



The Validity and Reliability Study of The Social Support Structure (Stress Buffering Model) In Iran

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ABSTRACT

A sample of 877 individuals (57% women and 43% men) was selected randomly to study the validity and reliability structure of the social support that answered the researcher's-made questionnaire of the social support. The result of validity study of the final questionnaire showed that the calculated Chronbach alpha coefficient was 0.736. The opinion of the authorities in the field of psychology concerning content validity of the questionnaire was positive. The result of exploratory/confirmatory factor analysis showed that all fitness indexes were in a very desirable limit (RMSEA = 0.056), and the model had a good fit with data. This was suggestive of the questions being in line with the theoretical structure.

Keywords: Validity, Reliability, Social Support, Stress Buffering Model, Factor Analysis

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INTRODUCTION

Today's world is full of developments; some of them are stressful for sure. The reaction against the stress differs from one person to another person or in one person from time to time. These differences mostly originate from the psychological and social stress modifying factors. One of these factors is social support. (Vaux, 1992), defines the social support as a meta-structure which is a combination of support networks, behavioral supports and mental evaluations of a person from the support. In his opinion, there are eight mechanisms by which the support works: 1-Direct action support, the best example of it is the child support by the parents. 2-Person's immunity against the difficulties (by improving the person's general feeling of well-being). 3-Directing the person's primary appraisal that he/she has from the life events. 4-Directing the person's secondary appraisal that he/she has from the life events. 5-Directing the person's re-appraisal that he/she has from the events. In this way, the

constant or the immediate struggle is to correct the person's interpretation from the life events and create a new impression in him/her about the difficulties. 6-Directing the person's attention toward other subjects which have no connection with his/her problems. 7-Direct action support (in this way, help is given to the person to find a proper solution to his/her problems. 8- Consoling emotional support (in this way, the support enjoys a special and reinforcing emotional nature). The general opinion is that the social support of the individual helps him/her in many ways to get along with psychic stress (House, 1981). First, family members, friends and colleagues can provide the individual directly with tangible supports. Second, the social network members can support the individual with information. They help him/her to solve the problems creating psychic stress by giving information and vision. These pieces of information help the individual to look at his/her problems in a new way. Third, those in the social communication network can support the

individual from the excitement point of view. They reassure the person that he/she is an important, respectful person and still in the center of attention. It is worth mentioning that all kinds of social supports under any circumstances are not supportive. In fact, the social support role in protecting and promoting well-being is relatively exclusive. For example, only a special kind of support will be useful for the individual under some circumstances. If a person who is financially in need will be only encouraged, he or she might feel more embarrassed and stressed (J. Cohen, 1983). The results of the carried out researches on the young widowed persons show that the emotional support can play the role of a shield or protection against the psychic stress caused by a deprivation or loss. Stress buffering model or buffering hypothesis brings the social support up that it is effective on mental health mostly when the stress level is high (Cobb, 1976). According to this model, the social support protects the individual against the pathogenic effects of the events which intensify the stress. From the Cohen and Wills' point of view, the social support enters into action between stressful events and the reaction towards them therefore it weakens the proper response to stress. The social support in the main effect model is considered a privilege only against the stress. The social support reduces the stressful effects, but when there is no stress the social support is void of privilege. Lack of support as the main effect model considers its loss traumatic for the mental health in this model is not necessarily considered stressful. Therefore, under the conditions of high stress and low support the trauma and psychosis are increased rather than under the conditions of high stress but high support (Steinberg & Gottlieb, 1994). S. M. Cohen, G (1984) by study of a set of researches related to the buffer hypothesis observed a considerable difference in their findings. In this study, S. M. Cohen, G (1984) along with their meta-analytical findings concluded that the observed differences originate from two kinds of buffer hypotheses, each one compatible with the findings of existent literature of the buffer hypothesis. Cohen and McKay put forward two kinds of buffer hypotheses: 1. Strong type. 2. Weak type.

