

# Prediction of Psychological Hardiness Based on Mental Health and Emotional Intelligence in Students

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## ABSTRACT

**Objective:** Psychological hardiness is a protective personality structure against life stresses that plays a major role in resisting stressful events. Thus, the present research aimed to predict the psychological hardiness based on mental health and emotional intelligence in students.

**Methods:** The method applied in the research was a descriptive-correlation type. A total of 348 students of Payame Noor University, Eleshtar branch, studying in the academic year of 2012/13 were selected through random sampling method. Data were collected through the psychological hardiness, mental health, and emotional intelligence questionnaires and were analyzed by the simple correlation coefficient and multiple regressions.

**Results:** Findings revealed that there was a positive and significant relationship between mental health and emotional intelligence and its components (self-motivation, self-consciousness, self-control, social awareness, and social skills) with psychological hardiness. Also, step by step regression results indicated that self-motivation ( $\beta = 0.386$ ), self-control ( $\beta = 0.229$ ), social skills ( $\beta = 0.239$ ), and social consciousness ( $\beta = 0.210$ ) are highly capable of predicting psychological hardiness scores.

**Conclusion:** By promoting psychological hardiness through increasing mental health and emotional intelligence, we can overcome stressful and anxious factors, as well as factors resulting in most psychological problems.

## 1. Introduction

Promotion of the mental health of the academic environment has always been a main dimension of development and optimization of human resources, drawing the attention of the educational departments to healthy physical and thinking forces in recent years. One of the psychological factors that play a major role in predicting and maintaining the physical and mental health of people is the psychological hardiness. Gamerazy and Mattson (1991) have defined the psychological hardiness as a competence process or a successful adjustment against threatening circumstances.

The psychological hardiness will reduce the stressful events and physical and mental arousal resulting from these events, thus leaving a positive impact on peoples' health (Shier, Golby, 2007). Besharat (2007) demonstrated that people with high psychological hardiness handle the stressful conditions better in comparison with people with low psychological hardiness while the former group uses more effective coping strategies. The psychological hardiness protects the youth against the psychological problems and the psychological impacts of the problematic events (Pinkorat, 2009). This issue will lead to a promotion of problem solving skills among people (Salehi Fadardi, Azad and Ne'mati, 2010). It also follows positive growth and changes (Walsh, 2006). Maddi (1990) demonstrated

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**Table 1.** The statistical index like average and standard deviation (Girls, N=158; Boys, N=190).

Groups Variables	Girls, N=158		Groups Variables	Boys, N=190	
	mean	Standard deviation		mean	Standard deviation
Mental health	73.36	5.63	Mental health	75.18	7.03
Emotional intelligence	92.55	16.3	Emotional intelligence	96.21	18.74
Self-motivation	17.22	4.8	Self-motivation	18.84	4.66
Self-awareness	24.6	3.92	Self-awareness	23.22	4.38
Self-control	19.54	5.61	Self-control	21.72	4.61
Social awareness or empathy	16.81	3.55	Social awareness or empathy	18.23	4.41
Social skills	15.11	3.6	Social skills	13.45	4.3
Psychological hardiness	55.78	11.53	Psychological hardiness	59.9	12.11

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in his investigation that hard people are more decisive and active in interpersonal communications and more inclined to people with higher psychological hardiness.

One of the variables affecting psychological hardiness is mental health. Mental health (as one of the 2 health factors) is necessary for a useful, effective, and satisfactory personal life. Mental health of the society, especially the effectual class of people is imperative for dynamism, prosperity, and transcendence of the society (Azadi and Azad, 2011). In fact, mental health is an essential factor for improving the human life quality (WHO, 2001). WHO experts defined mental health as a harmonious and coordinated competence in communication with others, changes, and alteration of the personal and social environment and solving personal contradictions and tendencies rationally, justly, and appropriately. They also maintain that mental health does not merely refer to lack of mental disease rather it is a competence to respond life experiences resiliently and significantly (Salehi, Soleimanizade, Bagheri and Abbaszade, 2007). According to WHO statistics, as many as 52 million people of different ages around the world are suffering from severe mental diseases and as many as 250 million people are grappling with mild diseases. Research based evidence suggest that there is a positive and significant relationship between the psychological hardiness and mental health (Shirbiam et al., 2009; Asgari and Homae, 2009; Azadi and Azad, 2011; Bahadori Khosrowshahi and Nosratabadi, 2012). In fact, hardiness, as a source of internal resistance decreases negative effects of stress and prevents mental and internal disorders to appear. The emotional intelligence applies in education, personal life, and the working environment. Higher emotional intelligence could promote the general life quality as well as personal and social accomplishments (Moosavi et al., 2012). The emotional intelligence has been considered as a success-

ful predictor of professional function and the ability to lead towards success at school (Shiple, Jackson and Segreset, 2010). The emotional intelligence is concerned with peoples' differences of perception, processing, adjustment, and application of emotional information (Mikoljaszack and Lumi et al., 2008).

