators in Turkey, the poverty threshold for a four-member family has been defined as a monthly income of 4997 TL (TÜİK, 2013). Taking both income and family size into consideration, it is evident that around 91% of the participants had an income below this threshold. According to Stronks, van de Mheen, van den Bos, and Mackenbach (1997), revenue is the most significant

Table 1
The distribution of the sample with respect to socio-demographic status.

Variable	Groups	N	%
Income	500 TL and below	16	2.2
	501–1000 TL	19	2.6
	1001–1500 TL	159	21.4
	1501–3000 TL	326	43.9
	3001–5000 TL	148	19.9
	5001 TL-above	47	6.3
	Not mentioned	37	3.6
Number of children in the family	1	39	5.3
	2	243	32.7
	3	255	34.4
	4	131	17.7
	5 – above	84	10.0
Mother education	Illiterate	43	5.8
	Elementary school	338	45.6
	Secondary school	180	24.3
	High school	136	18.3
	College and above	41	5.5
	Not mentioned	14	0.04
Father education	Illiterate	9	1.2
	Elementary school	242	32.6
	Secondary school	199	26.8
	High school	195	26.3
	College and above	85	11.5
	Not mentioned	22	1.6

criterion in determining the adverse consequences of low socio-economic status. In addition, sub-par education level was another criterion indicating low socio-economic status. The education status of participants' fathers (34% of whom were illiterate or graduated from elementary school) and mothers (50% of whom were illiterate or graduated from elementary school) also testify to their low socio-economic status.

2.2. Data collection instruments

2.2.1. The 14-Item Resilience Scale (RS-14)

The 14-Item Resilience Scale (RS) is a single-factor scale measures the extent of resilience in adolescents (Wagnild & Young, 1993). It is a 7 point Likert-type scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). The internal consistency indicator Cronbach alpha was obtained as 0.91 for the scale (Wagnild & Young, 1993). The psychometric properties of RS-14 were examined in this study. The internal consistency indicator Cronbach alpha was obtained as 0.81 for the overall scale. The results of a confirmatory factor analysis also supported a single factor structure of the RS-14 for the current study ($\chi 2/df = 4.44$, RMSEA = 0.07, CFI = 0.93; TLI = 0.91).

2.2.2. Mindful Attention Awareness Scale-Adolescent (MAAS-A)

The Mindful Attention Awareness Scale-Adolescent is a 14-item single-factor scale measuring mindfulness in 14–18 aged adolescents. The scale consists of 6 point Likert type items ranging from 1 to 6 with high scores pointing to higher mindful awareness. For this study, the internal consistency indicators of Cronbach alpha and test-retest reliability were obtained as 0.82 and 0.79 respectively (Brown, West, Loverich, & Biegel, 2011). The psychometric properties of MAAS-A were checked under the current study. The internal consistency indicator Cronbach alpha was obtained as 0.81 for the scale. The results of a confirmatory factor analysis supported single factor structure of MAAS-A ($\chi 2/df = 2.17$, RMSEA = 0.06, CFI = 0.92; TLI = 0.90).

2.2.3. Self-Compassion Scale (SCS)

The Self-Compassion Scale (Neff, 2003a) is a 26-item measurement tool assessing self-compassion through six sub dimensions: self-judgment, self-kindness, isolation, common humanity, mindfulness and over-identification. The scale has a 5 point Likert type format with 1 (almost never) specifying strong disagreement and 5 (almost always) specifying strong agreement. Incremental scores in this scale show higher levels of compassion toward the self. The internal consistency indicator, the Cronbach alpha was found 0.93 for the whole scale. Convergent/divergent validity indicators for the scale identify significant corelations with life satisfaction, depression and anxiety measures (Neff, 2003b). Within the scope of this study, the Cronbach alpha value was obtained as 0.89 for the overall scale. In addition, the findings of a confirmatory factor analysis supported the six factor structure of SCS for this study ($\chi 2/df = 3.2$, RMSEA = 0.05, CFI = 0.89; TLI = 0.88).

