# Psychometric Properties of the Farsi Version of the Social Problem Solving Inventory –Revised (F-SPSI-R): Preliminary Evidence

## Ali Asghar Bayani*[1], GhorbanaliGanji[2], Ali Bayani[3]

[1]Department of Psychology, Azadshahr Branch, Islamic Azad University, Azadshahr, Golestan Province, Iran
[2]Department of Political Science, Azadshahr Branch, Islamic Azad University, Azadshahr, Golestan Province, Iran
[3]Department of Sociology, Azadshahr Branch, Islamic Azad University, Azadshahr, Golestan Province, Iran

## ABSTRACT

This study examined psychometric data for a Farsi translation of the Social Problem-Solving Inventory (F-SPS-R), with a sample of 306 undergraduate students (61 men, 108 women) ranging from 18 to 46 years of age (M=27.8, SD=5.3). Participants completed the Social Problem-Solving Inventory (F-SPS-R), and the General Health Questionnaire. The findings confirmed the preliminary reliabilities, and preliminary construct validity of the Farsi translation of the Social Problem-Solving Inventory (F-SPS-R) among undergraduate students.

**KEYWORDS**: Social Problem-Solving, Farsi, validity, Reliability.

## INTRODUCTION

In the last few decades, the researchers' interests in social problem-solving have been on the rise in various fields of psychology (D'zorilla, &Maydeu-Olivares, 2002., Skin*et al*, 2012). Social problem- solving points out to the problem -solving in natural environment and the real world (D'zorilla, &Maydeu-Olivares, 1995). According to this definition, social objective emphasis is on the problems that affect individual's adaptive function in the social setting (D'Zurilla,Chang,&Sanna, 2003). The bulk of researches done on the social problems are based on the social problem- solving model which was first introduced by D'Zurilla, &Golfied (1971) and then later was reconsidered and expanded by D'Zorill,*et al.* (D'Zurilla, &Nezu, 1982, 1990; D'Zurilla, Nezu,& Maydeu-Olivares, 2002; Maydeu-Olivares, &D'Zorill, 1996; D'Zurilla, 1986; Nezu,&D'Zurilla, 1989). In this model, there are three basic concepts: problem-solving, problem, and solution strategy (D'Zurilla, &Nezu, 1982).

Problem-solving is a cognitive-behavioral process through which an individual or a group tries to find out and discover solutions to the particular problems confronted them in the daily life activities. This process offers various ways of effective solution and provides the possibility of choosing the best option from among multiple alternatives (D'Zurilla, &Nezu, 2007). It is deduced from this definition that the social problem-solving is a deliberate, rational and effortful attempt (D'Zurilla, Chang, &Sanna, 2003). This process, with respect to the problem-solving may aim to change the ambiguous state or reduction of emotional distress including depression and anxiety (Nezu, 1986, 1987; Bates, &Lavery, 2003; D'Zurilla, &Nezu, 2009).

Problem involves any situation in life that necessitates an adaptive response, however there is no immediate and effective response available or does not unveil itself to let the individual confront ithead on (D'Zurilla, &Nezu, 1990). Environment or individual himself may become the source of ambiguous situations which are generally unpredictable. Application of adaptive response solution to a particular situation is the outcome of problem –solving process (D'Zurilla,&Nezu, 2007). One of the main hypotheses, according to the social problem-solving model, is that the social problem –solving construct is not a one-dimensional but rather a multidimensional construct and is composed of discrete components which are related to one another. In the original model which was first proposed by D'Zurilla,&Goldfied (1971) and then expanded by D'Zurilla,&Nezu(1990) was hypothesized that the social problem- solving competence is composed of two discrete general problem orientation and problem solving skills indicators which later was labeled as Problem -Solving Style(D'Zurilla, *et al.*, 2002).

Problem orientation is a meta-cognitive process which incorporates a set of relatively stable schemes describing individual's thought and feeling toward the problem. This dimension includes problem-solving competence too. Problem solving orientation may facilitate or hinder problem solving process (D'Zurilla, &Nezu, 2007). Hence, problem solving orientation is either positive or negative. Positive problem orientation toward person's problem is of the belief that: 1) people possess the competence of solving their problems successfully; 2) people are committed to solve their problems instead of avoiding to confront them; 3) problems are solvable and successful problem -solving requires time and effort (optimism) (D'Zurilla,&Nezu, 2007). Positive problem

**Corresponding Author:** Ali Asghar Bayani, Ph.D., Department of Psychology, Islamic Azad University, Azadshahr Branch, Azadshahr, Golestan Province, Iran or email (aliasghar.bayani@gmail.com)

orientation alleviates negative emotions such as anxiety, depression and anger under problem solving situation and improves person's positive emotions and the perception of his competence in a way that increases problem solving attempt (D'Zurilla,&Nezu, 1990). In a negative problem solving orientation, individual looks at the problem as a serious threatening factor of well-being (psychological, sociological and economical). Such a person doubts his competence in successfully solving his problems and he becomes confused and frustrated when he confronts a problem (low frustration tolerance) (D'Zurilla, *et al.*, 2002).