The emotional intelligence is a sort of emotional processing that includes proper self- and others- appraisal and is an appropriate expression of emotions and compatible adjustment, such that it will give rise to improved life cycle (Salovey et al., 1993). Evidence indicates that higher emotional intelligence is significantly associated with extroversion, resilience, identification of various feelings, coordination of various feelings and their effects on the brain and conducts (Hans, Bianchi, 2008). The emotional intelligence is followed by little use of narcotics and better coping strategies (Erikson et al., 2014) and predicts various dimensions of the educational success (Parker et al., 2004). Research evidence is suggestive of a significant and positive relationship between the emotional intelligence, mental health, and psychological hardiness (Ehyakonnade et al., 2009; Kaveh and Yazdi, 2007).

In fact, the emotional intelligence is based on emotions and affection. People with higher emotional intelligence are physically healthier and in terms of skills of communication are in a better situation. They can better organize their own emotions and experience more happiness (Aghayar and Sharifi Daramadi, 2006). Accordingly, this research seeks to investigate factors affecting the psychological hardiness from the view of mental health and emotional intelligence. In accordance with the effects of the psychological hardiness on life quality and also due to the fact that in the modern world the abilities and welfare of the people is contingent upon the application of existing

**Table 2.** The Pearson correlation coefficient.

Groups	Psychological hardiness	
Variables	R	P
Mental health	0.12	0.025
Emotional intelligence	0.509	0.001>
Self-motivation	0.524	0.001>
Self-awareness	0.390	0.001>
Self-control	0.481	0.002
Social awareness or empathy	0.419	0.001>
Social skills	0.378	0.001>

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resources and amenities, the more efficient these resources are, the countries will be more advanced and effectual and thus, progress and transcendence of that country will be more decisive. Hence, investigating the factors leading to an increase in the psychological hardiness is of high importance. This research answers the following 2 questions: 1. Are emotional intelligence and mental health associated with the psychological hardiness? 2. Which variables of mental health and emotional intelligence do predict the psychological hardiness variance?

## 2. Methods

This research is a descriptive one and of a bivariate correlation and multivariate regression. The statistical population included all students of the Payame Noor University, Eleshtar branch, studying in 2012/13 academic year (4000 people). The research sample of 348 people (158 female students and 190 male students) was selected through random sampling method. The study objectives were explained and after drawing attention and collaboration of the subjects, we administered the psychological hardiness, mental health, and emotional intelligence scales. To analyze data, in addition to descriptive statistics (estimation of average and standard deviation indices), the Pearson correlation coefficient statistical methods and multivariate regression were applied.

### Research tools

To collect data, the following tools were applied.

#### Psychological hardiness scale

This scale was developed and validated by Kiamorsi and his colleagues (1998) with the aim of preparing a scale for measuring the psychological hardiness at the University of Shahid Chamran, Ahvaz. This question-

naire includes 27 items and each item has 4 choices of “never”, “rarely”, “sometimes” and “most often”, which scored from 0 to 3, respectively. Statements of 6, 21, 17, 13, 10, and 7 have a negative factorial charge and reversely scored. The total score of this questionnaire ranges from 0 to 81. Acquisition of higher scores is an indicative of higher psychological hardiness. Ghafoori and Renosefaderly, Kamali and Noori (2008), estimated the validity of this test through synchronized validity with three criteria of general anxiety, depression questionnaire, and Moslo’s self-actualization. The obtained coefficients were 0.65, 0.67, and 0.62, respectively where all the coefficients were significant at  $P < 0.001$ .

#### Mental health scale (GHQ-28)

The mental health scale of Goldberg and Hiller (1979) has 28 questions that measures 4 dimensions of physical, anxiety, social dysfunction, and depression symptoms. Each subtest has 7 questions and the scale questions is scored on 5-choice Likert scale style that ranges from ‘totally agree’ to ‘totally disagree’. Bagheri Yazdi and Mohamadi (2008) reported the reliability value of the scale as 0.85.

