

What's the role of perceived social support and coping styles in depression and anxiety?

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Background: Due to the excessive and pathologic effects of depression and anxiety, it is important to identify the role of protective factors, such as effective coping and social support. This study examined the associations between perceived social support and coping styles with depression and anxiety levels. **Materials and Methods:** This cross sectional study was part of the Study on the Epidemiology of Psychological, Alimentary Health and Nutrition project. A total 4658 individuals aged ≥ 20 years was selected by cluster random sampling. Subjects completed questionnaires, which were used to describe perceived social support, coping styles, depression and anxiety. *t*-test, Chi-square test, Pearson's correlation and Logistic regression analysis were used in data analyses. **Results:** The results of Logistic regression analysis showed after adjusting demographic characteristics for odd ratio of anxiety, active copings such as positive re-interpretation and growth with odds ratios; 95% confidence interval: 0.82 (0.76, 0.89), problem engagement (0.92 [0.87, 0.97]), acceptance (0.82 [0.74, 0.92]) and also among perceived social supports, family (0.77 [0.71, 0.84]) and others (0.84 [0.76, 0.91]) were protective. In addition to, for odd ratio of depression, active copings such as positive re-interpretation and growth (0.74 [0.69, 0.79]), problem engagement (0.89 [0.86, 0.93]), and support seeking (0.96 [0.93, 0.99]) and all of social support types (family [0.75 (0.70, 0.80)], friends [0.90 (0.85, 0.95)] and others [0.80 (0.75, 0.86)]) were protective. Avoidance was risk factor for both of anxiety (1.19 [1.12, 1.27]) and depression (1.22 [1.16, 1.29]). **Conclusion:** This study shows active coping styles and perceived social supports particularly positive re-interpretation and family social support are protective factors for depression and anxiety.

Key words: Anxiety, coping styles, depression, perceived social support

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INTRODUCTION

Depression and anxiety are the most common mental health problems around the world. These are often associated with unemployment, absenteeism, low productivity, loss of family income, somatic complaints and increased costs and utilization of health care. Thus, identifying resources for prevention and treatment of them is very important.

In recent decades, two types of personal resources have been well known that affect adaptation and psychological well-being.^[1] Social support and coping styles are external and internal resources respectively that many research have showed their relation with anxiety and depressive symptoms.^[2-4]

Social support refers to the experience of being valued, respected, cared about, and loved by others who are present in one's life.^[5] It may come from different sources such as family, friends, teachers,

community, or any social groups to which one is affiliated.^[2] Social support can come in the form of tangible assistance provided by others^[2] or in the form of perceived social support that assesses individuals' confidence of the availability of adequate support when needed.^[6]

Previous research shows that low social support is one of the predictors of psychological problems and associated with depression, anxiety, attention problems, social problems, somatic complaints, and low self-esteem.^[7] It appears that the role of social support is very important because it is considered as a mechanism to buffer against life stressors and promote health and wellness.^[8]

Other resource, coping styles are cognitive and conductible efforts in order to manage stress and specific individual demands.^[3] Similar to social support, coping could have buffering effect on psychological problems. Coping styles can be categorized as active and passive coping. The former refers to taking a direct and rational

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approach in dealing with a problem, and the latter involves avoidance, withdrawal, and denial.^[4]

Active coping styles can produce better emotional adjustment to chronically stressful events than avoidant coping styles.^[9]

Studies indicate, the use of active coping styles are associated with a lower frequency of anxiety and depression, and passive coping styles are related to increasing them.^[3,10]

According to past literature, although there are findings about the relationships of these internal and external resources with depression and anxiety, but we found few studies^[2,3] have been conducted on the general population and there was a little attempt to assess the association of social support and coping styles with depression and anxiety coincidentally. Also, most studies have been conducted with small sample size.^[1-3,6,10]

Hence, in order to fill these gaps, our main aim of this study was to determine the relationship between perceived social support and coping with depression and anxiety levels in Iranian general population with a large sample size.