Problem solving skills or problem solving style are indicative of behavioral and cognitive activities through which individual tries to understand the problem and find an effective way of solving it (D'Zurilla, 1986). Problem - solving style involves three components of rational problem solving, impulsivity-carelessness and avoidance style. Four main rational problem-solving skills are as follow: Problem definition and formulation, generation of alternative solutions, decision making, and solution implementation (Nezu, Nezu, &Lomardo, 2004). Impulsivity-carelessness style is an inefficient pattern which becomes apparent when attempts are made in the application of strategies and techniques. However, it seems that part of the problem with this pattern lies in the incomplete application of techniques and strategies themselves and not the pattern (D'Zurilla, &Nezu, 1990). Avoidance style is also another inefficient problem-solving pattern and its inefficiency is due to its dependency, inaction, passivity and procrastination. An individual who employs this style of problem solving prefers to avoid problems instead of confronting them head on. Such a person puts off problem –solving to a later time, waits for problems to solve themselves or make it the responsibility of others to solve his problems (D'Zurilla, &Nezu, 1982).

Based on the social problem-solving pattern a questionnaire was designed by D'Zurilla,&Nezu in 1990. This scale involved 70 items which measured two components of problem orientation and problem-solving skills. D'Zurilla, Nezu,&Maydeu-Olivares (2002) evaluated the factorial structure of this inventory and reduced it to 50 items and then the revised version of the Social Problem-Solving Inventory (SPSI-R) was offered. This scale measures five dimensions of social problem-solving model: Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem-Solving (NPS), Impulsivity-Carelessness (ICS) and Avoidance Style (AS).

Studies revealobtained value of validity and reliability of Social Problem-Solving Inventory to be acceptable.D'Zolrilla,*et al.* (1998) reported test-retest reliability (within three weeks period) the subscales from.72 (PPO) to.88 (NPO) and .68(PPO) to .91(NPO).Maydeu-Olivares*et al.* (2000) found psychometric properties of Spanish version of this scale to be quite admissible when applied on two samples of students from Spain and the United States. They obtained coefficient alphas range from .68 (PPO) to .92(RPS) and .76 (PPO) to .93 (RPS).Belzer, D'Zurilla&Maydeu-Olivares (2002) applied Social Problem-Solving Inventory-Revised on a sample of 355 American undergraduate students and found the coefficient alphas range from.76 (PPO) to .80 (NPO). They also reported correlation between the Spielberger State-Trait Anxiety Inventory (STAI) and RPS, AS, NPO, PPO, and ISCS scales -.13, .37, .64, -.43, .23 consecutively.D'Zurilla, *et al.* (2003) on a sample of 270 students found coefficient alphas of Social Problem-Solving Inventory-Revised ranging from .88(AS, NPO) to .82 (PPO). ). Siu&Shek (2005) applied psychometric properties of Chinese version of Social Problem-Solving Inventory on a sample of 352 senior high school students and found the scale acceptable. Coefficient alphas of this scales ranged from .64(PPO) to .98(AS). Test-retest reliability coefficient of Chinese version of RPS, AS, NPO, and ICS scales were .88, .81, .86, .61 and .71 consecutively.Siu&Shek (2005) also found positive and significant correlation between Beck Depression Inventory and AS, NPO. Morera, *et al.* (2006) applied Social Problem-Solving Inventory-Revised on a sample of 985 students and obtained Cronbach's alphas coefficient range from .64 (PPO) to .92 (RPS).

Researches on social problem-solving and problem solving therapy necessitates availability of valid instruments of reliability assessment which not only be able to assess the overall level of individual's competence in social problem-solving but also have the power to realize the strength and weakness of individual's competence in various components of this construct. Due to this necessity and the deficiency of Farsi version of the scale, this research was designed and implemented Farsi version of it on a sample of Iranian college students with the aim of making an introductory assessment of this instrument's validity and reliability.

