

## The relationship between mindfulness and metacognitive beliefs with emotional intelligence

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### Abstract

**Background:** Emotional intelligence is a set of teachable abilities and skills that prepare people for the sustainability and success in life. The purpose of the present study was to predict the emotional intelligence based on metacognitive beliefs and mindfulness beliefs in the students.

**Methods:** A total of 341 students were selected from Islamic Azad University, West Islamabad branch, using random cluster sampling from different university majors at the faculty of Social Sciences. They responded to Bar-Anne's Emotional Intelligence Questionnaire, the short form of the Wells Meta-Cognition Questionnaire, and Baer et al. Mindfulness Questionnaire. Data were analyzed using Pearson correlation coefficient and stepwise regression.

**Results:** Among the participants 200 (67.5%) were girl students. the age of the participants ranged between 18 and 52 years old. Also 254, (78%) had Bachelor's degree and 87 (21.97%) had Master's degree. Moreover, 105 (77.33%) were married. The mean (SD) of mindfulness were 107.3 (5.12), meta-cognitive beliefs 47.8 (5.01), and emotional intelligence 85.9 (13.43), respectively. The results of regression analysis showed that metacognitive beliefs were independent predictor of students' emotional intelligence ( $P < 0.001$ ,  $F = 34.59$ ). Metacognitive beliefs predicted a total of 21% of students' emotional intelligence.

**Conclusion:** Considering the findings of the present study, it can be stated that more attention should be paid to metacognitive beliefs as an independent predictor of emotional intelligence.

**Keywords:** Metacognitive Knowledge; Mindfulness; Emotional Intelligence

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### Introduction

Psychologists have defined intelligence as the ability to function effectively in life. Smart people are those who are driven by the knowledge and skill of experience to efficiently manage the tasks of everyday life. One of the most important aspects of intelligence is to accept global dynamic changes, environmental changes, skills, and knowledge from past experiences that are

undeniable and challenging. Effective information includes the use of existing learning systems, the expansion of existing knowledge, the analysis of new conditions, and the development of new conditions and solutions that help to improve the quality of the environment (1).

Today, the various types of intelligence are important and influential in various aspects of life. Carl Albert considers the social

intelligence as a good behavior in dealing with others and gaining their cooperation, and also believes that this intelligence includes awareness of situations and social behavior system that control them and a knowledge of interaction styles and strategies that can help a person to accomplish his goals in dealing with others (2).

Emotional intelligence is among the latest developments in understanding the relationship between cognition and excitement. In fact, this concept encompasses a set of social skills and competences that affect one's ability to recognize, understand and manage emotions, problem solving and adaptability, and effectively adapt the individual to the needs, pressures, and problems of life (3).

Emotional intelligence is one of the components that can play an important role in the relationship of people. According to Golman et al., emotional intelligence is an indispensable condition in the organization. Recently, some scientists have also found that emotional intelligence is more important than IQ for an employee. Today, emotional intelligence is defined as a kind of intelligence which includes an accurate understanding of individual emotions and an accurate interpretation of the others' emotional states (4). Emotional intelligence evaluates the individual emotionally; this means how much the individual is aware of his emotions and how controls them. A noteworthy point about the emotional intelligence is that emotional intelligence capabilities are not intrinsic: they can be learned (5).

Different definitions from mindfulness reflect three basic characteristics: A) attention and awareness focus on the present time; b) intention or purpose, which adds the motivational component to the person's attention and behavior; c) an attitude that shows how an individual pays attention or the situation that a person has when he takes notice, such as interest,

curiosity, disrespect, acceptance, and is responsive (6).

The mindfulness enables an individual to create a radically different relationship with the experience of inner feelings and external events by creating every moment awareness and behavioral orientation based on wise responsibility rather than reactive responsiveness. Mindfulness can effectively control emotional reactions through cortical inhibition of the limbic control system with purposeful use of the high functions of the mind such as attention, awareness, kindness, curiosity, and compassion (7). Therefore, individuals with higher levels of mindfulness show less negative self-concept and believe they are capable of abandoning such thoughts. Using mindfulness can use metacognitive mode of processing and increase flexibility in responding to threats (8).