2.2.4. Difficulties in Emotion Regulation Scale (DERS)

The Difficulties in Emotion Regulation Scale consists of 36-items which measure emotion regulation difficulties through six sub-dimensions: namely; non-acceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity (Gratz & Roemer, 2004). Incremental scores in the scale indicate greater emotional disregulation. Given the psychometric properties of DERS, the Cronbach's alpha coefficient was found as 0.93 for the overall scale and ranged between 0.80 and 0.89 for the subscales. The reliability values of DERS for the current study yielded the Cronbach alpha coefficient as 0.84 for the overall scale. The results of CFA also supported the six factor structure of the scale under this study ($\chi 2/df = 2.95$, RMSEA = 0.05, CFI = 0.91; TLI = 0.90).

2.3. Data analysis

With the data collection was complete, the data was then screened and cleaned in terms of accuracy, missing items, outliers and normal distribution. All of the data screening and cleaning procedures were conducted through the SPSS 20 statistical package program. Afterwards, model fit indices and path coefficients for the proposed model were examined through AMOS 18 software.

2.4. Procedure

In selecting the school districts, the indicators for low socio-economic status such as income, education level, etc. (Stepleman et al., 2009) were referred to. This resulted in the selection of the districts of Sultanbeyli, Sancaktepe and Umraniye in Istanbul (TÜİK, 2013). After receiving the ethical permissions from the Human Subjects Ethics Committee and the Istanbul Provincial Directorate of National Education, researchers contacted the three high shool principals for the relevant schools, who graciously allowed us to collect data from their students. After informing school staff about the purpose of the study and the procedures that would be used, the principal researcher organized a time schedule to arrive at each school. Then, the survey package along with a voluntary participation form were distributed during regular classroom hours. It took approximately 30–35 min for students to fill out the scales.

3. Results

3.1. Descriptive statistics

The Pearson product-moment correlation was utilized to examine the inter-correlation coefficients between the study variables. The correlation coefficients are given in Table 2.

As seen in Table 2, there are significant positive and negative relations between the exogenous, mediators and endogenous variables. As such, the endogenous variable, *resilience*, was found to have a moderately significant relationship with mindfulness ($r = 0.28$, $p < .001$), self-compassion ($r = 0.41$, $p < .001$) and emotion regulation difficulties ($r = -0.43$, $p < .001$). The exogenous variable, *mindfulness*, meanwhile, was also found out to have a moderately significant positive relationship with self-compassion ($r = 0.40$, $p < .001$) and a moderately significant negative relationship with emotion regulation difficulties ($r = -0.54$, $p < .001$). In addition, a significant negative relationship was found between the mediators of self-compassion and emotion regulation difficulties ($r = -0.66$ $p < .001$).

3.2. Path analysis

In order to test the proposed mindfulness model of resilience as mediated by self-compassion and difficulties in emotion regulation, a path analysis was conducted. Given the sufficient evidence for the assumption of normality, the Maximum Likelihood Estimation method was used (Kline, 2011).

So as to check the goodness of fit values for the proposed model, the chi-square value (χ^2), normed chi-square index (χ^2/df), comparative fit

Table 2
Inter-correlations between variables.

Variable	1	2	3	4
1. MAAS-A	–			
2. SCS	0.40***	–		
3. DERS	−0.54***	−0.66***	–	
4. RS-14	0.28***	0.41***	−0.43***	–

N = 752, ***p < .001, (2-tailed).

Table 3
Model fit indices for the proposed model and acceptable ranges.

Goodness of fit indexes	Model fit indices of the proposed model	Criterion ranges
χ2, df	2.1; 1	Non-significant
χ2/df	2.1	$\chi^2/df < 3$
CFI	1.00	CFI ≥ 0.90
TLI	0.99	TLI ≥ 0.90
RMSEA	0.04	RMSEA < 0.05
GFI	1.00	GFI ≥ 0.90

index (CFI), Tucker-Lewis index (TLI), root-mean-square error of approximation (RMSEA) and goodness of fit index (GFI) were used as criteria values. All goodness of fit values emerged with sufficient intervals for the indicators presented in Table 3.