MATERIALS AND METHODS

Subjects and procedure

Data were obtained within the framework of the Study on the Epidemiology of Psychological, Alimentary Health and Nutrition project, a cross-sectional study in April 2010 aimed to evaluate the epidemiological concepts of functional gastrointestinal disorders and their association with lifestyle and psychological determinants. Detailed information about this study design has been published recently.^[11]

The participants were included nonacademic staff members of Isfahan University of Medical Sciences (IUMS), who were working in hospitals, university campus and health centers affiliated with IUMS were invited to participate. Base on cluster random sampling, a sample was selected within 20,000 nonacademic employees that working in 50 different centers across Isfahan province.

The data was collected in two separate phases to increase the accuracy of data collection that self-administered questionnaires for psychological information were applied in the second phase. In the current analysis, we used data from 4657 adults who had completed information on psychological problem such as depression and anxiety, coping styles and perceived social support. The protocol of the study was approved by the ethics committee of IUMS, and it was clarified for all the participants and a written informed consent was obtained from all participants.

Measurements

In the current study, demographic information included age ≥ 20 , sex, marital status consisting married and unmarried (single, divorced, widow) and educational level consisting graduate (diploma and upper) and undergraduate (under diploma).

After assuring to individuals about the confidentiality of the information, data on demographic characteristics, anxiety, depression, perceived social support and coping styles were collected by standardized self-administered questionnaires.

Anxiety and depression were assessed using the validated hospital anxiety and depression scale (HADS). The questionnaire consists of 14 items that can be divided into two scales, anxiety ($\alpha = 0.82$) and depression ($\alpha = 0.84$). Both scales consist of seven items, with a score ranging from 0 to 21. Higher scores reflect more anxiety and more depression, respectively. Threshold points for clinical levels of anxiety and depression were set at a score ≥ 11 .^[12] Iranian version of the HADS has good reliability in the total scale ($\alpha = 0.92$) and its subscales, anxiety ($\alpha = 0.78$) and depression ($\alpha = 0.86$).^[13]

Coping styles was measured using cope scale. A multi-component self-administered coping strategies questionnaire that assess the cope with stressful life event. It consisted of the 23 items from the following five scales: Positive re-interpretation and growth, Problem engagement, Acceptance, seeking support and Avoidance scales. The reliability of the questionnaire was determined using Cronbach's alpha coefficient ($\alpha = 0.84$). Each item was scored on a 3-point scale (never = 0, sometimes = 1, and often = 2). For each scales, separate scores were reported.^[14] Furthermore, Iranian form of Cope scale had a good validity and reliability.^[15]

Perceived social support was measured using Multidimensional Scale of Perceived Social Support (MSPSS) that 12 items assessing 3 sources of support: Family, friends, and significant other. Items are rated on a 5-point Likert-scale. The original version of the MSPSS had adequate psychometric properties.^[16] Reliability of the Iranian form of the MSPSS was reported using Cronbach's alpha coefficient for a total scale, and subscales from between 0.84 and 0.91 and test-retest consistency was from between 0.72 and 0.85.^[17]

Statistics

Data were analyzed using SPSS version 15.0 (SPSS, Chicago, Illinois, USA). A $P < 0.05$ was considered as significant.

Continuous variables were expressed as mean \pm standard deviation and a t -test was used to compare the means between the two groups. Qualitative variables were

expressed as frequency, and a Chi-square test used to compare frequencies between the two groups.

Pearson correlation coefficient was used to test the relation between perceived social supports and coping styles.

Binary logistic regression analysis was used to find the association perceived social support and coping styles with depression and anxiety with adjusting demographic variables. Odds ratios (OR) were reported with the corresponding 95% confidence intervals (CI). Dependent variables included levels of depression (yes/no) and anxiety (yes/no) in two separate models. Independent variables were perceived social supports and coping styles, and adjusting variables were age, sex, marital status and educational level.

