

## Mindfulness and Its Relationship to Moral Anxiety among Adolescents in Jordan

Emad Alzubi<sup>1</sup>, Omar Al-Adamat<sup>\*2</sup>

<sup>1</sup>Associate Professor of Educational Psychology, Al Balqa' Applied University/ Princess Rahma University College.

<sup>2</sup>Ministry of Education, Jordan.

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### Abstract

This study aimed to investigate the mindfulness level in terms of gender and academic achievement and its relationship to moral anxiety among adolescents. The study was conducted on a sample consisted of (390) adolescents' students in Al-Salt city, Jordan. Two scales were used in the study, the mindfulness scale, and the moral anxiety scale. The study found that female adolescents have higher mindfulness levels compared to male adolescents who recorded a medium level and that the adolescents with higher academic achievement have higher mindfulness levels compared with those who have lower academic achievement. Furthermore, results exhibited a negative statistically significant correlation between mindfulness and moral anxiety as the mindfulness constituents (non-judging of experience, acting with awareness, and non-reactivity to inner experience) contribute to moral anxiety reduction among adolescents.

**Keywords:** Mindfulness, moral anxiety, adolescents.

### اليقظة الذهنية وعلاقتها بالقلق الأخلاقي لدى المراهقين في الأردن

عماد الزعبي<sup>1</sup>، عمر العظامات<sup>2\*</sup>

<sup>1</sup> أستاذ مشارك علم النفس التربوي، جامعة البلقاء التطبيقية/ كلية الأميرة رحمة الجامعية.

<sup>2</sup> وزارة التربية والتعليم، الأردن

### ملخص

هدفت الدراسة الحالية إلى تقصي مستوى اليقظة الذهنية في ضوء متغيري النوع الاجتماعي والتحصيل الدراسي وعلاقتها بالقلق الأخلاقي لدى اليافعين. أجريت الدراسة عينة مكونة من (390) طالباً يافعاً بمدينة السلط في الأردن. استخدم في هذه الدراسة مقياسان هما: مقياس اليقظة الذهنية، ومقياس القلق الأخلاقي. أظهرت نتائج الدراسة أن مستوى اليقظة الذهنية لدى اليافعين متوسط، تفوق الإناث على الذكور وتفوق اليافعين ذوي التحصيل الدراسي المرتفع على ذوي التحصيل الدراسي المنخفض في مستوى اليقظة الذهنية، كما أظهرت نتائج الدراسة أيضاً وجود علاقة ارتباطية سلبية دالة احصائياً بين اليقظة الذهنية والقلق الأخلاقي؛ حيث ساهمت مكونات اليقظة الذهنية المتمثلة بعدم الحكم على الخبرة الداخلية، العمل بوعي، وعدم التفاعل مع الخبرة الداخلية بانخفاض القلق الأخلاقي لدى اليافعين.

الكلمات الدالة: اليقظة الذهنية، القلق الأخلاقي، المراهقين

\* Corresponding author:

[adamat88@gmail.com](mailto:adamat88@gmail.com)

## 1. Introduction

Mindfulness is one of the primary cognitive strategies that contribute to increasing mental efficiency and creating various new perspectives that describe different levels of cognition, sociability and academic. It is also a scientific construction technique of cognition among individuals and societies. Numerous studies manifested the correlation between mindfulness and mental health aspects. Brown and Rayn (2003) demonstrated a positive association between mindfulness and life satisfaction. Similarly, Lykins and Baer (2009) investigated the differences in psychological well-being indicators including self-compassion, general satisfaction feelings, emotional regulation, coping anxiety and fear, and distress, which were in favor of the long-term practice of mindfulness compared to nonpractice of mindfulness. Other researchers suggested that mindfulness positively correlated with optimism, independence, and efficiency (Brown & Ryan, 2003) and negatively correlated with depression (Cash & Whittingham, 2010), neuroticism (Dekeyser et al., 2008; Giluk, 2009), social anxiety (Dekeyser et al., 2008; Rasmussen & Pidgeon, 2011), and psychological symptoms (Baer et al., 2006).