#### Emotional intelligence scale

The Shering’s emotional intelligence has 33 items and measures 5 components of self-motivation (7 questions), self-consciousness (8 questions), self-control (7 questions), social awareness or empathy (6 questions), and social skills (5 questions). This scale is set in a form of 5-choice Likert scale. Each subject will receive 6 separate grades where 5 grades are related with each component and 1 grade is the total emotional intelligence. Ehyakonande et al., research (2009) reported the reliability coefficient of the emotional intelligence scale 0.78 by using the Cronbach  $\alpha$ .

**Table 3.** Results of multivariate regression and regression variance analysis (step by step) of the psychological hardiness by the variables of mental health and emotional intelligence

Regression stages	Criterion variable	Predicting variables	Residual predicting variables in the analysis	Multiple correlation coefficients (R)	(R <sup>2</sup> )	F	Sig.
1	Psychological hardiness	Emotional intelligence components	Self-motivation	0.524	0.272	130.836	0.000
2	Psychological hardiness	Emotional intelligence components	Self-control	0.563	0.313	80.221	0.000
3	Psychological hardiness	Emotional intelligence components	Social skills	0.581	0.331	58.344	0.000
4	Psychological hardiness	Emotional intelligence components	Social awareness	0.599	0.351	47.96	0.000

### 3. Results

In this study the information of 348 people (158 female students and 190 male students) was analysed. Table (1), shows the statistical index like average, standard deviation based on the variables in study.

Results of the correlation coefficient between research variables are reported in table, 1. As seen there is a positive and significant relation ( $p < 0.001$ ) between mental health and emotional intelligence (and its components) and there is a positive relation ( $p < 0.005$ ) with psychological hardiness.

In table (3) a step by step multivariate regression analysis was done for specifying the fact whether mental health and emotional intelligence contribute to the students' psychological hardiness. As seen in table (3), the regression analysis was conducted in 4 steps. In the first step, among the predicting variables entering the analysis (emotional intelligence components), based on the highest significance level, only the self-motivation remains in the analysis that explains 27.2% of the variance of the psychological hardiness scores ( $R^2 = 0.272$ ,  $F = 130.836$ ,  $P < 0.01$ ). In the second step, in addition to self-motivation, self-control enters into the analysis that in total these two variables have been assigned 31.1% of the variance of the psychological hardiness scores ( $R^2 = 0.313$ ,  $F = 80.221$ ,  $P < 0.01$ ). In the third step, besides self-motivation and self-control, social skills enters into the analysis that in total these three variables account for 33.1% of the variance of the psychological hardiness scores ( $R^2 = 0.331$ ,  $F = 58.344$ ,  $P < 0.01$ ). In the fourth step, the social awareness also enters into the analysis that in total these four variables have been assigned 35.1

of the variance of the psychological hardiness scores ( $R^2 = 0.351$ ,  $F = 47.96$ ,  $P < 0.01$ ).

Based on the results, Beta regression coefficient ( $\beta$ ) indicates that in the first step, self-motivation ( $\beta = 0.524$ ,  $\text{Sig.} < 0.01$ ) is capable of predicting the psychological hardiness and in the second step, besides self-motivation ( $\beta = 0.367$ ,  $\text{Sig.} < 0.01$ ), self-control ( $\beta = 0.260$ ,  $\text{Sig.} < 0.01$ ) is capable of predicting the psychological hardiness scores. In the third step, besides self-motivation, ( $\beta = 0.421$ ,  $\text{Sig.} < 0.01$ ) and self-control ( $\beta = 0.302$ ,  $\text{Sig.} < 0.01$ ), social skills ( $\beta = 0.165$ ,  $\text{Sig.} < 0.01$ ) is capable of predicting the psychological hardiness scores. In the fourth step, apart from self-motivation, ( $\beta = 0.386$ ,  $\text{Sig.} < 0.01$ ), self-control ( $\beta = 0.229$ ,  $\text{Sig.} < 0.01$ ) and social skills ( $\beta = 0.210$ ,  $\text{Sig.} < 0.01$ ), social consciousness ( $\beta = 0.210$ ,  $\text{Sig.} < 0.01$ ) is capable of predicting the psychological hardiness scores. It should be kept in mind that self-awareness has been removed from the analysis ( $\text{Sig.} > 0.05$ ). Hence, the regression equation can be written as follows:

$$\text{Psychological hardiness} = (\text{Social consciousness} \times 0.210) + (\text{Social skills} \times 0.239) + (\text{Self-control} \times 0.229) + (\text{Self-motivation} \times 0.386)$$