RESULTS

A total of 4657 individuals (mean age = 36.51 ± 7.91 years; 2612 [56.1%] female; 2601 [55.8%] graduate; 3689 [79.2%] married) were included in the study. Characteristics of participants are summarized in Table 1. Subjects were compared in two levels of depression and anxiety. The results showed 1338 (28%) of community has depression and 654 (14%) anxiety. Individuals with depression were significantly more female, unmarried and under graduate; and individuals with anxiety were significantly more

female, younger and under graduate. There were significant differences in coping styles and perceived social support types between two of groups of depression and anxiety. The status of perceived social support and coping styles in depression and anxiety levels were shown in Table 1.

Multiple logistic regression analysis showed that in crude analysis, problem engagement, positive re-interpretation and growth and acceptance for OR of anxiety were significantly protective; but, avoidance was risk factor. Also, all types of perceived social support (family, friend and others) were significantly protective. Positive re-interpretation and growth with OR; 95% CI: 0.83 (0.77, 0.90) and Acceptance with 0.82 (0.74, 0.92) were more protective factors than other coping styles. In Model 2 analysis, results about coping styles after adjusting OR for age, sex, marital status and educational levels were similar, but; in perceived social supports, just family with OR; 95% CI: 0.77 (0.71, 0.84) and others social support with 0.84 (0.76, 0.91) for OR of anxiety were significantly protective and friend social support after full adjusting was not protective [Table 2].

As presented in Table 3, another multiple logistic regression analysis indicated, in crude analysis for OR of depression, Problem engagement, support seeking and specially Positive re-interpretation and growth (OR; 95% CI: 0.74 [0.69, 0.79]) were protective; but, risk factor for avoidance with 1.22 (1.16, 1.28). Also, all of perceived

Table 1: Descriptive statistics, means and SD of demographic characteristics, coping styles and perceive social supports according to depression and anxiety

Variable	Depression		P	Anxiety		P
	No depression n = 3315	Depression n = 1338		No anxiety n = 4003	Anxiety n = 654	
Demographic characteristics						
Age (mean±SD)	36.42±8.12	36.54±7.83	0.656	36.58±8.13	35.69±7.42	0.014
Sex n (%)						
Male	1590 (77.8)	454 (22.2)	0.000	1841 (90.0)	204 (10.0)	0.000
Female	1725 (66.1)	884 (33.9)		2162 (82.8)	450 (17.2)	
Educational level n (%)						
Under graduate	1283 (66.4)	650 (33.6)	0.012	1587 (82.1)	347 (17.9)	0.000
Graduate	1950 (75.1)	648 (24.9)		2313 (88.9)	288 (11.1)	
Marital status n (%)						
Married	2656 (72.1)	1030 (27.9)	0.000	3168 (85.9)	521 (14.1)	0.629
Unmarried	582 (67.8)	277 (32.2)		744 (86.5)	116 (13.5)	
Coping style						
Problem engagement (mean±SD)	9.95±1.93	8.90±2.36	0.000	9.79±2.03	8.75±2.42	0.000
Support seeking (mean±SD)	10.24±2.97	9.16±3.36	0.000	10.06±3.07	9.09±3.33	0.000
Positive re-interpretation and growth (mean±SD)	6.68±1.35	5.85±1.66	0.000	6.55±1.42	5.79±1.72	0.000
Avoidance (mean±SD)	3.32±1.75	3.62±1.78	0.000	3.37±1.76	3.64±1.77	0.000
Acceptance (mean±SD)	3.09±0.95	2.81±1.05	0.000	3.07±0.96	2.68±1.12	0.000
Social support score						
Friend social support (mean±SD)	2.07±1.64	1.34±1.50	0.000	1.95±1.64	1.29±1.50	0.000
Family social support (mean±SD)	3.26±1.22	2.22±1.61	0.000	3.10±1.34	2.12±1.61	0.000
Other social support (mean±SD)	3.30±1.19	2.34±1.62	0.000	3.15±1.31	2.27±1.64	0.000