Clinical and non-clinical research approved the effectiveness of mindfulness-based interventions (Shapiro, Schwartz, & Bonner, 1998; Vøllestad, Sivertsen, & Nielsen, 2011). In the context of anxiety, Hofmann et al. (2010) illustrated that the robust effects of mindfulness-based interventions to pare anxiety, which agrees with numerous studies such as (Baer et al., 2006; Brown & Ryan, 2003; Fetterman et al., 2010). Brown and Ryan (2003) reached empirical evidence from various samples on the inverse association among four anxiety scales and mindfulness, in which the last-mentioned measured using the Mindful Attention Awareness Scale (MAAS), as well as between mindfulness and anxious inducements found by Roemer et al. (2009). The same results were found by (Kohls et al., 2009) who used Freiburg Mindfulness Inventory (FMI-14) to measure mindfulness, and Walsh et al. (2009) who used both MAAS and FMI-14.

Consequently, advanced research was conducted to demonstrate the discriminant effectiveness of mindfulness constituents such as the study of (Cardaciotto et al., 2008) which found that comprising awareness and acceptance facets of mindfulness is significantly associated and predicted less anxiety and less mental illness severity. While Tran et al. (2013) showed the significant correlations between less anxiety and orientation to experience only compared to the second facet of mindfulness (self-regulated attention) as predefined by (Bishop et al., 2004). Adopting five facets of mindfulness as (Cash and Whittingham, 2010), only the non-judging facet has predicted less anxiety. Meanwhile, Soysa and Wilcomb (2015) found that two facets of mindfulness out of five negatively predict anxiety (non-judging and non-reactivity), and the study of (Ostafin et al., 2014), which found a negative relationship between anxiety and only two facets of mindfulness (non-judging and act aware).

Desrosiers et al. (2013) investigated the five facets of mindfulness (observing, describing, nonjudging, acting with awareness, and nonreactivity) and two anxiety components (anxiety arousal and general distress-anxiety). The findings revealed negative connotations between non-reactivity and general distress anxiety and that describing was significantly inversely associated with anxious arousal, contrary to a positive relationship between observing and anxious arousal. This positive relationship is also reported by (Desrosiers et al., 2014) despite the importance of observing to present instant experience. Furthermore, they inspected the moderate role of non-reactivity in the mediation of worry and rumination between observing and anxiety components, which is explained by the capability to observe non-reactivity that influences anxiety components through regulation strategies of cognitive emotions. Based on the abovementioned findings, it seems that the association between mindfulness facets and anxiety is not yet manifested, thus further empirical evidence is required.

Accordingly, adolescents face much psychological distress and adaptive problems. Moral anxiety is largely responsible for this amount of distress. The literature, as previously illustrated, introduces mindfulness as a significant practice to increase cognitive effectiveness and avoid excessive drift toward unpleasant thoughts and feelings, which enables dealing with various types of distress such as fear, stress, anger, and anxiety. Clinically, mindfulness is related to the quality of life and psychological well-being. Therefore, this study aims to investigate the associations between the facets of mindfulness, (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience) and the moral anxiety among adolescents in Jordan as well as to determine the level of mindfulness among this age group based on gender and academic achievements. Ultimately, this study tries to answer the following questions:

1. What is the level of mindfulness among Jordanian adolescents?
2. Are there any significant statistical differences in the level of mindfulness among Jordanian adolescents due to gender or academic achievement?
3. To what extent do the components of mindfulness (observation, description, conscious action, non-judgment of inner experience, lack of interaction with inner experience) contribute to predicting and explaining moral anxiety in adolescents?

## **2. Literature Review**

### **2.1 Mindfulness**

Mindfulness has a practical and theoretical association with quality of life and psychological wellbeing. It is a cognitive factor that prevents individuals from being emotionally and intellectually overwhelming and facing common psychological distress such as fear, anger, stress, and anxiety (Kabat-Zinn, 2004; Hayes & Feldman, 2004).

Bishop et al. (2004) introduced a two-component model of mindfulness. The first component includes self-regulation of attention and the second adopts a particular orientation toward one's experiences. Self-regulation of attention represents the general observing and sense of feelings, thoughts, and emotions in the present moment. This requires paying attention to experience and the competence of converting attention intentionally using all experience aspects. Taking into consideration a defined perspective or orientation toward the personal experience related to the attitude norm that an individual adopts toward his incidents, such as curiosity, openness, and acceptance.