According to Table 3, the chi-square value was non-significant χ^2 (1) = 2.1, p = .16 satisfying the goodness of fit criterion (Schumacker & Lomax, 2004). Similarly, the normed chi-square value expected to be below 3 (Kline, 2011) was found to be 2.1, thereby satisfying the criterion. The RMSEA value came up 0.04 for the proposed model which was also below the criterion cut-off value of 0.05 (Browne & Cudeck, 1993). The comparative fit index CFI, Tucker Lewis Index (TLI) and goodness of fit index (GFI) – all of which should be above 0.90 (Bentler, 1990) were respectively found as 1.00, 0.99 and 1.00, indicating a perfect fit for the model.

As a next step, a standardized path coefficient value for all of the proposed paths was explored. The results of this are presented in Fig. 1.

An examination of standardized path coefficients yielded that path coefficient values varied between 0.22 and −0.53. The effect size index for standardized coefficients (*β*) points out that a standardized direct effect of < 0.10 is considered a "small" effect; whereas values close to 0.30 can be considered of "medium" effect, and values > 0.50 a "large" effect (Kline, 2011). Given the values of this index, it can be clearly stated that mindfulness has a medium direct effect on self-compassion (*β = 0.40*) and difficulties in emotion regulation (*β = −0.33*). Self-compassion (*β = 0.22*) and difficulties in emotion regulation (*β = −0.28*) also have direct medium effects on resilience. In addition, all of the proposed paths in the model were found to be significant.

The squared multiple correlation coefficient (R^2) value which emerged for the proposed model showed that the model explains 21% of the variance in resilience.

Table 4
Standardized direct, indirect and total estimates of the proposed model.

Paths	Standardized estimates (*β*)
Mindfulness → Resilience	
Indirect (Total)	0.28***
Indirect by self-compassion	0.11*
Indirect by difficulties in emotion regulation	0.17*
Self-compassion → Resilience	0.22**
Direct	
Difficulties in emotion regulation →Resilience	−0.28**
Direct	

* p < .05.
** p < .01.
*** p < .001.

3.3. Direct and indirect relationships

The standardized direct, indirect and total effects for the proposed model were examined and results presented in Table 4.

Regarding the direct, indirect and total estimates as presented in Table 4, the total indirect effect of mindfulness on resilience is statistically significant (β = 0.28, p < .01). Both of the standardized indirect paths from mindfulness to resilience through self compassion (β = 0.11, p < .01) and difficulties in emotion regulation (β = 0.17, p < .01) are also significant. In addition, there are significant direct effects of self compassion (β = 0.22, p < .01) and difficulties in emotion regulation (β = −0.28, p < .01) on resilience.

4. Discussion

The purpose of this study was to test the proposed mindfulness model of resilience as mediated by self-compassion and difficulties in emotion regulation in adolescents coming from a low socio-economic background. The proposed model examined the effects of mindfulness on resilience via the specific influences of self-compassion and difficulties in emotion regulation for this relationship. Initial analyses of model fit indices yielded that the model fits the data perfectly. Furthermore, the findings of the path analysis indicated that the data supports the hypothesized relationships between the variables proposed.

