



# The Prediction of Mental Health Based on Social Problem Solving and Self-Efficacy among undergraduate students

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## Abstract

**Introduction:** The purpose of this study was to predict mental health and its components (somatic symptoms, anxiety and insomnia, social dysfunction and depression) based on social problem solving (SPS), and self-efficacy. SPS have 2 problem solving orientations: negative and positive orientation to problem solving (NPO and PPO), and 3 problem solving styles: rational problem solving style (RPS), avoidance style (AS), and impulsive/carelessness style.

**Materials and methods:** The statistical population consisted of undergraduate students at Azad University- Rudehen branch in 2013. Participants (n= 387) were randomly selected via multistage method and completed general health questionnaire (GHQ-28), social problem solving scale-revised (SPSR) and self-efficacy scale (Sherer et al). For analyzing of data multiple regression test is applied.

**Results:** The results showed that NPO and ICS can positively and self-efficacy can negatively predict total score of mental health difficulties. NPO and ICS have significantly positive relationship with somatic symptoms and anxiety. NPO and AS have significantly positive relationship with depression. Also NPO and AS have significantly positive relationship with social dysfunction, whereas RPS have significantly negative relationships with social dysfunction and self-efficacy negatively predicts depression.

**Conclusion:** According to research findings, it is recommended that psychologists emphasize on teaching and improving social problem-solving skills and self-efficacy for preventing of mental health difficulties.

## 1. Introduction

Mental health is one of the most important topics

for psychologists, counselors, and psychiatrists and much research has been done in this area. Mental

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health is a state of mind that characterized by emotional wellbeing, relative freedom from anxiety and disabling symptoms, and capacity to establish constructive relationships, and cope with the ordinary demands and stresses of life (Corsi, 2002). Mental or psychological well-being is influenced not only by individual characteristics or attributes, but also by the socioeconomic circumstances in which persons find themselves and the broader environment in which they live (World Health Organization, 2012). Self-efficacy and social problem solving skills are two important determinants of mental health. Low general self-efficacy (Rabani Bavojdan et al., 2011) and social problem solving (Ranjbar et al., 2013; Strecher et al., 1986) are the same too.

It has been found that a strong sense of personal efficacy is related to better health, higher achievement and better social integration (Scholz et al., 2002). People's beliefs in their efficacy play an important primitive role in health. Life-style habits and environmental hazards contribute substantially to health status and functioning. This enables people to exercise some behavioral control over the quality of their health (Bandura, 1997). Self-efficacy makes a difference in how people feel, think and act (Schwarzer and Fuchs, 1995).

Generally it is showed that increased levels of general self-efficacy are often accompanied by mental health (RabaniBavojdan et al., 2013). Also Najafi and Fouladchang (2008) and Muris (2002) showed that there is a positive relationship between self-efficacy and mental health in high school students.

As mentioned, social problem solving skills (SPS) is studied as one of the factors associated with mental health. Everyone experiences difficulties and challenges at some time or another in everyday living. In fact that many psychologists believe that facing and overcoming life's challenges and difficulties is essential for improving mental health, if individuals solve their problems effectively (Abolmaali, 2010). SPS is a cognitive-behavioral process by which people attempt to identify or discover effective or adaptive solutions to problems they experience in everyday living (D'Zurilla et al., 2002). SPS is a synonym for coping with stress and

interpersonal communication (Abolmaali et al., 2014).

SPS is assessed in 5 scales: Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Impulsivity/Carelessness Style (ICS) and Avoidant Style (AS) (Chang et al., 2004). Rational problem solving style (RPS) is considered as the reasonable, deliberate, and systematic application of effective problem-solving skills. Impulsive/carelessness skills (ICS) is an ineffective problem solving shape characterized by active attempts to apply problem-solving strategies and techniques, but these attempts are narrow, impulsive, careless, hurried, and incomplete (D'Zurilla et al., 2002). So it is characterized by passivity or inaction and dependency and avoidance of problem solving and procrastination. The avoidant problem solver prefers to avoid problems rather than confront them head on, puts off problem solving as long as possible, waits for problems to resolve themselves, and attempts to or move the responsibility for solving his or her problems to other people. Positive problem solving orientation (PPO) is a cognitive set that involves the general disposition to: evaluate a problem as a "challenge", believe that problem and difficult are solvable ("optimism"), believe in one's personal ability to solve problems successfully, and commit oneself to solving problems with notice rather than avoiding them. In contrast, negative problem solving orientation (NPO) is an ineffective or maladaptive cognitive-emotional set that involves the general propensity to view a problem as a significant threat to wellbeing and mental health, to doubt one's own personal ability to solve problems successfully, and to become easily frustrated and upset when confronted with problems. PPO and RPS are effective or adaptive problem-solving mechanisms and AS, ICS and NPO are ineffective or poor problem-solving mechanisms (Chang et al., 2004).