## MATERIALS AND METHOD

Prior to the undertaking of this research, we received the permission of Social Problem-Solving Inventory-Revised designer for the implementation of his inventory and also learned from him how to make the best use of his inventory in its Farsi version. In order to make sure that the Farsi version of Social Problem-Solving Inventory-Revised(F-SPS-R) to be the exact translation of its original version, we benefited ourselves from other experts and specialists' councils.

**Participant**: Undergraduate students of the Islamic Azad University, Azadshahr branch (108 women, 61men) took part in this study. Their ages ranged from 18 to 46 years (M= 27.8, SD=5.3); 57 were married, and 112 were single.

The respondents in the sample were from different fields of study: social science, psychology, law and education. Each respondent belonged to one the following ethnic groups: Baluch, Fars, Sistani, and Turkmen. They participated voluntarily in this study.

**Measures**: All participants were asked to complete a Farsi version of the General Health Questionnaire-28 (Taghavi, 2002), and a Farsi version of the Social Problem- Solving Inventory-Revised (SPSI-R, D'Zurilla, *et al.* 2002).

General Health Questionnaire-28: This questionnaire was originally developed by Goldberg in 1978as a self-administered screening instrument to identify psychological distress for use in general population surveys (Goldberg, 1997). The GHQ-28 has since been translated into 38 languages (Goldberg, &Williams, 1988). The GHQ-28 incorporates four subscales: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. Evidence for the validity and the reliability of Farsi version of the General Health Questionnaire-28(Goldberg, 1978) has been reported (Taghavi, 2002, & Faghipour*et al.*2011) for the Iranian samples.

Social Problem- Solving Inventory-Revised (SPSI-R): The SPSI-R consists of five subscales: Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Impulsivity - Carelessness Style (ICS) and Avoidance Style (AS). The PPO subscale consists of 5 items (''When my first attempt to solve a problem fails, I believe if I don't give up, I will eventually succeed''). The NPO subscale consists of 10 items (''I worry too much about my problems instead of trying to solve them''). The RPS subscale consists of 20 items (''when making decisions, I try to predict the pros and cons of each option''). The ICS subscale consists of 10 items (''When I have a problem, I act on the first idea that comes to me''). The AS subscale consists of 7 items (''I wait to see if a problem goes away before trying to solve it myself'').

## RESULTS

Reliability of the Farsi version of the Social Problem- Solving Inventory-Revised was measured using the test-retest and internal consistency methods. To examine test-retest reliability, the scale was administered to 110 participants twice, within a three weeks intervening period, and yielded .79 (Positive Problem Orientation .52; Negative Problem Orientation .57; Rational Problem Solving .48; Impulsivity/Carelessness Style .47; Avoidance Style .58). Cronbach alpha coefficient .80 showed the level of internal consistency of the Farsi version (Positive Problem Orientation, $\alpha$=.79; Negative Problem Orientation, $\alpha$=.82; Rational Problem -Solving, $\alpha$=.89; Impulsivity/Carelessness Style, $\alpha$=.87; and Avoidance Style, $\alpha$=.83). In Table 1, both mean and standard deviations scores are illustrated for the men and women who completed the Social Problem –Solving Inventory-Revised, the General Health Questionnaire and their subscales. The effect of sex differences on the scores were calculated using Student *t* test (also in Table 1). Sex difference did not illustrated statistically significant effect on the Social Problem -Solving competence.

### TABLE 1
#### MEAN AND STANDARD DEVIATIONS OF SCALES BY SEX

| Scales | Men (*n*= 61) | | Women (*n*= 108) | | *t* |
|---|---|---|---|---|---|
| | M | SD | M | SD | |
| Social Problem Solving Inventory | 12.58 | 2.63 | 12.63 | 2.37 | 0.49 |
| Positive Problem Orientation | 11.90 | 4.26 | 11.91 | 4.29 | 0.00 |
| Negative Problem Orientation | 13.28 | 6.99 | 15 | 6.90 | 1.72 |
| Rational Problem Solving | 43.98 | 13.45 | 43.89 | 14.41 | 0.08 |
| Impulsivity/Carelessness Style | 14.28 | 5.64 | 13.86 | 5.58 | 0.42 |
| Avoidance Style | 8.65 | 4.26 | 7.37 | 4.18 | 1.27 |
| General Health Questionnaire | 48.85 | 11.41 | 53.11 | 12.91 | 4.25* |
| Somatic Symptoms | 12.26 | 3.06 | 13.95 | 3.99 | 1.68** |
| Anxiety and Insomnia | 12.73 | 4.24 | 13.83 | 4.35 | 1.09 |
| Social dysfunction | 13.85 | 2.45 | 14.14 | 2.76 | 0.29 |
| Severe Depression | 10.36 | 3.81 | 11.28 | 4.78 | 0.91 |