According to Cernetic (2011), mindfulness is about accepting consciousness of self-experiences and nonjudgmental experiences now. These experiences comprise various aspects of consciousness: inner consciousness of thoughts, feeling, and sensations and external conscious of stimulants such as sounds, smells, colors, and people. Consequently, the individual acquires an accepting manner of incidents, no need for avoiding and suppressing manners.

Pidgeon et al. (2014) defined mindfulness as a complete awareness of emotions and experiences at the present moment, ceding thought drifting to the past or future, and amending pursued thinking ways. Masrour et al. (2017) considered the competence of events awareness, focusing on the primary factors, and non-judging the inner experiences are the components of mindfulness. In a more specific definition (Weinstein et al., 2009) defined mindfulness as the ability to pay full attention to all experiences that happen in the immediate moment. Shapiro et al. (2006) stated that mindfulness has four components which are self-regulation, self-management, values illustration, and exposure. While Miller (2011) determined two characteristics of mindfulness. The first characteristic is about the state of awareness of the current moments combined with deliberated feelings and oriented focusing, while the second characteristic is cognitive processing of the mindfulness explained by neutral perceiving of stimulants at present without assessed judgments.

Baer et al. (2006) illustrated four important mindfulness mechanisms:

- Observing: presence or noticing external and inner experiences like sensations, recognitions, emotions, scents, sounds, and scenes.
- Describing: capabilities to describe the inner experiences and depict experiences using words.
- Acting with awareness: given attention to activities practice at present moments, despite the differences between these activities and individual spontaneous behaviors as paying attention to something else.
- Non-judging: non-judging inner experiences through exhibiting assessed attitudes against thoughts and feelings.
- Non-reactivity: non-reacting with inner experiences, which tends to prevent thought and feelings fluctuation without any reactions.

Mace (2008) drew attention to mindfulness-based intervention which is employed in various application such as anxiety, stress, empathy, and self-problems (self-consciousness and self-hatred). Since mindfulness contributes to symptoms reduction of psychological stress, improving quality of life, and change mood in the different therapeutic contexts among selective samples of chronic diseases and emotional disorders like anxiety. Moreover, mindfulness has precautionary effects on those who are exposed to anxiety, overthinking, and attention disturbance (Dubert et al., 2016).

## 2.2 Moral Anxiety

Rachman (2004) claimed that anxiety is a tremendously experienced emotion among individuals and is contrarily manifested. Fear of bad incidents and worry furnishes anxiety conditions. McLean & Woody (2001) and Germer (2005) distinguished between worry and fear. Fear is defined as short-term responses to forthcoming threats or risk, while worry is not far from “normal” worries associated with family, work, and maladies, but it is less manageable and unpragmatic compared to normal. Germer (2005) stated that anxiety is fear of forthcoming harmful events, which is maladaptive in unreal perceived risk. In other words, anxiety is a disturbance in information processing that provokes overestimation of risk or underestimation of coping abilities (Beck et al., 2005). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV, TR) listed the common symptoms of anxiety including difficulties in concentration, a rapid feeling of stress and weakness, hyperactivity, the exhibition of a high level of agitation, the tension in the muscle, and the sleeping disturbance (American Psychiatric Association [APA], 2000). Nausea, urinary frequency, queasy stomach, and difficulty swallowing mentioned as physical symptoms of anxiety according to (Rachman, 2004). Mclean and Woody (2001) noticed that hyperactivity due to anxiety is associated with motor tension like shaking, irascible, restless, and nervous.

Moral anxiety is a distinctive anxiety form of worrying about a decent decision that stimuli better attitudes that are morally acceptable and right to do. Moral anxiety accounts high level of moral awareness as the claiming that social anxiety is a distinctive form of social awareness, since being moral anxious is a worry that decent decisions can morally dispute in evaluative situations correlated with social anxiety feelings. Greeson and Brantly (2009) believed that mindfulness is an alternative practice to manage anxiety and fear with openness, curiosity, and acceptance that promote the ability to bear distress, permit inner experiences and advance mental and physical functioning. Subsequently, mindfulness allows deliberately engaging with inner experiences and evaluates possibilities in any emerging situation, whether favorable, unfavorable, or neutral, that drives the individual's willingness to respond instantly.

## 3. Method and Procedures

### 3.1 Study Sample

The study sample consisted of (390) adolescents, (178) males, and (212) females, who were selected using the cluster sampling method from students enrolled in the second semester of the (2019/2020) academic year in public schools in Salt, Jordan.