Given the importance of the mindfulness levels and the use of metacognition, a closer look at the structures that are associated with it helps in the nature of metacognitive levels, and also if a strong relationship can be found, it can help predict the levels of metacognition and mind use with the respect to emotional intelligence. As mentioned, two important variables that seem to have an effective relationship with levels of emotional intelligence use are metacognitive beliefs and mindfulness. Accordingly, the present study was conducted to study the relationship between mindfulness and meta-cognitive beliefs with emotional intelligence in Islamic Azad University of Islamabad, West Islamabad Branch, in the academic year 2016-2017.

### **Methods**

This was a descriptive cross sectional study. The statistical population of the study includes all students of Islamic Azad University, West Islamabad branch, in the academic year 2016-2017.

The population was selected using cluster random sampling method, among the colleges of the Faculty of Humanities and

the majors of Psychology, Literature, Law, Physical Education and Accounting.

Then, based on Cochran's formula, 341 individuals were randomly selected as the sample size and responded to the research questionnaires.

#### *Five-Facet Mindfulness Questionnaire (FFMQ)*

This questionnaire is the result of factor analysis on five questionnaires of mindfulness, including Mindful Attention Awareness Scale (MAAS), Fryberg's Mindfulness Inventory Questionnaire (FMI), Cognitive and Affective Mindfulness Scale (CAMS), and Mindfulness Questionnaire (MQ). The analysis identifies the five factors that evaluate the different aspects of mindfulness. These factors include observation, description, action from consciousness, lack of judgment about inner experience, and the lack of reaction to inner experience. These factors are measured through a self-report questionnaire using 39 questions. Responses are encoded based on a five-point Likert scale of "never or very rarely correct" to "often or always correct". The five-dimensional scale has a high internal consistency (Cronbach's Alpha ranged from 0.75 to 0.91) (9). During Ghasemi Jobaneh et al. study, a brief form of the Mindfulness Questionnaire was first translated into Persian and then its validity and reliability were examined. Validity along with self-control scale ( $r=0.69$ ) and emotional regulation ( $r=0.68$ ) were reported at a significant level of 0.01 (10).

#### *Short Form Meta-Cognition Questionnaire*

This test was revised to measure metacognitive beliefs. The questionnaire has 30 items and each participant responds to the items on a four-point Likert scale: (I disagree, I agree somewhat, I agree so-so, I strongly agree). These options are scored as 1, 2, 3, and 4, respectively. The short form of the metacognitive questionnaire measures five components: Cognitive trust, positive beliefs about concern, cognitive self-consciousness, negative

beliefs about the uncontrollability of thoughts and danger, and beliefs about the need for control thoughts. The Cronbach's alpha coefficient of meta-cognition questionnaire (after one month) is 0.73. Correlation of short form of metacognitive questionnaire is significant with Spielberg State-Trait Anxiety Inventory ( $r=0.53$ ), Penn State Worry Questionnaire ( $r=0.54$ ), and Badoo Practical Thinking Questionnaire ( $r=0.49$ ) (11).

In Iran, in the research by Abolqasemi et al., Cronbach's alpha coefficient of the questionnaire was reported to be 0.81 (12).

#### *Emotional Intelligence Scale*

Emotional Intelligence Scale was developed by Bar-on (9) and includes 31 questions that focus on measuring the attention to feelings, realizing the emotions and mood improvement graded on a five-point Likert scale, ranging from completely agree to completely disagree; 13 questions to measure the attention to feelings, 11 questions to measure realizing the emotions, and 7 questions to measure the component of mood improvement. The scoring scale of the questions ranges from 0 to 10. The validity of this questionnaire, according to the study by Salovey et al., has been reported to be over 70%. Also, the Cronbach's alpha was reported as 0.93 (13).

In Iran, the reliability of the questionnaire was investigated by Samui et al. and reported as 0.93 (14).

Then, the mindfulness, meta-cognitive beliefs and emotional intelligence questionnaires were distributed among the students at the university. Primarily, we provided some explanations about the subject and objectives of the research as well as the ethical considerations and confidentiality of the names and their responses. When the participants filled out the questionnaires, they were collected and the data was analyzed using SPSS, version 23.