The literature shows that mindfulness has strong direct predictive effects on resilience (Kurilova, 2013; Pidgeon & Keye, 2014). On the other hand, the results of the current study indicated that mindfulness has significant but low direct correlations with resilience. This finding

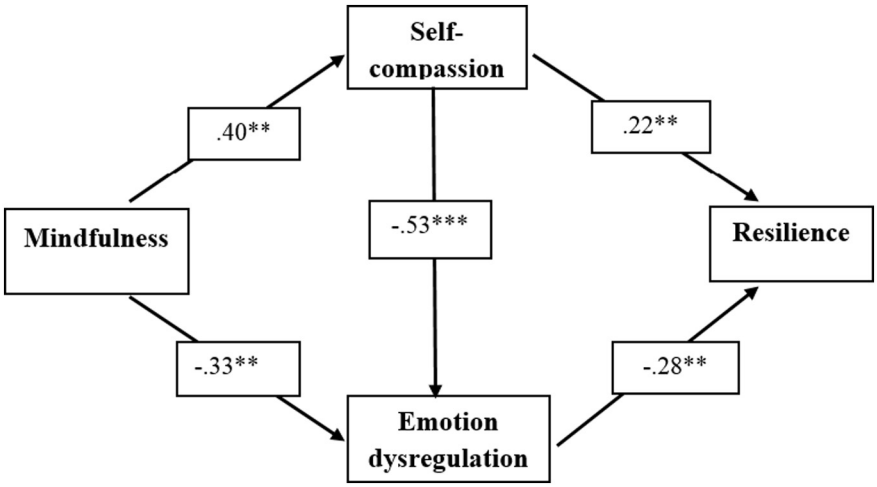

Fig. 1. Standardized path coefficients for the proposed model.
*p < .05; **p < .01; *** p < .001.

indicated that all the variance in the relationship between mindfulness and resilience was taken up by the mediation effects of self-compassion and emotional regulation for the current study.

Our findings show that mindfulness has a direct, positive relationships with self-compassion. In terms of the adolescence period in particular, it can be claimed that the emotional ups and downs typical of this phase have certain connections with harsh judgments toward the self as well as critical social comparisons. As expected, such unfavorable judgments and detrimental social analogies undoubtedly make the process of adolescence all the more daunting (Neff & McGeehee, 2010). Similarly, adolescents from low socio-economic backgrounds are also severely inclined to negative self-talk and distorted interpersonal comparisons as a direct result of their status (Zolkoski & Bullock, 2012). In this way, mindfulness – that is, an accepting attitude of experiences in the present moment – posssess a facilitating role for these adolescents in adopting a gentler, more indulgent position toward themselves and society at large.

The results further indicate a significantly negative relationship between mindfulness and emotion regulation difficulties. Mindful awareness is a source of equanimity and calmness toward the self and one's inner world. This specific relation with thoughts, feelings and senses is the promoter of a more favorable cognitive and affective status (Teper et al., 2013). With a spotlight on adolescents from low socio-economic backgrounds and who, due to their age, are already suffering from multiple cognitive and affective challenges (Stepleman et al., 2009), it thus emerges that being mindfully and non-judgmentally aware of emotional experiences may function as a more healing way of interpreting affective experiences.

Given the direct effects of mediators on the endogenous variable, *resilience*, a positive significant relationship was found to exist between self-compassion and resilience. It is a well-known claim that identity formation in adolescence starts with favorable or unfavorable assumptions that individuals direct toward the self. When these assumptions become harsh and overly critical, adolescents may become vulnerable to distortions detrimental to their mental health. However, a compassionate and gentle view of the self has the distinct potential to create wellbeing and resilience in these groups (Neff & McGeehee, 2010). Accordingly, as Zolkoski and Bullock (2012) claim, adolescents from low socio-economic backgrounds imbuing a positive conception of the self are more prone to resilient pathways. Thus, through inhibiting the development of a harsh position toward the self, or in the face of negative external events and challenging experiences, compassionate adolescents from low income families can effectively liberate themselves from the burdens of the detrimental implications of their status.

Another finding concerning the effects between mediators and resilience showed that emotion regulation difficulties are significantly and negatively related to resilience. During the adolescence period, the effective organization of emotions is a crucial means of fostering wellbeing (Broderick & Zennings, 2012). A corresponding assumption could also be valid for adolescents with a low socio-economic status who are more at risk of various behavioral and emotional challenges compared to other adolescents (Schneiders et al., 2003). That is to say, the relative importance of regulating emotions toward a resilient response can be put forth as a more explicit and perhaps even essential process, especially for adolescents from the economic backgrounds featured in this study.

