

# Emotional Intelligence and Depressive Symptoms as Predictors of Happiness Among Adolescents

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## Abstract

**Background:** Given that happiness is an important construct to enable adolescents to cope better with difficulties and stress of life, it is necessary to advance our knowledge about the possible etiology of happiness in adolescents.

**Objectives:** The present study sought to investigate the relationships of emotional intelligence, depressive symptoms, and happiness in a sample of male students in Tehran, Iran.

**Materials and Methods:** This cross-sectional study was conducted on a sample of high school students in Tehran in 2012. The participants comprised of 188 male students (aged 16 to 19 years old) selected by multi-stage cluster sampling method. For gathering the data, the students filled out assessing emotions scale, Beck depression inventory-II, and Oxford happiness inventory. Data analysis was carried out using descriptive and analytical statistics in statistical package for social sciences (SPSS) software.

**Results:** The findings showed that a significant positive association existed between high ability of emotional intelligence and happiness ( $P < 0.01$ ). Conversely, the low ability of emotional intelligence was associated with unhappiness ( $P < 0.01$ ), there was a positive association between non-depression symptoms and happiness ( $P < 0.05$ ), and severe depressive symptoms were positively associated with unhappiness ( $P < 0.01$ ). High ability of emotional intelligence ( $P < 0.01$ ) and non-depression symptoms ( $P < 0.05$ ) were the strongest predictors of happiness.

**Conclusions:** These findings reinforced the importance of emotional intelligence as a facilitating factor for happiness in adolescences. In addition, the findings suggested that depression symptoms may be harmful for happiness in adolescents.

**Keywords:** Depression, Emotional Intelligence, Iranian Students, Wellbeing

## 1. Background

So far, many studies have been undertaken about unhappy people; individuals with depression, anxiety or other mental disorders (1, 2). To the best of our knowledge, limited studies have been conducted on happy individuals. In recent years, some psychologists have concentrated on positive psychology, such as positive viewpoints in coping with stressors, depressive symptoms, and other difficulties in life (3). Such studies about behavioral and cognitive features of happy individuals can be useful for the treatment of individuals with mental disorders. Additionally, happiness is considered to be particularly important due to its contribution to adolescents' future success (4). Regarding the highly valued importance of happiness, we investigated the association of happiness with emotional intelligence and depressive symptoms in Iranian high school boys.

Happiness, which has been emphasized as one of the major features of positive psychology (5, 6), is recognized as an emotion; it is a mental evaluation of events with positive emotion associated with three components: rare frequencies of negative effect, repeated happenings of positive effect, and a high level of life satisfaction (1).

Therefore, happiness includes the emotional and cognitive aspects. It is one of the cognitive-motivational constructs; positive inner experience and motivator play important roles in mental and physical health of adolescents by preventing and protecting them to engage in mental and physical disorders (7).

It is evident from previous studies that happiness is an emotional-cognitive construct; therefore, it is possible that emotional intelligence is one of the factors that create happiness (8, 9). According to the model of Mayer et al. (10), emotional intelligence was defined as a kind of social intelligence, which includes the ability to monitor one's emotions and others' emotions, manipulating the information for managing one's thoughts and actions, regulating emotion in self and others, and utilizing suitable emotions to actively and effectively solve daily difficulties and obstacles (11). Attention to emotions refers to an individual's tendency to notice and ponder on his/her feelings and emotions. Emotional intelligence refers to the ability to discriminate between positive and negative emotions. In addition, emotional intelligence can repair negative emotions even

