

Investigation of Relationship between Coping Strategies and Self-Efficacy with Mental Health in Female Students of Guilan Sciences and Research University

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ABSTRACT

The present research tries to investigate relationship between coping styles and self-efficacy with mental health in female students in Guilan Sciences and Research University. Research was a descriptive correlation study. The statistical population of the research included all women in Guilan University who studied in 2013-2014 academic years. A sample made up of 150 people was selected by means of cluster sampling. Goldberg and Hiller questionnaire (1979), Lazarous and Folkman questionnaire (1985) and Sherer and Madoukes questionnaire (1982) were used for datagathering. The results showed that there is a relationship between coping strategies and self-efficacy with mental health in female students in Guilan University ($p < 0.01$). Considering the research results, it can be concluded that stress coping styles and self-efficacy are important psychological factors which are related to mental health and must be considered in investigation of mental health.

KEYWORDS: coping strategies, self-efficacy and mental health

INTRODUCTION

Mental health is an important subject of study in psychology and psychiatry and many studies are conducted to deal with this subject and factors which affect it have received a lot of attention by psychologists. Over the past few decades, study of mental health and recognition of factors which affect them has received a lot of attention. Due to the complex nature of "mental health", there is no comprehensive definition for it. This may be resulted from absence of an acceptable definition for normality. Larous Dictionary defines mental health as "psychological power to work effectively, harmoniously and in a good manner, flexibility in harsh conditions and ability to maintain one's balance" (Ganji, 2001). Mental health has some dimensions like anxiety "an ambiguous and unwelcome mental experience which is accompanied by worry about future dangers and events and physical symptoms like headache, high heartbeat, perspiration and nervousness (Sadouk and Sadouk, 2007; translated by FarzinRezaee, 2008)", depression "it refers to a sentimental state, response to a special situation and unique behavior style (Silgman and Roozenhan, 1995; translated by SeyyedMohammadi, 2013), sleep disorder "disruption in one's response threshold (Sarasoun and Sarasoun, 2003, translated by SeyyedMuhamadi, 2008)" and deficiency in social function (disruption in relationship with other people, isolation (FathiAshtiyani, 2009). Levinson (1985) believes that in order to determine mental health, we must first specify that: "what a kind of feeling does a person have towards him or her and others and surrounding world and secondly, we must determine the way of compatibility of the individual with his or her location and time situation (as quoted from Milanifar, 1998). One of these factors is self-efficacy which entered psychology literature after Albert Bandura's paper. From Bandura's viewpoint, self-efficacy is an individual's ability to do a special action in getting along with a specific situation. In other words, self-efficacy refers to individuals' judgments about their abilities to fulfill pre-determined levels of performance (Pajares, 1997). Recent Bandura's studies showed that a low sense of self-efficacy is correlated with psychological distress, weaker responses to ache and lower motivation for following health programs. In contrast, a high sense of self-efficacy is correlated with psychological pressure and weaker biological responses to psychological pressures, higher power for compatibility and more interest in health plans. Self-efficacy belief influence health-related behaviors from two aspects. One is through influence of these beliefs on health-related behaviors and the other is through their impacts on their biological functions. In other words, it both influences on possibility for different ailments and improvement process (Parvin and Oliver, 1992). Individuals with high self-efficacy try harder and become more successful and express more motivation and feel less afraid. Bandura (1980) believes that because individuals with high levels of self-efficacy have more control on works, they are more certain. Since individuals are afraid of events on which they

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do not have control, they are less certain and individuals who have higher self-efficacy feel less afraid (Hergenhahn and Alson, 2005). A review of previous studies findings reveals that there is a significant relationship between self-efficacy and mental health. Researchers found that when students expect to perform well and have positive self-evaluation, they have better performance. In contrast, weak performance expectations and negative self-evaluation cause weak performance in students (Beiron and Baron, 1997; as quoted from Najafi and Fouladchang, 2007). Coping strategies is another important element in mental health. Coping is a dynamic process which might cause success in a work and positive feedback may motivate an individual to repeat it. On the other hand, defeat makes him or her to try another way. Individuals permanently revise their evaluations. Lazarus RS, Folkman (1984) classified different types of coping into problem-oriented coping styles and emotion-based coping styles for stress control. Problem-oriented coping aims to remove or alleviate a problem and reduce stressful situation requirements and increase resources for confrontation with it (Sarafino, 2003; translated by Mirzaee et al, 2008). Emotion-oriented coping tries to control emotional implications of stressful factor. Emotion-oriented attempt tries to adjust emotional responses to stressful factors. It emphasizes on controlling emotional responses and physiological stimulation in order to reduce psychological pressure (Lazarus RS, Folkman, 1984; as quoted from AminiKhoyee et al, 2011). Najafi and Foulad Chang (2008) showed that there is a positive and significant relationship between self-efficacy and mental health. Therefore, the question is that "whether there is a relationship between coping styles and mental health in female students in Guilan Sciences and Research University?"