Respecting the findings related to the indirect paths between mindfulness and resilience, self-compassion was found to be a significant predictor. Adolescents in this age group suffer from many stress factors in their social world simultaneously to their striving to adjust to the physical, mental and emotional demands of puberty (Bluth & Blanton, 2014). The finding of this study means that both mindful awareness and self-compassion may be held as an effective bulwark against the stress reactions of such challenging social conditions as well as the developmental turmoils which are bound to occur regardless. Correspondingly, difficulties in emotion regulation also emerged as a mediator between the relations of mindfulness to resilience. This result shows that mindful awareness through emotion regulation influences the resilient reactions of adolescents participated in this study. According to Prakash, Hussain, and Schirda (2015), emotion regulation accompanied with mindfulness has a stress reducing capacity for all age groups. Thus, both mindfulness and effectively regulating emotions may facilitate the resilience responses through the stimulation of stress coping mechanisms in adolescents from low socio-economic backgrounds.

A number of implications drawn from this study may make way for a field of further enquiry in other studies. In this study, a number of intrapersonal psychological mechanisms (mindfulness, self-compassion and difficulties in emotion regulation) were investigated in order to test their specific influences on resilience for adolescents with low socio-economic status. These theory-driven intrapersonal features were proposed by considering the fluctuations of the adolescence topped by the already-risky conditions of this disadvantaged groups. Although the proposed psychological mechanisms account for a particular variance for resilience, there are other unaddressed attributes which may also predict resilience tendencies in these groups. Thus, in future studies, the role of mindfulness and related therapeutic factors in the resilience of disadvantaged groups could be further elaborated upon. In addition, this study was conducted on adolescents from low socio-economic backgrounds in the society in order to account for the risk context within resilience frameworks. However, other studies working on similar resilience models may also be conducted with various other risky groups such as individuals with a psychiatric/chronic disease, those residing in orphanages, and those facing major issues in the family or family structure etc. (Coleman & Hagell, 2007; Embury & Saklofske, 2014).

As well as referring to the contributions and findings of this study, our results should, undoubtedly, also be regarded in terms of their limitations. First of all, in order to reach the participants that best reflected the sample characteristics, a purposive sampling method was preferred. However, the lack of randomization over this sampling technique may have constrained the results of the study. In addition, the sample of this study was formed with adolescents from socio-economically disadvantegous districts who may reflect a homogenous sample group in terms of socio-demograph. Thus, the generalizability of these findings may be restricted to only comparable adolescent groups.

References

Bajaj, B., Gupta, R., & Pande, N. (2016). Self-esteem mediates the relationship between mindfulness and well-being. *Personality and Individual Differences, 94*, 96–100.

Bentler, M. (1990). Comparative fit indices in structural models. *Psychological Bulletin, 107*, 238–246.

Bluth, K., & Blanton, P. (2014). Mindfulness and self-compassion: Exploring pathways to adolescent emotional well-being. *Journal of Child and Family Studies, 23*(7), 1298–1309.

Broderick, C. P., & Zennings, A. P. (2012). Mindfulness for adolescents: A promising approach to supporting emotion regulation and preventing risky behavior. *New Directions for Youth Development,* (136), 111–126.

Brown, K. W., West, A. M., Loverich, T. M., & Biegel, G. M. (2011). Assessing adolescent mindfulness: Validation of an adapted Mindful Attention Awareness Scale in adolescent normative and psychiatric populations. *Psychological Assessment, 23*, 1023–1033.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.). *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.

Coleman, J., & Hagell, A. (2007). *Adolescence, risk and resilience: Against the odds.* John Wiley and Sons, Ltd.

