

Psychometric Properties of the Persian Version of the Multidimensional Scale of Perceived Social Support in Iran

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ABSTRACT

Background: Social support is a complex and multifaceted construct. Thus, It is important that a given social support scale be theoretically grounded and its purview clearly defined. The purpose of this study was to examine the reliability, validity and factor structure of the Iranian version of the Multidimensional Scale of Perceived Social Support (MSPSS).

Methods: The sample study included 176 consecutive myocardial infarction (MI) patients admitted to the coronary care unit (CCU) ward of nine hospitals in Isfahan, Iran, and 71 consecutive subjects from the general population. They all filled out the final Iranian version of the MSPSS and also 71 participants filled out the MSPSS twice over a 2-month period. Factor analysis, Cronbach's α coefficient and Pearson's correlation coefficient correlation were used to analyze data.

Results: Factor analysis of the scores of the patient and healthy samples yielded a three-factor structure, including family, friends and significant others. The percentage of variance explained by the three factors in the patient sample and healthy sample were 77.87% and 78.55%, respectively. Cronbach's α coefficient has been found to be 0.84 for the scale and 0.90, 0.93 and 0.85, respectively, for the friends, significant others and family subscales from the patient sample, and 0.92 for the scale and 0.89, 0.92 and 0.87, respectively, for the friends, significant others and family subscales from the healthy sample. Test-retest stability over a 2-month period yielded 0.84 for the scale and 0.73, 0.78 and 0.84, respectively, for the friends, significant others and family subscales from the healthy sample.

Conclusions: The findings proved the three-factor structure of the Iranian version of the MSPSS and indicated that the Iranian version of the MSPSS is a reliable, valid and acceptable measure of perceived social support.

Keywords: Iranian population, psychometric properties, social support

INTRODUCTION

The role of social support is well recognized in health, psychological adjustment, and in the relation between stress and physical symptoms.^[1-6]

Social support is a multidimensional and complex construct that has both structural and functional aspects.^[3] The structural aspects of social support include quantitative properties of the social network such as size, range, proximity, and accessibility.^[3] As Berkman *et al.*, argued that functional support refers to the quality of the support served by the structural component.^[3] Both structural and functional aspects depend on the perception of the recipient of support.^[3] Hence researchers differentiate between perceived and received social support.^[7,8] Perceived support refers to the perception of the recipient of accessibility and quality of support.^[3,9]

A number of scales have been designed to assess social support, including in-person interviews and self-report questionnaires.^[10,11] The Multidimensional Scale of Perceived Social Support (MSPSS) is one of these scales, which was originally developed by Canty-Mitchell and Zimet.^[12] It addresses the subjective measure of social support adequacy.^[10,13] Recently there has been a surge of interest in the use of the MSPSS across cultures.^[14] Zimet *et al.*,^[12] have well argued that the MSPSS is a short scale (12 items total), its items are easy to understand and despite being a brief instrument it measures support from three sources. The significant others subscale is a unique aspect of the MSPSS.^[14] It leaves the definition of who the “significant other(s)” is (are) to the respondent.

The MSPSS measures perception of social support from three sources: Family, friends and significant others. Psychometric properties of the MSPSS have been demonstrated among a number of different samples, including university students,^[12] psychiatric patients,^[15] urban adolescences,^[13] medical students,^[10] South African adolescences^[16] and teenagers of Hong Kong.^[14]

The three-factor structure of the MSPSS was supported in all but one subsequent study. In a study done on the Chinese version of the MSPSS by Kee,^[14,10] the friends and significant others subscales were combined into one subscale. It perhaps revealed that perceived social support varies among different cultures.

Due to the important role of perceived social support in psychological and physical health, unique features of the MSPSS are being discussed, bearing in mind that no research has demonstrated the Persian version of this scale; therefore, the purpose of the present study was to evaluate the

reliability, validity and factor structure of the Persian version of the MSPSS in an Iranian sample.

METHODS

Participants

The sample included 176 myocardial infarction (MI) patients and 71 healthy participants. The mean age of the MI group was 56 years (SD = 9.75), 84% were male and 88.6% married. The average age of the healthy group was 74/4 years (SD = 10.05), 65% were male and 78% married. The MI group included anterior MI (48.3%) and non-anterior MI (51.7%) diagnosis.

Measures

The focus of this study is on the Persian version of the MSPSS. The original version of the scale, which is a 12-item questionnaire developed by Zimet *et al.*,^[12] measures the perceived support from family, friends and significant others. This instrument provides response options ranging from 0 to 6 (very strongly disagree to very strongly agree). The scale was translated for the present study. In this procedure, a person translated the questionnaire items from English to Persian, and another translated them back to English. Differences between original and back-translated statements were rare, carefully analyzed and easily resolved when necessary through revisions in the Persian translation.

Psychometric properties of the English version of the MSPSS have been shown among several populations. The MSPSS terms used to describe sources of social support were specifically designed to allow respondents to interpret items in ways most relevant to themselves. For example, items that measure the significant others subscale refer to a “special person” who may be interpreted variously to mean a boyfriend/girlfriend, a teacher, a counselor, etc., Canty-Mitchell and Zimet^[13] well argued that use of more specific terms could have weakened the instrument (e.g., use of the boyfriend/girlfriend statement may refer to the existence of a romantic relationship). See Table 1 for MSPSS item wording.