METHODOLOGY

Considering the fact that the present research aims to investigate relationship between coping styles and self-efficacy and mental health in female students of Guilan Sciences and Research University, the research methodology is descriptive correlation. Statistical population of the research included all women in Guilan University who studied in 2013-2014 academic years. 150 female students were selected by means of cluster sampling. In correlation studies, we are allowed to select 30 to 50 people for each predicting variable (Delavar, 2006).

Research instruments

Goldberg and Hiller's mental health questionnaire: this questionnaire contains 28 questions and was introduced by Goldberg and Hiller (1979). It has four subsidiary scales and every scale has 7 questions. Scales include: 1. Physical symptoms, 2. Anxiety symptoms and sleep disorders, 3. Social function scale, 4. Depression symptoms scale. Items 1 to 7 refer to physical symptoms. Items 8 to 14 refer to social function and items 15-21 refer to evaluation of symptoms of social function and items 22 to 28 refer to depression symptoms. "Never" received zero point, "normal level" received score 1, more than normal received score 2 and very higher than normal received score 3. In every scale, a score more than 6 and in total, a score above 22 indicated symptoms. Goldberg (1979) believes that investigation of internal consistency via Cronbach's alpha is the best way for evaluation of reliability of this instrument. Goldberg reported an acceptable high value for reliability using retest and Cronbach's alpha coefficient. Gloreg (1998) reported 0.95 for reliability coefficient of total questionnaire. Internal consistency of the questionnaire using Cronbach's alpha was equal to 0.93 in Chan (1985) and Case (1984) studies. Minnesota multi-faceted questionnaire was used for evaluation of concurrent validity in Chen and Chen (1983) research. They calculated 0.54 for correlation coefficient. Coffman and Wilson (1983) implemented general health questionnaire and Beck's disappointment scale and reported concurrent validity coefficient to be equal to 0.69 (FathiAshtiyani, 2009). Reliability coefficient of this questionnaire was equal to 0.73 in the present research.

Lazarous's coping styles questionnaire: this questionnaire contains 66 items which was designed by Lazarous and Folkman (1985) based on coping strategies index (Lazarous and Folkman, 1980) and evaluates a wide range of thoughts and actions which are used by people when confronted with internal or external stressful conditions. This questionnaire has 8 subscales: direct coping, keeping distant, self-control, social support demand, and evasion-avoidance acceptance, preplanned problem-solving and positive re-evaluation. 16 items of this scale are used for assurance and the other 50 items evaluate individual coping style. This questionnaire is divided into two sections: problem-oriented coping strategies (social support demand, responsiveness, positive re-evaluation and preplanned problem-solving) and emotion-oriented coping strategies (direct coping, keeping distant, self-control and evasion-avoidance). In its revised version, all items are based on a four-point scale (from zero=never used to 3=I have used it a lot). In order to obtain the score of each subscale, the scores of all subscale items should be summed up. This scale was normalized on a sample made up of 750 middle-aged couples. Cronbach's alpha coefficients for the subscales were: direct coping subscale=0.70, keeping distant subscale=0.61, self-control subscale=0.70, social support demand=0.76, responsiveness subscale=0.66, evasion-avoidance subscale=0.72, preplanned problem-solving subscale=0.76, positive re-evaluation subscale=0.79. these values indicate good reliability for this scale. Vahedi conducted a research on 763 students of grades 2 and

3 in public high schools of Tehran. He reported reliability coefficient to be equal to 0.80 using internal consistency (Cronbach's alpha). Vahedi used correlation between raw scores of this scale with raw scores of Lionel's stress questionnaire in order to evaluate convergent validity of the scale. The results showed that WOCQ test had a good convergence. Furthermore, the results of principal components analysis and varimax rotation showed that coping styles scale is made up of 10 factors with factor loadings above 0.3. In this research, reliability of the questionnaire using Cronbach's alpha was equal to 0.79.