*$^*P <0.03$*
*$^{**}P <0.005$*

Construct validity of the Social Problem –Solving Inventory-Revised was estimated by administering the General Health Questionnaire-28.Table 2 shows the Pearson correlations coefficient between scores on each of the scales and subscales. A significant negative correlation ($r = - .38$, $P< .001$) was obtained between scores on the Social Problem Solving Inventory and the General Health Questionnaire. Social Problem- Solving Inventory was

negatively associated with the Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction and Severe Depression. A significant negative correlation was noted between scores on Positive Problem Orientation and subscales of General Health Questionnaire. The correlation between Negative Problem Orientation and General Health Questionnaire was positive($r = .46$, $P < .001$).

TABLE 2
SIGINIFICANT PEARSON CORRELATION MATRIX FOR TOTAL SCORES

| Scale | r | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Positive Problem Orientation** | - | | | | | | | | | | |
| **Negative Problem Orientation** | -0.24** | - | | | | | | | | | |
| **Rational Problem Solving** | 0.77** | -0.15* | - | | | | | | | | |
| **Impulsivity/Carelessness Style** | -0.25** | 0.67** | -0.16* | - | | | | | | | |
| **Avoidance Style** | -0.30** | 0.55** | -0.32** | 0.48** | - | | | | | | |
| **Social Problem solving Inventory** | 0.77** | -0.70** | 0.71** | -0.67** | -0.71** | - | | | | | |
| **Somatic Symptoms** | -0.15* | 0.31** | -0.04 | 0.29** | 0.08 | -0.23** | - | | | | |
| **Anxiety and Insomnia** | -0.18* | 0.45** | -0.08 | 0.38** | 0.22** | -0.34** | 0.69** | - | | | |
| **Social dysfunction** | -0.13 | 0.26** | 0.04 | 0.31** | 0.13 | -0.16* | 0.40** | 0.38** | - | | |
| **Severe Depression** | -0.23** | 0.45** | -0.19 | 0.44** | 0.35** | -0.44** | 0.58** | 0.67** | 0.42** | - | |
| **General Health Questionnaire** | -0.20** | 0.46** | -0.11 | 0.44** | 0.25** | -0.38** | 0.83** | 0.83** | 0.63** | 0.85** | - |
| ***P <0.05**<br>****P <0.001** | | | | | | | | | | | |

## DISCUSSION

The aim of the present study was to examine psychometric properties of the Farsi version of the Social Problem- Solving Inventory-Revised on Iranian sample of undergraduate students. Analysis indicated an acceptable test-retest correlation consistency with the previous result reported by D'Zurilla*et al.* (1998) and Siu, &Shek (2005), although there are some differences between the values obtained in each study. Internal consistency of this Farsi translation of the Social Problem- Solving Inventory-Revised was acceptable. These coefficients were consistent with the coefficients in English, Chinese and Spanish versions that reported by Maydeu-Olivares *et al.*, (2000), Belzer, *et al.*,(2002), D'Zurilla, *et al*(2003), Siu&Shek (2005) and Morera*et al.* (2006).

Analysis provided some preliminary evidences of construct validity of this Farsi version. Scores were associated negatively with higher scores on the General Health Questionnaire and subscales, which are consistent with the result reported by Siu, &Shek (2005).

To overcome the limitations of this study, it is recommended that the validity and reliability of Farsi version of this inventory on other age and ethnic groups be investigated and attention be paid to its factor structure.

## REFERENCES

Bates, G. W., &Lavery, B.J,2003. Social problem-solving and vulnerability to depression in a clinical sample.Psychological Reports, 92: 1277-1283.

Belzer, K.D., D'zurilLa, T.J. &Maydeu-OlIvares, A, 2002. Social problem-solving and traitanxiety as predictors of worry in a college student population.Personality and Individual Differences,33: 573-585.

D'zurilLa, T. J,1986.Problem-solving therapy: A social competence approach to clinical intervention. New York: Springer Publishing Company. PP: 30-45.

D'zurilLa, T. J., &Goldfried, M. R, 1971.Problem solving and behavior modification. Journal of Abnormal Psychology, 78: 107-126.