The strong type of buffer hypothesis predicates an intense psychopathology for the people who experience high levels of stress but enjoy low levels of social support. Here, psychic trauma is relatively low for the people who enjoy high levels of support. The weak type of hypothesis predicates that when stress increases, the trauma might increase among the people who enjoy high level of support, too. But the level of this increase should be less than that of those who have less social support. According to the stress buffering model or the shield, the social support through protection of the individual against the negative effects of high stress is effective on his/her well-being. This protective role is effective only when the individual is affected with an intense stress. In the low stress condition, a trivial protection is taken place. This protection is taken place at least in two ways: The first way includes cognitive evaluation process. When an individual faces with a very stressful situation, those who enjoy high level support do not evaluate stress as much as those who enjoy low level support (Peirce, Frone, Russell, & Cooper, 1996). The second way includes modification of reaction

against a situation which is evaluated stressful. For instance, a person who enjoys high level support may have a friend who presents a proper solution for his/her problems or convinces him/her that his/her problem is not so important. Those who enjoy low level support do not benefit these privileges. That is why the negative effects of stress are much more for them. It seems that the individual's social network (family members, friends and colleagues) alone can predict his/her well being in the future through providing positive experiences and a set of award-winning roles in the society. The family members can have the individual under their direct tangible support. This support could be methods of promoting well-being, fight against stress and an intelligent cope with it by giving information and vision to the individual. Meanwhile, those who are in the support network of the individual can support him/her excitingly and assure him/her that he/she is a valuable and respectful being (House, 1981). The individual's friends spend more time with him/her and help him/her to experience a catharsis when associating with him/her. Also, an individual who enjoys a good social support is encouraged by the people around him/her to behave in a way which results in a better well-being, higher level of life quality and finally a higher satisfaction of life (House, 1981). Many of these supports exist before the event of psychic stress and, in fact, help the individual to find a more positive affection toward himself and toward the events around himself. This results in more self-esteem and feeling more personal control. They help the individual to show more flexibility in confronting with hardships (S. Cohen & Wills, 1985). These individuals enjoy a better life quality because of having sufficient supports. This more proper quality of life causes less physical and mental complaints and the individual enjoys a better satisfaction of life. When an individual acquires a better adjustment with the environment by having support, he/she becomes more strong against the stress and knows the methods of coping with it better than the one who inevitably gets help from the others only when in stress. This person feels more powerful and self-confident because of having positive experiences with others, getting valuable information from the individuals in his/her social relations network. He/she, when in stress, has the ability to better evaluate and cope with it (Gottlieb, 1988). This point is also true. The individuals who enjoy low support, mostly show tendency towards loneliness. This loneliness results in negative thoughts about themselves, reduces their self-esteem and abilities to cope with the events of life. These things make them to report a low life quality which results in a low satisfaction of their lives. Usually these negative feelings result in abnormal behaviors, more physical and mental complaints and in general, lower well-being. It is clear that if such a person is affected with stress and mental pressures due to having no strong bases of personality which could have already been created by the individual's communication networks, his/her mental health will come down and the life quality and satisfaction of it will be reduced intensively. The researcher would like to design a questionnaire in which the questions only measure the buffering model. In this research three hypotheses have been considered by the researcher, 1- The designed questionnaire for the buffering model has a

good validity. 2-The designed questionnaire for the buffering model has a good reliability. 3-The designed questionnaire for the buffering model has a suitable fitness.

METHODOLOGY

The main instrument to gather data for the analysis and design of a social support model (stress buffering model) was a questionnaire with 19 questions based on the study of resources in the library and interviews with the experts and authorities in the field of social psychology and health. To finalize the questionnaire, cases such as analysis of the questions and the study of reliability and validity tests were considered. To obtain the content validity and face validity of the questionnaire, the views of the authorities in this field were sought. They had positive views about it. The researcher studied the internal consistency of the questions through reliability calculation to verify the validity structure. Then the parameters of the stress buffering model of social support were analyzed by the exploratory and confirmatory factors. A sample with 877 individuals (57% women, 43% men) was selected randomly and answered the questions in the questionnaire. For analysis of the research statistical data, the information obtained from the questionnaires was extracted and put in the general data table. Then all data were analyzed using computer by the statistical software, especially STATISTICA, SPSS, and Lisrel.

FINDINGS

In this research, in order to estimate the reliability of the questionnaire, the internal consistency of the test has been calculated through Chronbach alpha coefficient. The reliability coefficient of the questions relating to the social support parameters (stress buffering model) has been calculated separately and reported in the following table.

Table 1. The acceptability coefficient and the reliability coefficient

Stress buffering model	Support	Question correlation	Reliability with Question
$\alpha=0.736$	Instrumental	0.49	0.702
	Esteem-Emotional	0.60	0.630
	Information	0.36	0.735
	Network	0.67	0.583

The descriptive indexes of all measured variables such as average mean and esteem-emotional support, instrumental, network and informational indexes are in the following table.