Findings of researches provide preliminary support for problem solving as an active treatment for mental health difficulties. For example problem solving is considered as a component of structured psychotherapies for depressed adolescents and suggests one pathway by which maternal depression

may disrupt treatment efficacy for depressed adolescents treated with CBT (Dietz et al., 2014). Kahrazehi et al. (2003) showed that Problem-solving skills training lead to reduce depression among high school students. Asheri et al. (2013) Concluded that there was a significant correlation between problem-solving styles and life satisfaction. Also Babapour Kheiroddin et al. (2003) reported a positive relationship between problem solving and mental health of students.

In general, the role of self-efficacy and social problem-solving skills has attracted the attention of specialists and researchers. Dupere et al. (2011) showed that increased levels of general self-efficacy, problem-oriented coping strategy and internal locus of control will improve mental health. In contrast, decreased general self-efficacy, emotion-oriented coping strategy and external locus of control would lead to decreased mental health.

Chang et al. (1998) found in college students and psychiatric patients: a negative problem orientation was most highly correlated with hopelessness, depression, and suicidal risk and rational problem-solving skills emerged as an important predictor variable in the suicidal psychiatric sample.

In attention to the importance of mental health in personal, familial, social, and academic living, it is important to identify the factors that influence it. So, research purpose is to predict mental health and its components (somatic symptoms, anxiety and insomnia, social dysfunction and depression) based on self-efficacy and social problem solving (RPS, PPO, NPO, AS and ICS), or is to determine the contribution of self-efficacy and social problem solving in predicting the mental health among undergraduate students.

## 2. Method

The method of this research is descriptive-correlative.

### 2.1. Participants

The statistical population included the whole undergraduate girl students in Islamic Azad university- Roudehen branch during 2012-2013. The sample study involved 387 girls was randomly selected via a multistage method.

### 2.2. Measurement

#### 2.2.1. Short Form of Social Problem-Solving Revised Version: (SPSI-R)

In order to evaluate the ability of the participants' social problem-solving skills, a short form of 25 questions devised by D'Zurilla et al. (2002) standardized by Taghilou (2009) was applied in this case. This questionnaire had five sub-scales, these sub-scales are: Positive orientation towards the problem, Negative orientation towards the problem, rational problem-solving style, Avoidant style and Impulsivity-carelessness styles. The whole coefficients of the above mentioned items were as follows, respectively: 0.68, 0.75, 0.62, 0.68, and 0.68. The total coefficients obtained for the related tool were 0.69. In addition, after processing the model from the confirmed factorial analysis, the indices of processing were obtained at suitable levels for the related test (Taghilou, 2009) Three scales were for the inefficient or non-functional methods in relation to the avoidant style and Impulsivity-carelessness style affairs and two scales were subjected to the efficient or functional methods of the positive orientation in terms of the problem-solving process (Abolmaali, 2010).

#### 2.2.2. General Health Questionnaire-28

The General Health Questionnaire (GHQ) is a screening device for identifying minor psychiatric disorders in the general population and within community or non-psychiatric clinical settings. The 28 items version of GHQ was extracted from factor analysis of the GHQ-60 that tried to find the best solution where item measuring mental health. This questionnaire has 4 subscales: somatic symptoms, anxiety and insomnia, social dysfunction and severe depression (Ayers and Pickering, 2001). Test-retest reliability has been reported to be high (0.78 to 0.9) (Robinson and Price, 1982) and internal consistency reliability have been shown to be excellent (Cronbach's Alpha=0.9-0.95) (Failde et al., 2000). The GHQ-28 correlates well with the Hospital Depression and Anxiety Scale (HADS) (Sakakibara and Miller, 2009) and other measures of depression (Robinson and Price, 1982). The GHQ-28 is one of the most widely used and validated questionnaires to screen for emotional distress and

possible psychiatric morbidity. In this research, the internal consistency of this test is assessed 0.99 for total items, and were respectively attained 0.91, 0.70 0.93, 0.93 for above subscales.