Sherer's self-efficacy questionnaire: this scale is made up of Sherer et al's general self-efficacy scale contains 17 items. Sherer and Madoukes(1982)-without specification of factors-believed that this scale measures three aspects of behavior including tendency to start behavior, tendency to develop attempts for completing assignments confrontation with obstacles. The items are based upon 5-point Likert scale from 1=completely disagree to 5=completely agree. In general, this questionnaire contains 17 items and items 3, 8, 9, 13, and 15 increase score from left to right and the other items increase score from right to left and higher scores indicate higher self-efficacy. Cronbach's alpha coefficient for group self-efficacy was equal to 0.83, first factor was equal to 0.76, second factor =0.68 and the third factor equal to 0.56. In order to study criterion validity of the questionnaire, its internal correlation with Roter's control resource was used. Partial correlation between Sherer's general self-efficacy scale and Roter's internal control attribute was equal to $r=0.333$ (Sherer and Madouks, 1982). Bakhtiyari Barati (2007) correlated ideas obtained from this scale and measures of several personality features (internal and external control of Roter, personal control subscale, Marlow and Cran's social degree scale and Rosenberg's inter-individual competency scale) in order to measure construct validity of general self-efficacy scale. the correlation between self-efficacy scale and measures of personality features was equal to 0.61 and significant in 0.05 significance level and verified the construct (as quoted from Keramati and Shahr Aray, 2004). Furthermore, reliability coefficient was equal to 0.76 using Guttman's bisection method and was equal to 0.75 using Cronbach's alpha. In this research, reliability coefficient was equal to 0.75 using Cronbach's alpha coefficient.

Findings

We first start with a description of data, and then we deal with relationship between coping strategies and self-efficacy with mental health in female students of Guilan Sciences and research University using stepwise multivariate regression analysis and Pearson correlation coefficient and SPSS software (version 18):

Table 1. Description of sample group based on marital status of the participants

	Frequency	Percentage
married	70	0.46
single	80	0.54
sum	150	100

Table 1 shows that participants included 70 married people (46%) and 80 single people (54%).

Table 2. Description of sample group based on participants' ages

age	frequency	percentage
23-25 years old	29	0.20
26-30 years old	35	0.23
31-35 years old	65	0.43
36-50 years old	21	0.14
total	150	100

Table 2 indicates that all participants aged 23-50 years and were divided into four age groups. 29 people (20%) were in the group age 23-25 years, 35 people (23%) were in group age 26-30 years and 65 people (43%) were in age group 31-35 and 21 people (14%) were in group age 36-50.

Table 3. Descriptive indices of coping strategies and self-efficacy and mental health

Variable	mean	SD
Mental health	44.27	9.55
Problem-oriented	53.29	7.24
Emotion-oriented	59.34	8.90
Self-efficacy	63.02	12.98

Table 3 indicates descriptive indices for research variables. The highest mean value belongs to self-efficacy (63.02) with a standard deviation equal to 12.98. Mean value of mental health for female students was equal to 44.27 with a standard deviation equal to 9.55.

Table 4. mutual correlations between coping strategies and self-efficacy with mental health

Variable	1	2	3	4
1. mental health	-	0.21**	-0.33**	0.38**
2. problem-oriented		-	0.24**	0.18**
3. emotion-oriented			-	-0.14**
4. self-efficacy				-

*p<0.05, **p<0.01

As it can be seen in table 4, correlation coefficients between coping strategies and self-efficacy and p-mental health in female students in Guilan Sciences and Research University were statistically significant ($p<0.01$). In other words, there is a significant relationship between predicting and dependent variables. Since correlation coefficient between predicting variables is smaller than 0.90, colinearity condition does not hold and predicting (independent) variables can participate independently in prediction and clarification of variance of dependent variable.

Table 5. summary of stepwise regression analysis for prediction of mental health in female students based on coping strategies and self-efficacy

model	Predicting variables	Multiple correlation R	Multiple correlations R ²	Adjusted R-squared	ΔR^2	Standard error S.E	F changes	sig
1	Self-efficacy	0.38	0.14	0.14	-	12.58	24.91	0.01
2	Emotion-oriented	0.47	0.22	0.21	0.08	11.05	14.43	0.01
3	Problem-oriented	0.51	0.26	0.26	0.04	9.47	11.01	0.01

Stepwise regression analysis results in table 5 indicate that self-efficacy enters the model as the strongest predicting variable and is able to predict 14 percent of the variance of mental health of female students (dependent variable). In the second step, emotion-oriented strategy enters the model and these two variables can explain 22% of the variance of female students' mental health (dependent variable). When emotion-oriented strategy enters the model, it can predict 8% of the variance of mental health of female students (dependent variable). In the third stage, problem-oriented strategy entered the model and these three variables were able to predict 26% of the variance of mental health in female students (dependent variable). Problem-oriented strategy managed to predict only 4% of the variance of mental health in students.

Table 6. Summary of stepwise regression analysis for prediction of mental health in female students based on coping strategies and self-efficacy

model		Non-standard coefficient (b)	Standard error	B standard coefficients	t	Sig.
1	constant	23.25	4.34		5.36	0.01
	Self-efficacy	0.40	0.08	0.380	4.99	0.01
2	constant	42.44	6.54		6.49	0.01
	Self-efficacy	0.36	0.08	0.340	4.62	0.01
	Emotion-oriented	-0.32	0.08	-0.279	-3.8	0.01
3	constant	29.97	0.08		4.09	0.01
	Self-efficacy	0.34	0.07	0.328	4.68	0.01
	Emotion-oriented	-0.32	0.08	-0.271	-4.39	0.01
	Problem-oriented	0.31	0.09	0.268	4.01	0.01

Table 6 indicates that in the first model, self-efficacy with a standard beta value equal to 0.380 has a direct influence on mental health of female students and can predict 40% of mental health of female students. In other words, as self-efficacy increases by one unit, female students' mental health also increases by 0.4 units.