P ≤ 0.001; SD = Standard deviation

Table 2: The association of coping styles and perceived social support types with anxiety level

Anxiety	OR (95% CI)		
	Crude	Model 1	Model 2
Coping style			
Problem engagement	0.90 (0.86, 0.95)	0.90 (0.86, 0.95)	0.92 (0.87, 0.97)
Support seeking	0.97 (0.93, 1.01)	0.97 (0.93, 1.00)	0.97 (0.93, 1.00)
Positive re-interpretation and growth	0.83 (0.77, 0.90)	0.84 (0.77, 0.91)	0.82 (0.76, 0.89)
Avoidance	1.18 (1.11, 1.26)	1.19 (1.12, 1.27)	1.19 (1.12, 1.27)
Acceptance	0.82 (0.74, 0.92)	0.82 (0.74, 0.92)	0.82 (0.74, 0.92)
Social support score			
Friend social support	0.91 (0.85, 0.98)	0.91 (0.85, 0.98)	0.93 (0.87, 1.00)
Family social support	0.75 (0.69, 0.82)	0.78 (0.71, 0.84)	0.77 (0.71, 0.84)
Other social support	0.87 (0.80, 0.95)	0.85 (0.78, 0.92)	0.84 (0.76, 0.91)

P ≤ 0.05; Model 1 = Age and sex adjusted; Model 2 = Age, sex, marital status and educational level adjusted; OR = Odds ratio; CI = Confidence interval

Table 3: The association of coping styles and perceived social support types with depression level

Depression	OR (95% CI)		
	Crude	Model 1	Model 2
Coping style			
Problem engagement	0.88 (0.85, 0.92)	0.89 (0.85, 0.92)	0.89 (0.86, 0.93)
Support seeking	0.96 (0.93, 0.99)	0.96 (0.93, 0.99)	0.96 (0.93, 0.99)
Positive re-interpretation and growth	0.75 (0.71, 0.80)	0.75 (0.71, 0.80)	0.74 (0.69, 0.79)
Avoidance	1.22 (1.16, 1.28)	1.22 (1.17, 1.29)	1.22 (1.16, 1.29)
Acceptance	0.96 (0.87, 1.04)	0.93 (0.85, 1.02)	0.94 (0.86, 1.03)
Social support score			
Friend social support	0.89 (0.85, 0.94)	0.89 (0.84, 0.93)	0.90 (0.85, 0.95)
Family social support	0.73 (0.68, 0.78)	0.75 (0.70, 0.81)	0.75 (0.70, 0.80)
Other social support	0.81 (0.75, 0.86)	0.79 (0.74, 0.85)	0.80 (0.75, 0.86)

P ≤ 0.05; Model 1 = Age and sex adjusted; Model 2 = Age, sex, marital status and educational level adjusted; OR = Odds ratio; CI = Confidence interval

social support types especially family with 0.73 (0.68, 0.78) were significantly protective factors. Similar results were obtained in Model 2, after adjusting odd ratio for age, sex, marital status and educational levels.

Table 4 shows a correlation between different types of perceived social support and coping styles. The results showed that there were positive relationships between all types of perceived social support and coping styles (*P* ≤ 0.001) except, the relationship between avoidance with family and others social support scores. Also, there is a negative relationship between avoidance with friend social support.

DISCUSSION

In the present study, we tried to investigate the association between perceived social support and coping styles with depression and anxiety in the general population.