in mood state (12). According to the mental ability model created by Mayer et al. (2004) (10), individuals with greater emotional intelligence reported better emotion regulation and low levels of stress and experienced higher levels of happiness (13). Furthermore, individuals with high emotional intelligence have advantages in terms of greater social competence and richer social networks; advantages that enhance a sense of happiness. A large and growing body of literature has shown that a positive association existed between happiness and emotional intelligence (14-16). Similarly, Griess (17) concluded that happiness was positively associated with optimism and hopefulness among students. Other studies have shown that happiness has been positively associated with perceived life satisfaction, high level of emotional intelligence, good interpersonal ties, and negatively associated with anger, depression, and anxiety (5). According to the world health organization (WHO), around 350 million people suffer from depression throughout the world (18). Several studies have found that the prevalence of depression in Iranian students varies from 36% to 66% and the prevalence of depression in the Iranian population varies between 15 - 25% (19, 20). The WHO estimates that depression will become the leading global mental-health problem by 2020, if urgent action is not taken (18). Depression has a detrimental effect on the lives of adolescents with this disorder (18). Previous studies showed that depression was associated with low positive affect and high negativity (21-23). Seligman et al. explained that while happiness increased in adolescents, the symptoms of depression decreased (22). Therefore, the scientific understanding of the predictors of happiness has an important influence on mental and physical health in adolescents. Studies have reported that individuals who are high in emotional intelligence are more likely to report happiness, as well as occupational satisfaction, life satisfaction, and mental and physical health (24-26).

## 2. Objectives

This paper sought to examine the associations of high, middle, and low levels of emotional intelligence as well as levels of depression with happiness in Iranian male students and to examine the strongest predictor of happiness among male students. Furthermore, the happiest students were compared to unhappy students on features such as family income, family structure, emotional intelligence, and depression.

## 3. Materials and Methods

### 3.1. Ethical Consideration

The study was approved by the ethics committee of university of Tehran, Tehran, Iran. The participants were informed about the research purposes and that their participation in this study was voluntary and anonymous and they could withdraw from the study at any time.

### 3.2. Participants

After calculation using the Cochran formula, approximately 188 high school male students with the ages ranging from 16 - 19 years (mean = 17.1 ± 0.93) in Tehran were chosen. There were 55 high schools in the 11<sup>th</sup> district of ministry of education in 2011-2012. Six schools were chosen randomly and one class was chosen from each school. Of the 188 students, 30% (n = 56) were in freshman, 23% (n = 43) sophomore, 25% (n = 47) junior, and 22% (n = 41) senior years of high school. Seventy-two percent of the students reported that they lived with both parents. The rest of the students reported they lived with their mother (14%), father (8%), and others (6%).

### 3.3. Procedure

The data was collected from six high schools located in district 11 of Tehran, with official authorization of Iranian ministry of education. Data collection at each school was performed after agreement and permission of school principal. Each student in selected classes was chosen as a participant in this study. Data were collected during one of the regularly scheduled classes. The packs of questionnaires were distributed among the students. Each pack contained an introductory letter and four questionnaires (one of them was a demographic questionnaire). A total of 210 questionnaires were distributed among the students, of which 188 (89.5%) usable questionnaires were returned and 12 students (5.7%) refused to complete the questionnaires.

### 3.4. Translation of the Questionnaires

The questionnaires were translated from English to Farsi. To ensure that the Farsi translation properly reflected the meaning in the English version, back-translation was used with the help of three experts in the English and the necessary modifications were applied as well.

### 3.5. Pilot Study

A pilot study was conducted on 40 students. This study was conducted to determine the reliability of the tools. The Cronbach's alpha coefficients for the questionnaires in the pilot study were as follows: 1) assessing emotions scale (AES)  $\alpha$ : 0.88; 2) Beck depression inventory-II (BDI-II)  $\alpha$ : 0.80; and 3) The Oxford happiness inventory (OHI)  $\alpha$ : 0.75. Those students who participated in the pilot study were excluded from the main study sample.

### 3.6. Instruments

#### 3.6.1. Assessing Emotions Scale

This is a 33-item questionnaire that measures emotional intelligence. All the questions are in 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Total scores can be calculated by reverse coding items 5, 28 and 33, and then summing up all the items. The total score is from 33 to 165. A high score indicates greater

ability of emotional intelligence. AES was divided into three subscales, appraisal of emotions, utilization of emotions, and regulation of emotions. Schutte et al. (27) suggested using the total scores of AES rather than scores of subscales. AES had a good internal consistency with  $\alpha = 0.90$  and the test-retest reliability was  $\alpha = 0.87$ . Several studies have reported that this questionnaire has had powerful convergent and divergent validities (28, 29).