Table 2. Descriptive indexes of the social support parameters-Stress buffering model (SBM)

SBM Model	No	Av	Mean	Min	Max	STD	SAE
Instrumental	877	4.47	5.00	1.00	6.00	1.29	0.04
Esteem-emotional	877	4.70	5.00	1.00	6.00	1.06	0.04
Information	877	4.53	4.50	1.00	6.00	1.06	0.04
Network	877	4.19	4.25	1.00	6.00	1.09	0.04

Since the researcher's goal was the analysis of the exploratory/confirmatory factor, therefore the following three

steps were taken, 1-Preparing the correlation matrix, 2-Initial factors extraction and 3-Rotation to access the final solution, seeking discover The simple and interpretational factors (Ali Delavar, 2003). To evaluate the correlation matrix, the Bartlet's test of sphericity has been used. The minimum necessary condition to carry out factor analysis is the meaningfulness of the chi-square.

Table 3. The result of Bartlet's test for correlation matrix

Kaiser-McKay-Olkin's sampling adequacy scale	chi-square	Freedom degree	Meaningfulness
0.937	7975.85	153	0.000

Therefore, concerning the sampling adequacy and meaningfulness of Bartlet's test, the data correlation matrix is suitable for the factor analysis. Meanwhile, carrying out the factor analysis is another condition which is the study of communality' degree of each question with the whole questionnaire. In cases which the amount of factors extraction is higher than 30 in the trend of communalities, it is possible to find out the internal compatibility of the variables or the fundamental structures of the measurement instrument. The table below shows the communality amount of each one of the parameters with the whole questionnaire.

Table 4. The communality amount of parameters

Questions	Communality	Parameters	Communality
q23	0.69	q33	0.75
q24	0.67	q34	0.59
q25	0.59	q35	0.55
q26	0.64	q36	0.56
q27	0.55	q37	0.70
q29	0.61	q38	0.69
q30	0.68	q40	0.62
q31	0.69	q41	0.72
q32	0.69	q42	0.64

The main methodology factors analysis was used to extract the factors from correlation matrix. Meanwhile, in the factor analysis only factors are extracted that explain the highest amount of variance.

Table 5. Initial statistical indexes using the social support

Parameters	Initial special value			Total Factor loadings square		
	Total	Variance percent	Cumulative percent	Total	Variance percent	Cumulative percent
1	7.97	44.29	44.29	7.97	44.29	44.29
2	1.46	8.13	52.42	1.46	8.13	52.42
3	1.19	6.59	59.01	1.19	6.59	59.01
4	1.01	5.62	64.63	1.01	5.62	64.63
5	0.77	4.25	68.88			
6	0.69	3.85	72.73			
7	0.58	3.20	75.93			
8	0.55	3.07	79.00			
9	0.52	2.90	81.90			
10	0.48	2.64	84.54			
11	0.46	2.56	87.10			
12	0.44	2.45	89.55			
13	0.39	2.17	91.72			
14	0.36	2.02	93.75			
15	0.32	1.75	95.50			
16	0.30	1.65	97.15			
17	0.28	1.56	98.72			
18	0.23	1.28	100.00			

The first main parameter explains the highest amount of variance and the other parameters are extracted in the order of importance based on the amount of variance they explain (Ali Delavar, 2003).

The Varimax rotation method was used to ease the data interpretation and simplify the factors so that to make it possible both the exploration of the overall outlook of the questionnaire concepts and distinguish a simpler structure which represents the outline and relatively a clear way to reach the effective solutions.

Table 6. The Promax relating to social support variable-stress buffering model

Questions	Factors			
	1	2	3	4
q33	0.841			
q31	0.830			
q32	0.812			
q30	0.773			
q34	0.666			
q41		0.805		
q42		0.802		
q40		0.694		
q35		0.473		
q23			0.854	
q24			0.789	
q38				0.830
q37				0.820

Several fitness factors have been used to evaluate the confirmatory factor analysis which is in the following table.

Table 7. Fitness indexes of the social support parameters-stress buffering model

Index name	Amount of Fitness Adequacy
Chi-square statistic (2) and its meaningfulness	206.38(P = 0.001)
Root mean square error of approximation (RMSEA)	0.056
Normalized fitness index (NFI)	0.99
Non-normalized fitness index (NNFI)	0.98
Comparative fitness index (CFI)	0.99
Goodness of fitness index (GFI)	0.96
Adjusted goodness of fitness index	0.94

Finally, researcher presented the factor loadings, determination coefficient and the statistic of the social support stress buffering model questions in Fig 1.