Procedure

Participation in this study was voluntary, anonymous and in compliance with institutional ethical guidelines. Data collection from the MI

patients occurred 2 weeks after MI, when the patients were in a coronary care unit (CCU), and their physical conditions were stable. The healthy group responded to the scale simultaneously for the first time and again 2 months later. The questionnaire was administered in hospitals, and participants were informed of the voluntary nature of the study and anonymity of responses before administering the questionnaire.

After data collection, the scale was scored and analyzed. Principal-component factor analysis with oblique rotation, Cronbach's α and Pearson's correlation were used to analyze the data.

RESULTS

Exploratory factor analysis was used to explore and refine the underlying structure of the items. Prior to factor analysis, the matrix was assessed for psychometric adequacy. The Kaiser–Meyer–Olkin measure of sampling adequacy (MSA = 0.80 for the MI patients and = 0.87 for the healthy group) was well for the two groups, and Bartlett's test of sphericity was significant ($\chi^2 = 1446.14$, $P < 0.01$ for MI patients; $\chi^2 = 619.87$, $P < 0.01$ for healthy participants). Given the stability of data, we conducted a principal-component factor analysis with oblique rotation. Oblique rotation was chosen to allow correlation between factors. Using the Eigenvalue >1 criterion and a scree plot analysis, three factors emerged from the correlation

matrix. There was no item loaded on two or more factors with a difference <0.1 . Cross-loading with a difference >0.1 was not unexpected, because we expected some correlation between factors. Therefore, consistent with results from prior studies,^[13,12] three factors were extracted, which coincided with the family, friends and significant others subscales.

The factors combined to account for 77.9% and 78.5% of the variances in the MI patients and healthy respondents, respectively. The oblique rotated factor pattern matrix indicated that all items loaded highly (0.74 or better) on their respective subscale, with minimal cross-loadings (all less than 0.29) for the MI patients [Table 1], and some high-cross loading (higher than 0.50) but with a difference >0.1 for the healthy participants [Table 2].

Internal consistency as assessed by Cronbach's α was 0.83 for total MSPSS in the MI patients and 0.92 in the healthy group. Cronbach's α for all subscales was similar in both groups of respondents [Table 3]. Test–retest reliability as assessed by Pearson's correlation in the healthy group was 0.74, 0.78, and 0.84 for family, friends and significant others, respectively.

DISCUSSION

The results of the present study indicated that the Persian version of the MSPSS was a valid and reliable instrument for use among the Iranian MI patients and healthy group. The results also showed

Table 1: Oblique rotated pattern matrix from principal axis factor analysis of the MSPSS-P items in MI patients

Items	Factors		
	Significant others	Family	Friends
Significant others			
2. There is a special person with whom I can share joys and sorrows	0.92		
1. There is a special person who is around when I am in need	0.92		
10. There is a special person in my life who cares about my feelings	0.91		
5. I have a special person who is the real source of comfort to me	0.89		
Family			
4. I get the emotional help and support I need from my family		0.89	
11. My family is willing to help me make decisions		0.85	
3. My family really tries to help me		0.83	
8. I can talk about my problems with my family		0.78	
Friends			
6. My friends really tries to help me			0.91
7. I can count on my friends when things go wrong			0.89
9. I have friends with whom I can share my joys and sorrows			0.86
12. I can talk about my problems with my friends			0.85

MSPSS=Multidimensional scale of perceived social support, MI=Myocardial infarction

Table 2: Oblique rotated pattern matrix from principal axis factor analysis of MSPSS-P items in healthy participants

Items	Factors		
	Significant others	Family	Friends
Significant others			
2. There is a special person with whom I can share joys and sorrows	0.90	0.45	0.51
10. There is a special person in my life who cares about my feelings	0.90	0.43	0.55
5. I have a special person who is the real source of comfort to me	0.90	0.37	0.43
1. There is a special person who is around when I am in need	0.87	0.42	0.36
Family			
3. My family really tries to help me		0.88	
11. My family is willing to help me make decisions	0.46	0.88	
4. I get the emotional help and support I need from my family	0.61	0.87	0.44
8. I can talk about my problems with my family	0.59	0.74	0.44
Friends			
7. I can count on my friends when things go wrong	0.38	0.38	0.90
9. I have friends with whom I can share my joys and sorrows	0.57		0.88
12. I can talk about my problems with my friends	0.40		0.87
6. My friends really try to help me	0.49	0.53	0.80

MSPSS=Multidimensional scale of perceived social support, MI=Myocardial infarction

Table 3: Cronbach’s α for total MSPSS-P and all its subscales in both groups of participants

	Family	Friends	Significant others	Total
MI patients	0.85	0.90	0.93	0.83
Healthy group	0.87	0.89	0.92	0.92

MSPSS=Multidimensional scale of perceived social support, MI=Myocardial infarction

high internal consistency of the scale and the three subscales in both patients and healthy respondents. In addition, test–retest reliability indicated its excellent stability over a 2-month period.

Factor analysis confirmed the three-factor structure proposed by Zimet *et al.*,^[12] in their original study and supported by all but one (Chinese version) study. Although these results confirmed that the Persian version of the MSPSS showed good psychometric properties in an Iranian sample, more cross-loading in healthy participants perhaps revealed that when an individual becomes indisposed: (a) Perceived social support may change, (b) social contact may increase and (c) sources of functional support may be more clarified. Future studies will need to test these possibilities.

CONCLUSIONS

Overall, the Persian version of the MSPSS is a reliable and valid instrument to measure three

different sources of perceived social support, family, friends and significant others, among Iranian MI patients and healthy samples.

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