### 3.6.2. Beck Depression Inventory-II

This 21-item questionnaire assesses the depression symptoms during a fortnight. All the questions are in 4-point Likert scale from 0 to 3 (27). The BDI-II had a good internal consistency with  $\alpha: 0.92$  (30). Several studies have reported that BDI-II has had powerful construct validity (31-33). The reliability and concurrent validity of the BDI-II-Persian as a measure of depressive symptoms in nonclinical samples have been supported too (32).

### 3.6.3. The Oxford Happiness Inventory

This is a 29-item questionnaire that assesses happiness in respondents. All the questions are in 6-point Likert scale from 1 = strongly disagree to 6 = strongly agree. The total score is from 29 to 174. A high score indicates greater happiness. The OHI had a good reliability with  $\alpha: 0.92$ , and it had a strong internal consistency to measurement of happiness in the respondents ( $P < 0.001$ ) (34). Several studies have reported that this questionnaire has had good validity and reliability (16, 35, 36).

### 3.7. Demographic Survey

Demographic information was collected to measure the different features of an individual's background. The participants completed a demographic survey about their age, educational level, family income, and family structure.

### 3.8. Data Analysis

In this study, descriptive statistics (average, standard deviation, frequency) and inferential statistics (the Pearson's correlation coefficient and multivariate regression analysis) were used.

### 3.9. Data Preparation

The missing data for items (ranging from 0.88% to 1.86%) was addressed with the series mean method in statistical package for social sciences (SPSS) software. Outliers 4.7% ( $n = 10$ ) were excluded from the analyses (those scoring 3 standard deviations from the mean). The data were considered to be normal, because the skewness values were from  $-0.98$  to  $0.62$  and the kurtosis values were from  $-1.65$  to  $0.13$  for all the variables. Byrne (2010) stated that if the skewness value was between  $-1$  to  $+1$  and the kurtosis value is between  $-2$  to  $+2$ , the data were considered to be normal (37).

## 4. Results

The scores of the three questionnaires were standardized and Z scores for each of the participants were added. The subjects were divided into three groups of approximately equal sizes. Table 1 summarizes the demographic information of three happiness groups. The happiest students including 47 (25%) students, middle happiness group including 78 (41.5%) students, and unhappy group including 63 (33.5%) students were compared regarding some factors such as emotional intelligence, depression, family income, and family structure.

The correlations of the levels of emotional intelligence and depression with three levels of happiness are presented in Table 2.

A multivariate regression analysis was conducted to predict the strongest predictors of happiness among male students (Table 3). The findings demonstrated that high and middle levels of emotional intelligence were the strongest predictors of happiness among the male adolescents.

**Table 1.** Demographic Characteristics of Three Happiness Groups

Variables	Group (n = 188)		
	Unhappy	Semi-Happy	Happy
<b>Emotional intelligence</b>			
Low	48 (70.6)	16 (23.5)	4 (5.9)
Middle	14 (17.9)	44 (56.4)	20 (25.6)
High	1 (2.4)	18 (42.9)	23 (54.8)
<b>Depression</b>			
Normal	3 (4.5)	31 (46.3)	33 (49.3)
Moderate	28 (35.0)	40 (50.0)	12 (15.0)
Severe	32 (78.0)	7 (17.1)	2 (4.9)
<b>Family income</b>			
High	15 (32.6)	13 (28.3)	18 (39.1)
Middle	28 (28.0)	48 (48.0)	24 (24.0)
Low	20 (47.6)	17 (40.5)	5 (11.9)
<b>Family structure</b>			
Single parent	13 (56.5)	8 (34.8)	2 (8.7)
Parents alive	41 (27.3)	67 (44.7)	42 (28.0)
Divorced	9 (60.0)	5 (33.33)	1 (6.67)

Abbreviation: EI, emotional intelligence.