Mental health = $23.25 + 0.40$ (self-efficacy)

In the second model, self-efficacy with a standard beta value equal to 0.340 has a direct influence on mental health of students and emotion-oriented strategy with a standard beta value equal to -0.279 has a negative influence on mental health. Moreover, self-efficacy predicts 0.36 and emotion-oriented strategy predicts -0.32 of variance of students' mental health. In other words, as self-efficacy increases by one single unit, mental health of students also increases by 0.36 units and as emotion-oriented strategy increases by one unit, mental health increases by 0.32.

Mental health = $42.44 + 0.36$ (self-efficacy) - 0.32 (emotion-oriented strategy)

In the third model, self-efficacy with a standard beta value equal to 0.328 has a direct impact on mental health and emotion-oriented strategy with a standard beta value equal to -0.271 has a negative impact on mental health and problem-oriented strategy with a standard beta value equal to 0.268 has a direct influence on mental health of female students and self-efficacy can predict 0.34 and emotion-oriented strategy can predict 0.32 and problem-oriented strategy can predict 0.31 of the variance of marital satisfaction. That is to say, as self-efficacy

increases by one single unit, mental health is increased by 0.32 units and as problem-oriented strategy increases by one unit, mental health increases by 0.32 units. As emotion-oriented strategy increases by one unit, mental health of female students is reduced by 0.31 units.

Mental health= $29.97 + 0.34(\text{self-efficacy}) - 0.32(\text{emotion-oriented}) + 0.31(\text{problem-oriented})$

DISCUSSION

In the present research, we investigated relationship between coping strategies and self-efficacy with mental health in female students in Guilan Sciences and Research University. These results are consistent with the results of studies conducted by Save-Kaching et al (2000), Pok et al (2005), Stock et al (2009), Arabian (2004), Mir Sameei et al (2008), Sadeghi Movahhedi et al (2008), Amini Khouyee et al (2011). These authors also showed that an increase in self-efficacy has a relationship with mental health. This study indicates that increasing self-efficacy and provision of a supporting social environment are ways for helping individuals with anxiety and depression. Moreover, it has been observed that weak self-efficacy and sense of solitude are two features which are related to depression and anxiety. Pok et al showed that problem-oriented coping has a negative relationship with neuroticism and a positive relationship with responsiveness. Amini Khouyee et al conducted a research titled relationship between coping skills and mental health in female students and teachers. They showed that coping skills are the main predictors of mental health and its subscales. As an explanation of the first hypothesis test results and significant relationship between self-efficacy and coping styles with mental health and the fact that self-efficacy is the best predictor, it can be said that individuals' judgments about their abilities (self-efficacy) are in relationship with their thoughts, feelings and behaviors and affect them. Those who have strong beliefs about their self-efficacy see their problems as challenges and not as threats. Therefore, they search actively and creatively for new situations and use compatible and problem-oriented strategies for these problems. Moreover, individuals with high self-efficacy look for more complex targets which require more attempts, are more persistent at works and have lower anxiety and depression and get along well with stressful situations. Furthermore, individuals with higher self-efficacy are more hopeful and this result in purposefulness, self-confidence, increase in problem-solving skills, happiness and optimism. Therefore, as individuals have higher levels of self-efficacy, they are more psychologically healthy. Moreover, regarding emotion-oriented strategy in the research hypothesis, it can be said that individuals who make use of emotion-oriented strategy can adjust stress when confront with stressful conditions and they work mainly on stress-resulted conditions. Moreover, individuals with emotion-oriented strategy re-evaluate tense situations and see the positive aspect of what is happening and make it easier to reach their targets. Therefore, an individual who accepts the reality of a tense situation is prepared to confront with it and wants to change it. Therefore, it can be said that as individuals have more emotion-oriented strategies, they have less mental health. Regarding problem-oriented strategy as the third predicting variable, it can be said that individuals with problem-oriented try to change the external stressing factor when undergo stressful conditions. They try to work consciously on the problem and recognize the problem logically. Consequently, women who use problem-oriented strategies are healthier psychologically. Because the population of the research was restricted to Rasht City and Guilan Islamic Azad University female students, it is difficult to generalize the results to other individuals and age groups. Future researchers are proposed to conduct similar studies on both genders in other provinces of Iran so that it is possible to compare cultural and sexual differences and their roles on mental health.

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