## **Results**

Among the participants 200 (67.5%) were female. the age of the participants ranged  
 Table 1. Distribution frequency and percentage of population variables of participants

		Female N (%)	Male N (%)
Age category	18-28	94 (21.7)	66 (16.5)
	29-38	65 (19.7)	38 (9)
	39-48	25 (14)	24 (5.3)
	49-58	18 (12.1)	13 (1.7)
	Total	200 (67.5)	141 (32.5)

Table 2. Mean and standard deviation related to the scores of mindfulness, metacognitive beliefs, and emotional intelligence

Variables	Mean (SD)
Mindfulness	107.3 (5.12)
Metacognitive beliefs	47.8 (5.01)
Emotional Intelligence	85.9 (13.43)

between 18 and 52 years old. Also 254, (78%) had Bachelor's degree and 87 (21.97%) had Master's degree. Moreover, 105 (77.33%) were married.

The students' age ranged between 18 and 52, and 200 were girls (67.5%) and 141 boys (32.5%). The highest frequency was for the girls aged 18-28, with 94 (7.21%) participants (Table 1).

The means and standard deviations of mindfulness, metacognitive beliefs, and emotional intelligence are illustrated in table 2.

As the results of Table 3 show there was a significant correlation between both mindfulness and metacognitive beliefs with emotional intelligence.

Metacognitive beliefs were independent predictor of students' emotional intelligence ( $P < 0.001$ ,  $F = 34.59$ ). Metacognitive beliefs predicted a total of 21% of students' emotional intelligence (Table 4).

### Discussion

According to the findings, there was a positive and significant relationship between students' mindfulness and metacognitive beliefs. The results of different studies are similar to those of the present study (15-18). This can be explained in that people with mindfulness have less negative psychological symptoms and try to observe and describe things in the same way that they are and happen, avoid evaluating and judging things and treating with their awareness and insights in their everyday activities. People who get higher scores on mindfulness are most likely present at the present time, are alert and aware of internal and external phenomena and, instead of reactive and non-constructive encounter, they counteract in a constructive and actionable way against the life events. As a result, they have a better performance in various aspects of life, especially in their studies.

Table 3. Pearson correlation coefficient related to mindfulness and metacognitive beliefs with emotional intelligence

	Emotional intelligence	
Variables	Pearson correlation coefficient	$P^*$
Mindfulness	0.35	<0.001
Metacognitive beliefs	0.64	<0.001

\*Significance level=99%

Table 4. Results of stepwise regression of emotional intelligence score based on metacognition and mindfulness

Predictor variable	SS	df	F	R <sup>2</sup>	P
Metacognitive beliefs Regression	1925.70	1	34.59	0.21	<0.001

There was a positive and significant relationship between metacognitive beliefs and emotional intelligence. The findings are consistent with the results of other research findings (16, 19-24). The role of emotional intelligence as a regulating component in cognitive issues and designing the emotional and social adaptation programs have a positive impact on learner's academic and social performance regarding the control of emotions in dealing logically and correctly with academic pressures and emotional problems. In this regard, many psychologists, counselors, and scholars have recently found interest in it.

The present study investigated the variables mentioned among students. The students' academic performance can be enhanced by assessing their meta-cognitive awareness of reading strategies and subsequently determining the strengths and weaknesses of the study, and knowing about the state of their emotional intelligence. In general, the available data clearly show that some meta-cognitive beliefs and thought control strategies are positively correlated with some psychological variables when evaluated as the qualitative variables. These findings can be explained in that uncontrollable beliefs and the risk of using concern strategies for controlling thoughts lead to fewer personal control feelings in individuals.

Considering the role and importance of emotional intelligence in various parts of life such as education, occupation, social environment, and mental health, which help us to identify our own and others' feelings, skills in helping to build healthy relationships with others and sense of responsibility towards tasks, the learners must achieve proper growth in controlling

emotions in addition to using meta-cognitive and mindfulness strategies in order to achieve a high level of academic performance and optimal learning.

If an individual is emotionally intelligent, he can effectively have emotional answers and balance them and, therefore, protect the destructive effects of stress on the educational, occupational, and social responsibilities. In this regard, it is suggested that social and emotional skills be taught to students alongside the lessons learned, because it provides them with a wide range of capabilities and not only positively affects their academic performance, but it also has a positive impact on their subsequent career and social performance.

#### *Conflict of interest*

Authors declare no conflict of interests.

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