### 2.2.2. Self-Efficacy Scale

The Self-Efficacy Scale was developed and tested with 376 college students. Factor analysis yielded 2 subscales: a General Self-Efficacy subscale (17 items) and a Social Self-Efficacy subscale (6 items). Confirmation of several predicted conceptual relationships between the Self-Efficacy subscales and other personality measures (i.e., Locus of Control, Personal Control, Social Desirability, Ego Strength, Interpersonal Competence, and Self-Esteem) provided evidence of construct validity. Positive relationships between the Self-Efficacy Scale and vocational, educational, and military success established criterion validity (Sherer et al. 1982). In this Research internal consistency of all items is assessed 0.95 (Cronbach's Alpha).

## 3. Results

In Table 1 descriptive indices of studying variables are reported, Such as mean, standard deviation (SD) and distributive indices (skewness and kurtosis). According to this table, it can be stated that all of the variables tended to normal distribution, due to skewness and kurtosis which were between -2 and +2.

Research hypothesis: *self-efficacy and social problem can predict mental health and its components among undergraduate students.*

For the testing of this hypothesis in this research, multiple regression analysis with a stepwise method was used.

According to **Table 2**, NPO and ICS can positively and self-efficacy can negatively predict total score of mental health difficulties and 43.8% of the variance of mental health is explained by self-efficacy and SPS.

In order to prediction of somatic symptoms and anxiety based on predictor variables, the above table is showed that NPO and ICS have significantly positive relationship with somatic symptoms and anxiety, 20.4% of the variance of somatic symptoms

and 28.1% of variance of anxiety is explained is explained by AS and ICS.

Also NPO and AS have significantly positive relationship with depression, self-efficacy negatively predicts depression and 45.9 % of depression variance is explained by predictor variables.

Besides NPO and AS have significantly positive relationship with social dysfunction, whereas RPS have significantly negative relationships with social dysfunction, and 30% of social dysfunction variance is explained by predictor variables.

In according to  $\beta$ , it can be said, NPO has more contribution in predicting of predictor variables.

## 4. Discussion

The findings of the present study showed that SPS and self -efficacy had significant relationship with mental health. The results are consistent with Dietz et al (2014), Kahrazehi et al (2003), Asheri et al (2013) and Babapour kheiroddin et al (2003) that reported a positive relationship between problem solving and mental health. In all cases contribution of NPO in predicting of mental health and its components is more than other variables. Chang et al (1998) found that NPO was most highly correlated with hopelessness, depression, and suicidal risk. It seems that NPO have more important role in mental health and have more influence in causing of difficulties of mental health.

In this study, anxiety was negatively predicted by self-efficacy. In other word increasing the self-efficacy leads to reduce anxiety. Bandura (1977) suggested people's beliefs in their efficacy play an important role in improving health. Self-efficacy makes a difference in how people feel, think and act In terms of feeling; a low sense of self-efficacy is associated with depression, anxiety, and helplessness. Such individuals also have low self-esteem and harbor pessimistic thoughts about their accomplishments and personal development.

**Table1.** Descriptive indices of studying variables

Variables	Mean	SD	kurtosis	Skewness
Somatic symptoms	5.76	3.42	1.09	1.48
Anxiety	6.35	4.16	0.11	0.63
Social dysfunction	7.17	2.56	0.38	0.91
Depression	3.09	3.61	1.50	1.57
Total score of mental health	22.39	1.11	1.20	1.83
NPO	12.64	3.43	-0.18	-0.53
PPO	5.83	3.43	0.63	0.01
RPS	12.12	3.49	-0.02	-0.43
AS	3.10	2.57	0.95	0.94
ICS	7.04	2.95	0.44	0.12
Self-efficacy	66.12	8.66	-0.47	-0.02

Note: Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Avoidant Style (AS) and Impulsivity/Carelessness Style (ICS)