D'zurilLa, T. J., &Nezu, A. M,1982.Social problem solving in adults.In P. C. Kendall (Ed.), Advances in cognitive behavioral research and therapy. New York: Academic Press, PP: 201-244.

D'zurilLa, T. J. &Nezu, A. M, 1990.Development and preliminary evaluation of the Social Problem Solving Inventory. Psychological Assessment, 2: 156-163.

D'zurilLa, T. J., Maydeu-OlIvares, A,1995.Conceptual and methodological issues in social problem-solving assessment.Behavior Therapy, 26:409-432.

D'zurilLa, T. J., Maydeu-OlIvares, A., & Kant, G. L, 1998.Age and gender differences in social problem-solving ability.Personality and Individual Differences, 25: 241–252.

D'zurilLa, T. J., &Nezu, A. M, 2007. Problem-solving therapy: A social competence approach to clinical intervention. New York: Springer Publishing Company. PP: 101-144.

D'zurilLa, T. J.,Nezu, A,M.,&Maydeu-OlIvares, A, 2002.Social Problem-Solving Inventory-Revised (SPSI-R): Technical manual. North Tonawanda, NY: Multi Health Systems. PP: 51-64.

D'zurilLa, T.J., Chang, E.C., &Sanna, L. J, 2003.Self-esteem and social problem-solving as predictors of aggression in college students.Journal of Social and Clinical Psychology,22: 424-440.

D'zurilLa, T. J., Maydeu-OlIvares, A, 2004. Social problem solving: theory and assessment. In E. C. Chang, J. T. D'Zurilla, L. J.Sanna (Eds.), Social problem solving: Theory, research, and training. Washington, DC: American Psychological Association.PP:10-27.

D'zurilLa, T. J., &Nezu, A. M, 2009.Problem-solving therapy.In K. S. Dobson (Ed.), Handbook of cognitive-behavioral therapies. New York: Guilford. PP:197-224.

Faghihpour, M., Amoopour, M., Gilanian, S., Alinejad, M., &Mousavian, S,J, 2011.The relationship between emotional intelligence and mental health of students. Journal of Basic and Applied Scientific Research, 1(12):3046-3052.

Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., &Rutter, C,1997. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psychological Medicine, 27(1): 191-197.

Goldberg, D. & Williams, P,1988. A Users's Guide to the General Health Questionnaire.Fer-

Nelson Publishing Co. Ltd. Windsor, Berkshire, UK, PP:97-110.

Maydeu-OlIvares, A., &D'zurilLa, T. J, 1996. A factor analytic study of the Social Problem-Solving Inventory: An integration of theory and data. Cognitive Therapy and Research, 20: 115-133.

Maydeu-OlIvares,A., Rodrl´guez-fornells,A., Go´mez-benito,J.,&D'zurilLa,,T.J, 2000.Psychometricproperties of the Spanish adaptation of the social problem-solving inventory-revised (SPSI-R).Personality and Individual Differences, 29: 699–708.

Morera, O. F., Maydeu-OlIvares, A., Nygren, T. E., White, R. J., Fernandez, N. P., &Skewes, M. C,2006. Social problem solving predicts decision making styles in a North American Hispanic sample. Personality and Individual Differences, 41: 307-317.

Nezu, A. M, 1986. Negative life stress and anxiety: problem solving as a moderator variable. Psychological Reports, 58: 279-283.

Nezu, A. M, 1987. A problem solving formulation for depression: A literature review and proposal of a pluralistic model. Clinical Psychology Review,7:121-144.

Nezu, A. M., &D'zurilLa, T. J, 1989.Social problem solving and negative affective conditions. In P. C. Kendall & D. Watson (Eds.), Anxiety and depression: Distinctive and overlapping feature. New York: Academic Press, PP:285-315.

Nezu, A. M., Nezu, C. M., & Lombardo, E. R, 2004.Cognitive-behavioral case formulation and treatment design: A problem-solving approach. New York: Springer, PP: 185-195.

Siu, A. M. H., &Shek, D. T. L, 2005. The Chinese Social Problem Solving Inventory: some initial results on reliability and validity. Journal of Clinical Psychology, 61:347-360.

Skin, M., Kurt, I.,&Demirkiran, F, 2012. Does social problem solving training reduce psychological distress in nurses employed in an academic hospital? Journal of Basic and Applied Scientific Research, 2(10):10450-10458.

Taghavi, S. M. R, 2002. Validity and reliability of General Health Questionnaire (GHQ-28) in college students of Shiraz. Journal of Psychology, 20: 381-398.