The results showed that perceived social supports, especially family social support are strong protective factors for depression and anxiety. Although, the association between anxiety and social support has received less attention than depression in the literature, however, the results about both of them are consistent with findings of many studies among

Table 4: The correlation between coping styles and perceived social support types

Variable	Friend social support	Family social support	Other social support
Problem engagement	0.159*	0.217*	0.201*
Support seeking	0.358*	0.354*	0.311*
Positive re-interpretation and growth	0.194*	0.243*	0.238*
Avoidance	-0.075**	-0.011	-0.009
Acceptance	0.150*	0.103*	0.106*

P* ≤ 0.001; *P* ≤ 0.01

different communities.^[18-20] One explanation for these may be that according to stress-buffering model,^[21] perceived social support has a protective role for psychological problems by decreasing perception a situations as a threat and increasing the belief that resources are available.^[2] Furthermore, social support facilitates positive self-conceptions and social skills, responsibility and competence, and impulse control by three dimensions: Warmth, behavioral control, and psychological autonomy-granting that lead to low level of psychological problems such as depression and anxiety.^[22] Furthermore, in line with some studies particularly in eastern countries, our finding indicated family social support is more protective than other types.^[23,24] These results are corresponding to our culture, in which family is the first and most important supportive resource.

In addition, the results about coping styles showed active copings except support seeking for anxiety and acceptance for depression are protective factors and passive or avoidance coping is risk factor for both of them. Most of the studies have similarly reported the negative association of active copings and the positive association of passive coping with depression and anxiety.^[25-27]

In this study among active copings, positive re-interpretation and growth are the most protective factor for both depression and anxiety. That is an adaptive cognitive coping that by positive refocusing and reappraisal of the situation makes emotional well-being.^[28,29] Therefore, it inversely effects on depression and anxiety symptoms.

On the other hand, acceptance as an effective psychological coping, interestingly, in our research was not protective for depression.^[30] We found just one study among Chinese caregivers that acceptance had not significant relation to depression.^[31] So, the concept of acceptance for our society is possibly underdeveloped, and people more accept tolerance, instead of acceptance.

Moreover, social support seeking was not protective for anxiety. Some studies have reported the association between support seeking and less depressive symptoms^[30] but we found no assessment for anxiety. Seeking supportive interactions may enhance self-esteem during stressful periods, which in turn may facilitate positive adaptation. But the result was in contrast with our prediction and social support seeking did not have significant association with decreasing odds of anxiety. One possible reason may be the role of cultural factors. Some studies have pointed to reliable cultural differences to social support seeking in coping with stressors.^[32,33] They believe that the tendency to not seek social support is a phenomenon shared across Asians. These cultures usually minimize negative consequences and prefer to not disclose their distress. They may dislike expressing their negative emotions because of fear of presentation as a weak person or stigmatization.^[32]

Ultimately, findings from the current study also highlight the patterns of relationships that might be between perceived social support types and coping styles. The result showed the positive significant relationships between all types of perceived social support and active coping styles but, negative relationship between perceived friend social support and avoidant coping style. According to our results, some studies revealed that social support can increase proactive coping.^[34,35] It seems that social support is related to the use of coping strategies. A study suggested that social support reduce adaptation difficulties and depressive symptoms through coping strategies.^[1] Possible explanations may be that social support could decrease

the use of harmful disengagement coping strategies such as avoidance and increase beneficial engagement coping strategies because individuals believe their social network includes someone who is willing to listen.^[36]

Several limitations in this study need to be addressed. This is a cross-sectional analysis. Therefore, we cannot determine causality and also, other social factors that may affect depression, and anxiety have been overlooked. Other limitation is that depression and anxiety symptoms in the participants were based on a self-report measure. So we should be cautious in generalizing the findings.

CONCLUSION

Our finding showed the use of active coping styles and perceived social supports in depression and anxiety can be considered as protective factors, particularly family social support and positive re-interpretation and; inversely, passive coping styles (Avoidance) play the role as a risk factor for depression and anxiety. Hence, the findings suggest about most protective resources in our society, we can plan a variety of intervention approaches, including cognitive, behavioral, and social approaches to prevent of depression and anxiety.

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AUTHOR'S CONTRIBUTION

All authors contributed to the study design. PA was Leader of the research. AF and HRR conducting the statistical analysis and NM prepared the Manuscript. HRR and HA read and editing the manuscript. All authors read and approved the final version of the manuscript.

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