### 3.2 Study Instruments

The current study utilized two scales: the mindfulness scale and the moral anxiety scale.

#### 3.2.1 Mindfulness Scale

The mindfulness scale of (Baer et al., 2006) was used in this study, consisting of (64) items, distributed over five dimensions: observing, describing, acting with awareness, non-judging experience, and non-reactivity with inner experience. The original version of the scale has good validity and reliability scores. The researchers translated the scale to the Arabic language with intensive concerns toward translation accuracy. Ten specialist arbitrators in educational psychology and psychological and educational measurement weighted the translated version of the instrument to ensure its convenience. Four items were deleted, and some items were rephrased as per the consensus of three and more arbitrators. The construct validity of this scale was validated by calculating the correlation coefficient of the items with the dimension to which they belong, the correlation coefficient of items with the overall score, and the correlation coefficient of the scale's dimensions with the overall score, which ranged from (0.67 - 0.80), (0.58 - 0.79), and (0.76 - 0.84), respectively. All correlation coefficients were statistically significant.

Furthermore, the reliability of the Arabic version was measured based on the Test-re-Test method. Reliability scores of all facets (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience) and the overall score are measured, and it attained (0.78, 0.62, 0.69, 0.69, 0.81, 0.77) respectively. Likewise, the Cronbach Alpha coefficient was used to evaluate internal consistency for all facets and an overall score, which ranged from (0.56) to (0.77).

### 3.2.2 Moral anxiety scale

The study adopted the moral anxiety scale of (Lawrence et al., 1976), which consists of (15) items to measure mindfulness. The original version of the scale has good validity and reliability scores. The researchers translated the scale to the Arabic language with intensive concerns toward translation accuracy. Ten specialist arbitrators in educational psychology and psychological and educational measurement weighted the translated version of the instrument to ensure its convenience. Accordingly, two items were rephrased. The construct validity of the translated scale was measured by calculating the correlation coefficient between the items and an overall score, which ranged from (0.71) to (0.84). Reliability scores using the test-re-test technique and Cronbach Alpha were (0.83) and (0.80), respectively.

## 4. Results

To answer the first question (what is the level of mindfulness among adolescents?), descriptive statics (mean and standard deviation) calculated for participants' responses on the five facets of the mindfulness scale (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience).

**Table 1: Descriptive Statics of Participants' level of mindfulness and five facets in descending order.**

Rank	No.	Mindfulness Facets	Mean	Std. Deviation	Level
1	5	<b>Non-judging</b>	3.50	0.684	Medium
2	4	<b>Describing</b>	3.39	0.540	Medium
3	3	<b>Act with awarness</b>	3.34	0.496	Medium
4	2	<b>Observing</b>	3.05	0.253	Medium
5	1	<b>Non-reactivity</b>	2.92	0.387	Medium
		<b>Overall</b>	3.27	0.309	Medium

Table (1) shows that participants have a medium level of mindfulness, the non-judging facet has the highest mean and ranked the first, while non-reactivity with inner experience ranked last with the lowest facet mean.

To answer the second question (Are there significant statistical differences in the level of mindfulness among adolescents due to gender or academic achievement?), descriptive statics (mean and standard deviation) were calculated for participants' responses on the mindfulness scale according to gender and academic achievement level, as illustrated in Table (2).

**Table 2: Descriptive Statics of Adolescents' level of mindfulness according to gender and academic achievement level.**

		Mean	Std. Deviation	Frequency
<b>Gender</b>	<b>Male</b>	3.22	0.313	178
	<b>Female</b>	3.30	0.302	212
<b>Academic Achievment</b>	<b>Accepted</b>	3.08	0.476	15
	<b>Good</b>	3.25	0.316	79
	<b>Very Good</b>	3.24	0.291	186
	<b>Excellent</b>	3.34	0.294	110

Table (2) illustrates that there are relatively clear differences in the mean and standard deviation of adolescents' mindfulness level among gender and academic achievement level categories. To illustrate the statistically significant differences Two-Way ANOVA test was applied, as shown in Table (3).