Embury, P. S., & Saklofske, H. D. (2014). *Resilience interventions for youth in diverse populations.* New York: Springer.

Germer, G. (2005). What is mindfulness? In G. Germer, R. Siegel, & P. Fulton (Eds.). *Mindfulness and psychotherapy* (pp. 1–27). New York: Guilford.

Grabbe, L., Nguy, S. T., & Higgins, M. K. (2012). Spirituality development for homeless youth: A mindfulness meditation feasibility pilot. *Journal of Child and Family Studies, 21*(6), 925–937.

Gratz, K., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment,*

26(1), 41–54.
Kabat-Zinn, J. (2005). *Coming to our senses: Healing ourselves and the world through mindfulness.* New York, NY: Hyperion.
Kline, B. R. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: Guilford Press.
Kurilova, J. (2013). Exploration of resilience in relation to mindfulness, self-compassion and attachment styles (Unpublished master's thesis). University of Calgary Applied Psychology Division.
Lazarus, R. S. (1999). *Stress and emotion: A new synthesis.* New York: Springer.
Masten, S. A. (2001). Ordinary magic: Resilience process in development. *American Psychologist, 56*(3), 227–238.
Neff, D. K. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85–101.
Neff, D. K. (2003b). The science of self-compassion. In C. Germer, & R. Siegel (Eds.). *Compassion and wisdom in psychotherapy* (pp. 79–92). New York: Guilford Press.
Neff, K. D., & McGeehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*, 225–240.
Parto, M., & Besharat, A. M. (2011). Mindfulness, psychological well-being and psychological distress in adolescents: Assessing the mediating variables and mechanisms of autonomy and self-regulation. *Procedia - Social and Behavioral Sciences, 30*, 578–582.
Pidgeon, M. A., & Keye, M. (2014). Relationship between resilience, mindfulness and psychological well-being in university students. *International Journal of Liberal Arts and Social Science, 2*(5), 27–32.
Prakash, S. R., Hussain, A. M., & Schirda, B. (2015). The role of emotion regulation and cognitive control in the association between mindfulness disposition and stress. *Psychology and Aging, 30*(1), 160–171.
Rogers, H. B. (2013). Mindfulness meditation for increasing resilience in college students. *Psychiatric Annals, 43*(12), 545–548.
Schneiders, J., Drukker, M., Ende, D. V. J., Verhulst, F. C., Os, V. J., & Nicolson, A. N. (2003). Neighbourhood socioeconomic disadvantage and behavioural problems from late childhood into early adolescence. *Journal of Epidemiology and Community Health, 57*, 699–703.
Schumacker, R. E., & Lomax, R. G. (2004). A beginner's guide to structural equation modeling. *Mahwah, New Jersey*. Lawrence Erlbaum Associates, Publishers.
Southwick, M. S., & Charney, S. D. (2012). *Resilience: The science of mastering life's greatest challenges.* NY: Cambridge University Press.
Stepleman, M. L., Wright, E. D., & Bottonari, A. K. (2009). Socioeconomic status: Risks and resilience. In S. L., & M. S. (Eds.). *Determinants of minority mental health and wellness* (pp. 273–302). New York: Springer.
Stronks, K., van de Mheen, H., van den Bos, J., & Mackenbach, J. P. (1997). The interrelationship between income, health, and employment. *International Journal of Epidemiology, 26*(3), 592–600.
Teper, R., Segal, V. Z., & Inzlicht, M. (2013). Inside the mindful mind: How mindfulness enhances emotion regulation through improvements in executive control. *Current Directions in Psychological Science, 22*(6), 449–454.
Türkiye İstatistik Kurumu (TÜİK) (2013). *Seçilmiş göstergelerle İstanbul 2013.* Ankara: Türkiye İstatistik Kurumu Matbaası.
Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*, 165–178.
Zolkoski, M. S., & Bullock, M. L. (2012). Resilience in children and youth: A review. *Children and Youth Services Review, 34*, 2295–2303.