**Table2.** The prediction of mental health based on social problem solving and self-efficacy

predictors	Total mental health			Somatic symptom			Depression			Anxiety			Social dysfunction		
	B	$\beta$	T	B	$\beta$	T	B	$\beta$	T	B	$\beta$	T	B	$\beta$	T
Constant	12.6		2.57	2.06		1.15	3.06		94.1	0.01		0.003	7.45		5.86
PPO	0.18	0.13	1.39	0.01	0.01	0.93	0.06	0.05	1.03	0.07	0.02	0.75	0.07	0.1	1.68
NPO	1.45	0.48	8.86	0.35	0.35	5.5	0.48	0.46	8.64	0.48	0.39	6.44	0.24	0.32	5.27
RPS	-0.11	-0.04	-0.73	0.01	0.01	0.13	-0.05	-0.04	-0.92	0.01	0.01	0.09	-0.08	-0.11	-2.04
AS	0.42	0.1	1.9	-0.06	0.04	-0.73	0.23	0.16	3.28	0.04	0.03	0.47	0.20	0.20	3.53
ICS	0.42	0.14	2.9	0.21	0.18	-3.11	0.05	0.04	0.86	0.25	.018	-3.12	0.015	0.02	0.32
SE	-0.15	-0.12	-2.1	-0.03	-0.07	-1.1	-0.06	-0.15	-2.6	-0.03	-0.06	-0.89	-0.04	-0.12	-1.88
	$R^2=0.44, R^2 Adj=0.43, F=10.36$			$R^2=0.20, R^2 Adj=0.21, F=17.51$			$R^2=0.46, R^2 Adj=0.45, F=53.60$			$R^2=0.28, R^2 Adj=0.27, F=24.8$			$R^2=0.3, R^2 Adj=0.28, F=27.16$		

\* All T and F Values significant in  $P \leq 0.01$

Note: Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Avoidant Style (AS), Impulsivity/Carelessness Style (ICS) and self-efficacy (SE)

In terms of thinking, a strong sense of competence facilitates cognitive processes and academic performance. Self-efficacy levels can enhance or impede the motivation to act. Individuals with high self-efficacy choose to perform more challenging tasks (Schwarzer and Fuchs, 1995). These negative emotions may result increasing in anxiety level.

In this research results indicated that NPO and ICS predict somatic symptoms and anxiety. Symptoms such as fatigue, headaches, dizziness and somatic problems are a manifestation of somatic symptoms (karami, 2009). If people do not have the ability to solve everyday problems and choose inefficient ways to solve problems, they cannot reduce their stress levels. Therefore; stress can affect the immune system and cause a somatic syndrome or problem health. Overall, there is a significant relationship between daily stress and the occurrence of both concurrent and subsequent health problems such as flu, sore throat, headaches, and backaches (DeLongis et al., 1988).

Also, in this research found that NPO and AS can predict depression and social dysfunction. Generally NPO, AS and ICS are maladaptive aspects of problem solving and do not lead to successful problem solving. If a small problem cannot be resolved, it may become a big problem and maybe cause frustration, depression or despair. But problems that are solved may have several benefits, such as more adjustment and functioning at work or school, more satisfying relationships with friends, family and co-workers, higher self-esteem and life satisfaction. One can successfully solve everyday problems can be in promoting mental health (Nezu and Ronan, 1985). In addition to RPS could negatively predict social dysfunction. RPS leads to more adaption with the environment and cause a decrease in social dysfunction.

Many experts regard the identification of possible causes of mental health problems. According to the findings of this research is confirmed the role of social problem-solving skills and self-efficacy in predicting students' mental health. Since social problem solving and self-efficacy are modifiable, therefore, educational efforts for teaching problem solving and social skills intervention are

recommended to enhance skills for problem solving in everyday living.

Also for enhancing of self-efficacy, it is suggested that educational psychologists use the following strategies to enhance self-efficacy:

Social learning, learn by watching, reinforcement of self-regulation, teach needed learning strategies, reinforce struggling learners in all environments and situations in which they should use the learning strategy and correctly use it, reinforce effort and persistence, teach Students to make facilitative attributions, help students create personally important goals, matching task difficulty to struggling learners' instructional and independent levels, linking new work to recent successes (Margolis and McCabe, 2003). So it is important to emphasize on teaching and strengthen problem-solving skills and self-efficacy lead to preventing of many mental health difficulties.

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