**Table 3: Two- Way ANOVA test of differences in adolescents' level of mindfulness according to gender and academic achievement level.**

	Sum of Squares	df	Mean Square	F	Sig.
<b>Gender</b>	0.491	1	0.491	5.329	0.022
<b>Academic Achievement Level</b>	1.049	3	0.350	3.791	0.011
<b>Error</b>	35.504	385	0.092		
<b>Overall</b>	37.226	389			

According to Table (3), there are statistically significant differences in the mindfulness level among adolescents due to gender in favor of female students. Likewise, there are statistically significant differences in the mindfulness level among adolescents due to academic achievement levels. To reveal the source of variance among groups' results the Scheffe's post hoc test was applied, as shown in Table (4).

**Table 4: Scheffe test of differences Source in adolescents' level of mindfulness according to academic achievement level groups.**

	Mean	Accepted	Good	Very Good	Excellent
<b>Accepted</b>	3.08				
<b>Good</b>	3.25	0.18			
<b>Very Good</b>	3.24	0.17	0.01		
<b>Excellent</b>	3.34	0.26*	0.09	0.09	

\* Significant at level ( $\alpha = 0.05$ )

Table (4) indicates that there are statistically significant differences in the mindfulness level of adolescents attributed to academic achievement levels among students granted an excellent level and accepted level in favor of students who granted an excellent level.

Finally, the results of the third question (To what extent do the components of mindfulness (observation, description, conscious action, non-judgment of inner experience, lack of interaction with inner experience) contribute to predicting and explaining moral anxiety in adolescents?). Pearson correlation coefficient was applied to answer this question, in which the correlation measured among participants' responses on the mindfulness scale and moral anxiety scale as illustrated in Table (5).

**Table 5: Pearson correlation coefficients among participants' scores in mindfulness scale and moral anxiety scale.**

Mindfulness	Moral Anxiety
<b>Observing</b>	Pearson Coef. -0.125*
	Sig. 0.013
	Frequency 390
<b>Describing</b>	Pearson Coef. -0.212(**)
	Sig. 0.000
	Frequency 390
<b>Acting with awareness</b>	Pearson Coef. -0.292(**)
	Sig. 0.000
	Frequency 390
<b>Non-reactivity with inner experience</b>	Pearson Coef. -0.152(**)
	Sig. 0.003
	Frequency 390

<b>Non-judging of experience</b>	Pearson Coef.	-0.340(**)
	Sig.	0.000
	Frequency	390
<b>Overall</b>	Pearson Coef.	-0.392(**)
	Sig.	0.000
	Frequency	390

\*Significant at level ( $\alpha = 0.05$ )

\*\*Significant at level ( $\alpha = 0.01$ ).

Table (5) reveals a significant inverse correlation between mindfulness and moral anxiety, similar to negative correlations between mindfulness facets (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience) and moral anxiety among adolescents. The hierarchical regression analysis was conducted to evaluate the contribution of mindfulness facets to interpret and predict moral anxiety among adolescents, as shown in table (6).

**Table 6: Results of hierarchical regression analysis of mindfulness facets on the moral anxiety scale.**

Predicted Variable	Determination Coefficient	F	Sig. (F)	Mindfulness Facets	Standard Beta	T	Sig.
<b>Moral anxiety</b>	0.176	23.4	0.000	<b>Non-reactivity</b>	-0.148	-3.131	<b>0.002</b>
				<b>Observing</b>	-0.041	-0.820	0.413
				<b>Acting with awareness</b>	-0.193	-3.323	<b>0.001</b>
				<b>Describing</b>	-0.038	-0.686	0.493
				<b>Non-judging</b>	-0.246	-4.842	<b>0.000</b>

As illustrated in Table (6), the determination coefficient of mindfulness facets (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience) is statistically significant to explain moral anxiety reduction by 17.6%. Mindfulness facets contribute to moral anxiety reduction among adolescents by standard Beta of the regression coefficient. Accordingly, moral anxiety reduces by (0.246) due to the increment of one standard unit of non-judging of experiences, by (0.193) corresponding to one standard unit increment of acting with awareness, and by (0.148) corresponding to one standard unit increment of non-reactivity with inner experiences. Contrary, two facets of mindfulness (describing and observing) do not contribute to reducing moral anxiety among adolescents.