**Table 2.** Correlations of Three Levels of Emotional Intelligence and Depression With Levels of Happiness

Variable	Group		
	Unhappy	Semi-Happy	Happy
<b>Emotional intelligence</b>			
Low	0.591 <sup>a</sup>	-0.274 <sup>a</sup>	-0.332 <sup>a</sup>
Average	-0.278 <sup>a</sup>	0.255 <sup>a</sup>	0.112 <sup>b</sup>
High	-0.354 <sup>a</sup>	0.105 <sup>b</sup>	0.369 <sup>a</sup>
<b>Depression</b>			
Normal	-0.458 <sup>a</sup>	0.417 <sup>a</sup>	0.721 <sup>b</sup>
Moderate	0.027	0.149 <sup>b</sup>	-0.199 <sup>a</sup>
Severe	0.498 <sup>a</sup>	-0.262 <sup>a</sup>	-0.245 <sup>a</sup>

<sup>a</sup>p < 0.01.<sup>b</sup>p < 0.05.**Table 3.** Results of Multivariate Regression Analysis of Levels of Emotional Intelligence, and Depression to Predict Emotional Intelligence<sup>a</sup>

Variables	B	Beta	P Value
Average emotional intelligence	0.490	0.318	.000
High emotional intelligence	0.696	0.381	.000
No depression symptoms	0.327	0.206	.012
Severe symptoms of depression	-0.265	-0.144	.056

<sup>a</sup>Adjusted R square = 0.41; F (6,181) = 22.51.

## 5. Discussion

The findings of this study proposed emotional intelligence and non-depression symptoms to be the strongest predictors of happiness among male students. The findings suggested that higher emotional intelligence was positively associated with happiness. By finding a relationship between depressive symptoms and emotional intelligence in a sample of adolescents, the present findings confirmed the previous results and improved them in two main ways.

Firstly, the present findings indicated that emotional intelligence was a facilitating factor for happiness (8, 9). Studies have indicated several facilitating factors for happiness which can increase the likelihood of happiness (1). Emotional intelligence is one of the psychological factors for happiness (9). The results of this study indicated that emotional intelligence acted as a facilitator and in relationship with happiness, it could enhance predictive validity.

Secondly, the most obvious finding to emerge from this study was that non-depressive symptoms were associated with happiness and severe depressive symptoms were associated with unhappiness, which is in accordance with the results of Cheng and Furnham (21). In addition, non-depressive symptom was one of the predictors of happiness among students. One factor that was common in the three studied variables was that each variable was related to an emotional area. Therefore, there were interactions between these variables, which meant that emotional in-

telligence had a positive effect on happiness and reduced depressive symptoms. Therefore, emotional intelligence plays a key role in increasing happiness and reducing depressive symptoms (9).

These findings pointed out that parental divorce had a significant negative effect on adolescents' happiness. Adolescents living with a single parent perceive low levels of happiness compared with adolescents with both parents alive (38, 39). In this regard, Parsons likened family as the factory where the personality of children is made and parents play an important role to create the child's personality (39).

There were two significant implications for mental health specialists in the present study. First, when assessing an individual's happiness, it is important to consider the presence of emotional intelligence and depressive symptoms in addition to other factors. Secondly, emotional intelligence training can alter the effect of unhappiness-related factors; these may be the significant factors to incorporate into happiness programs. The present findings suggested that developing emotional intelligence may increase the likelihood of happiness. In addition, the findings from this study can be fruitful for parents and family members to nurture a generation with more perceived happiness and mental health.

One important limitation of this study was its reliance on the self-report questionnaires. Although the measures used in the study were psychometrically adequate, multi-

method approach would be superior and lend incremental validity to the current study. An interview with each participant could overcome this limitation. Furthermore, our samples were restricted to male students and its results cannot be generalized to female students. Finally, this study employed a cross-sectional design and did not allow causal interpretation about the relationships between variables. We hope that the present study can encourage more researches on the relationship between the positive psychological traits and happiness in nonclinical samples to identify the factors positively affecting happiness. Another suggestion for future studies is a comparative study between the happiest and the unhappiest people about their mental health and other features that play important roles in their happiness and unhappiness.

Our findings seemed to highlight the value of emotional intelligence as a facilitator in reaching happiness. They also provided some preliminary indications, suggesting the inclusion of emotional intelligence training as a tool to help students to decrease depressive symptoms as well as for increasing the sense of happiness in adolescents.

### Authors' Contributions

Abbas Abdollahi conceived and designed the evaluation, helped in drafting the manuscript, collected the clinical data, interpreted them, and revised the manuscript. Mansor Abu Talib re-evaluated the clinical data and revised the manuscript. Seyedeh Ameneh Motalebi performed the statistical analysis and revised the manuscript. All the authors read and approved the final manuscript.

### Declaration of Interest

None declared.

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