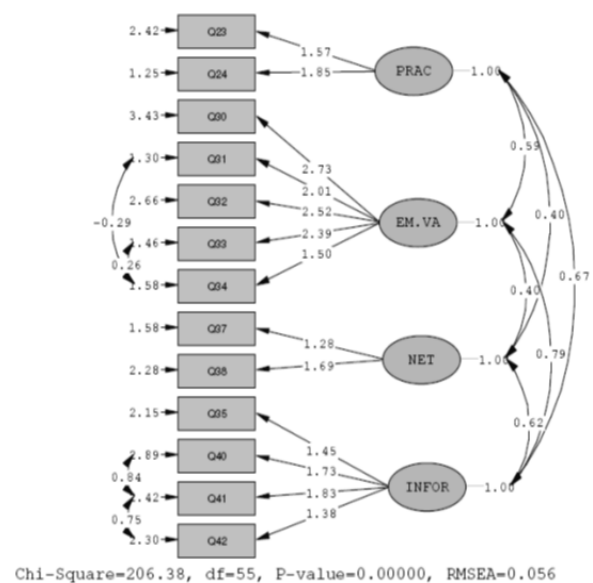


Figure1. Factor loadings of questions

DISCUSSION AND RESULT

The findings of the research show that there is a meaningful difference among the social support parameters. In fact, there is an obvious difference among the averages between the network support parameter and the other kinds of supports. It indicates this point that the subjects believe that the most support they perceive or receive is the esteem-emotional and the least is network support. Considering the cultural context of Iran, it is expected that most of the subjects report they receive support from their family members and relatives, and the social institutes look like less suitable choice to receive support. Meanwhile, more official networks or institutes carry out some duties traditionally and pay less attention to give support, or they do not let the people know properly about themselves. This causes ignorance about these networks and results in lack of confidence towards these organs. Therefore, the subjects refer to their relatives for help traditionally. It is necessary for the concerned institutes such as welfare office and the others to carry out more activities in this field. Since the aim of this research was the constituent factors and factor structure of the questionnaire of social support (stress buffering model), all 19 questions of the questionnaire were studied. Meanwhile, the correlation of each question with the total mark and subscale was considered. Also, the reliability coefficient of each subscale was calculated after deletion of each question (Loop method). The results showed that the reliability amount decreased when the questions were deleted. This desirability showed these questions suitable for the measurement of social support. Meanwhile, the communality of each one of the 19 (S. Cohen & Hoberman, 1983; S. Cohen, Kamarck, & Mermelstein, 1983).

Questions with the whole questionnaire was reported more than 0.30 which is an indication of high correlation of each one of the parameters with the whole test and its suitability with the factor analysis (Ali Delavar, 2003). When factor

analysis, the researcher considered the amount of variance which the parameters explain and noticed that four factors have a special value more than one. These four factors, generally explain about 65 per cent of the variance of the whole questionnaire. This means that a general factor has appeared .therefore most of the questions have a considerable factor loading on it. After Warimax rotation, the factors were identified. For instance, the question No. 32 allotted the most factor loadings to itself. (Question No. 32: When I am informed of a bad news, there is someone to console and help me). In confirmatory factor analysis, the researcher wanted to determine the fitness indexes to be able to design a model to have the power to explain the experimental data based on several parameters. Therefore, he chose the structural equation modeling which is a comprehensive approach for the test of hypothesis about the relations of the observed and

latent variables and called co-variance structure analysis or modeling. In short, it is called SEM (Ali Delavar, 2006). Thus, all factor loadings of the 19 questions and their degree of errors for the questionnaire of the main effect model social support were determined, and the RMSEA which means root mean square error of approximation was equal to 0.056. We know that this index for the very good models is equal to 0.05 or less than it. The models which their RMSEA are between 0.05 up to 0.08 have a suitable fitness, and if it is up to 0.10 they have a weak fitness (Hooman, 2010). Therefore, it can be said that the designed questionnaire has a good fitness. Considering the other indexes of fitness which all are indicative of a good fit, we can recommend the next researchers to use this questionnaire with a high degree of confidence.

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