## Discussion

The results show that adolescents have a medium level of mindfulness, considering mindfulness as a cognitive constituent that developed with aging, acquired experiences, and adopted strategies to cope and deal with various attitudes and experiences. Adolescents, at this age, are still developing psychologically and cognitively. It is assumed that daily life and educational acquired experiences would help adolescents to advance a balance of psychological and cognitive development to achieve a clear vision of their selves and emotions, which turns into a higher level of mindfulness. This result is consistent with the study of (Neff, 2003 and Brown et al., 2007) who stated that mindfulness is experienced and acquired by experiences.

However, Female students have shown a higher level of mindfulness than male students. This result is incompatible with the findings obtained by (Sabir et al., 2018 and Weinstein et al., 2009) which reported no significant differences in mindfulness due to gender. This may be attributed to the nature of the social upbringing in the conservative Arab society that gives males an extra measure of indulgence, which in turn hinders the ability of the male adolescent to develop normal growth psychologically and cognitively and strengthen his mindfulness. Therefore, he becomes less able to control his internal experience, observation, description, and acting consciously. Adolescents with high academic achievement attain a higher level of mindfulness due to the quantitative and qualitative experiences they had. This undoubtedly is reflected in their self-esteem and self-confidence and make them more able to observe, describe and control internal experiences and act

consciously. Thus, they achieve a higher level of mindfulness.

Finally, the results of this study approved the inverse association between all facets of mindfulness (observing, describing, acting with awareness, non-judging of experience, and non-reactivity with inner experience) and moral anxiety among adolescents, indicating that any increment of mindfulness level is corresponding to a reduction in moral anxiety. In which non-judging of experience and acting with awareness significantly contribute to reducing moral anxiety among adolescents. This is explained by the embedded cognitive process involving non-judging inner experiences and acting with awareness, which manages psychological threaten stimulus and achieves objective consciousness of situation and inner experiences thereby regulate expression of thoughts and feelings without the need to suppress or avoiding. Furthermore, Mindfulness facets provoke higher positive predictions rather than negatives in return reducing an individual's moral anxiety. Mindfulness declines spontaneous and impetuosity reactions to threatening stimuli; it enables the individual to adopt objective perspectives rather than self-standpoints (Cernetic, 2016).

These findings coincide with the results of previous studies such as study of (Lykins & Baer, 2009), which reported a positive effect of mindfulness on emotional regulation and coping with fear, anxiety and psychological distress, the study of (Giluk, 2009) and (Dekeyser et al., 2008) which emphasized the negative relationship between mindfulness and general anxiety and particularly social anxiety, study of (Rasmussen & Pidgeon, 2011) and (Baer et al., 2006) which indicated to the negative association between mindfulness and general psychological symptoms, study of (Cash & Whittingham, 2010) Which indicated the negative correlation between mindfulness and depression, study of (Brown & Ryan, 2003) which revealed positive associations between mindfulness and independent, efficiency and optimism, study of (Grow et al., 2015) which showed effective of mindfulness in self-acceptance and reducing anxiety and depression, and the study of (Araas, 2008) which stated the impact of mindfulness on inclining psychological distress.

### **Conclusion**

The study aimed to explore the mindfulness level and the impact of gender and academic achievement level on mindfulness and determine the relations combined mindfulness and moral anxiety among adolescents in Arabian societies. The results revealed that adolescents have a medium level of mindfulness, female students surpass male students in mindfulness, and higher academic achievement demonstrates a higher level of mindfulness compared to lower academic achievement students. Results approved the inverse relationship between mindfulness and moral anxiety; three mindfulness facets out of five (Non-judging experience, acting with awareness, and non-reactivity with inner experience) contribute to reducing moral anxiety among adolescents. The study introduced several recommendations and suggestions including the necessity of preparing enrichment strategies through energetic and standardized training programs aim to increase mindfulness levels among adolescents, which are supposed to positively influence mental and emotional aspects. The researchers highlight the need for further studies and research to conduct the correlation between mindfulness and different related psychological, emotional, and behavioral variables.

The theoretical significance of the study driven from the scarce of studies investigated the relationships among mindfulness and moral anxiety in the Arabian culture according to researchers' knowledge. Thus, the study attempts to enrich the scientific content and drives empirical evidence. In the context of practice, the study results may help decision-makers in the educational institutes to introduce convenient plans and strategies that contribute to promising appropriate educational environments for adolescents. This study hoped to stimulate further studies conducting mindfulness and its association with different variables.



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