In other words, for each standard deviation of change in self-motivation scores, psychological hardiness scores will increase as much as 0.386 standard deviation. For each standard deviation of change in the self-control scores, the psychological hardiness scores will increase as much as 0.229 standard deviation. For each standard deviation of change in social skills scores, psychological hardiness scores will increase as much as 0.239 standard deviation. And for each standard deviation of change

**Table 4.** Standardized regression coefficients ( $\beta$ ) and related significance tests (t)

Regression steps	Predicting variables	Beta standard coefficients ( $\beta$ )	T statistic	Sig.
1	Self-motivation	0.524	11.438	0.000
2	Self-motivation	0.367	6.598	0.000
	Self-control	0.260	4.664	0.000
3	Self-motivation	0.421	7.328	0.000
	Self-control	0.302	5.345	0.000
	Social skills	0.165	3.206	0.001
4	Self-motivation	0.386	6.713	0.000
	Self-control	0.229	3.830	0.000
	Social skills	0.239	4.329	0.001
	Social consciousness	0.210	3.390	0.001
Variables out of the analysis	Self-awareness	0.029	0.495	0.621

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in social consciousness scores, psychological hardiness scores will increase as much as 0.210 standard deviation.

#### 4. Discussion

The purpose of the present research was to predict the psychological hardiness in students based on mental health and emotional intelligence. The findings indicate a positive and significant relationship between mental health and psychological hardiness in line with researches by Shirbiam et al., (2009), Asgari and Homae (2009), Azadi and Azad (2012), Bahadori Khosrowshahi, and Hashemi Nosratabadi (2013).

To explain the findings, we can say that a mentally healthy person has a feeling of accountability, self-confidence, goal-orientation, personal values, individuality, and sameness. So, to have a hard personality means to have a personality with mental health. Surely, the psychological hardiness is positively related to the physical health and increases health among people by reducing stress (Hassel, Abdolhoseini and Ganji, 2011). In terms of a positive relation between psychological hardiness and mental health, we should emphasize on fundamental characteristics of tolerating people like social capacity, problem solving competence, feeling of purposefulness, and belief in a clear future (Wolf, 1995). In fact, the psychological hardiness will add to the peoples' capacity and capabilities for changing regardless of the menacing risks (Friborg et al., 2006). Generally speaking, people with high hardiness despite sinister eventualities are hopeful to deal with stresses successfully and effec-

tively. They possess the ability to grasp meaning of life when facing disturbing experiences and have confidence in their own roles as valuable people. All of this will give rise to mental health.

Of other findings of the research is the positive and significant relationship between the emotional intelligence and psychological hardiness. This finding is in correspondence with that of Kaveh and Yazdi (2007). To explain this finding, we can say that the emotional negligence includes a set of internal elements (level of self-awareness, self-image, feeling of independence and competence, self-actualization and decisiveness) and external elements (interpersonal relations, easiness in empathy and feeling of responsibility) that is concerned with the capacity of the person to accept reality, resilience, ability to solve emotional problems, ability of problem solving, and coping with stressful events (Goleman, 1995).

This will add to self-efficiency and better performance in the areas of self-adjustment, self-expression, independence, empathy with others, control and optimism (Guilford et al., 2008). These people, in fact, look at the stressful events as challenges and opportunities for learning not as threats to security. As a result, they feel fewer physiological and emotional disorders (Moira and Ollivera, 2008). They also have a positive view towards life, are more optimistic than others and feel more satisfied (Mayer, Salovey and Carso, 2000). People with higher emotional intelligence act more successfully in establishing communication with the world and are more ex-

perienced in dealing with stressful situations. Because, they accurately perceive and express their own emotional states and know when and how to express their own feelings, hence they adjust their own dispositional states effectively (Salovey, Bedel, Taylor, Mayer 1999; quoted by Mohamad Khani, Bashghare, 2009). In fact, higher emotional intelligence is correlated with lower feeling of tiredness (cognitive, physical and mental-social). Higher emotional intelligence involves compromised perceptions, which manages emotions and aids people to perceive tiredness differences otherwise (Babapoor Kheiroddin, 2010).

The major limitation of the research was related to the students' community whose results can be cautiously generalized to other communities. Also, in accordance with the importance of the psychological hardiness as a factor for promotion of health and psychological well-being and the impacts of mental health and emotional intelligence in increasing it, we recommend that classes be held for improving the mental health and emotional intelligence at the academic level for the students.

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