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# An investigation of the relationship between personality dimensions and Stress coping styles

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## Abstract

Purpose of this study was to examine the relationship between personality dimensions and coping styles with stress. Method was correlation study in which 300 students (150 girls, 150 boys) were selected from Malayer University. An extensive analysis was performed to assess the kind of association exist among five personality factors personality (neuroticism, extraversion, openness, agreeableness and conscientiousness) and three coping strategies (problem-focused, positive emotional-focused and negative emotional-focused). All participants were asked to complete the NEO-FFI personality inventory and the Tehran Coping Styles Scale (TCSS). Results indicated that Neuroticism was negatively correlated with positive emotional-focused coping style and was positively correlated with negative emotional-focused coping style in female students, while it was positively correlated with negative emotional-focused coping styles in male students. Extraversion was positively correlated with problem-focused and positive emotional-focused coping style in both male and female students. Openness was positively correlated with problem-focused coping styles in female students. Agreeableness was positively correlated with problem-focused and positive emotional-focused coping styles and negatively correlated with negative emotional-focused coping style in male, while it was positively correlated with problem- focused coping style and negatively correlated with negative emotional-focused coping style in female students. Conscientiousness were positively correlated with problem-focused coping style and negatively correlated with negative emotional-focused coping style in both male and female students. Discussin: personality dimensions were associated with coping strategies.

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*Keywords: personality dimension, stress coping style, five-factor model*

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## 1. Introduction

While many people are flexible in selecting different coping styles, however research shows that personality traits may influence this selection (Amirkhan et al, 1995; Bouchard, Guillemette and Landry-Leger, 2004; Chung, Denis, Easthope, Werrett and Farmer, 2005; Cuijpers, Steuneberg and Van Straten, 2007; according to Marnie Brow, 2008). Longitudinal and cross sectional studies support the idea that personality traits could predict coping styles (Marnie Brow, 2008).

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Relationship between personality with stress and coping have been reviewed and endorsed in several research (Penely & Tomaka, 2002; Ferguson, 2001; Volrath & Torgersen, 2000; Grant, Langen-fax, 2006; Fickova, 2009; Marnie Brow, 2008; Leandro & castilo 2010). First findings in this field indicated neuroticism and extraversion can predict stress and coping, individuals with high neuroticism experience more stressful events and individuals with high extraversion experience both higher stressful and enjoyable events (Bolger & Schilling, 1991; Suls, Green & Hillis, 1998; Magnus, Diner, Fugita and Pavot, 1993). Also Neuroticism is likely to make individuals susceptible in experiencing negative emotion and frustration (Bolger & schilling, 1991), while extraversion can help them experience positive emotions (Watson and Clark, 1992; Watson, Clark and Carey, 1988). Individuals with high neuroticism use passive and inadaptible copings but individuals with high extraversion use active coping strategies and seek social support (Amirkhan, Risinger and Swicker, 1995; Watson & Hubbard, 1996; Volrath & Torgersen, 2000).

Studies about relationship between big five personality factors and stress related processes mainly focus on relation between these factors and application of coping strategies (Penely & Tomaka, 2002). These studies indicated neuroticism predicts emotion-focused coping strategies like escape, avoidance, hostile responses and emotional catharsis positively and problem-focused coping strategies like planning negatively. Conscientiousness predicts emotion-focused coping strategies particularly avoidance negatively and problem-focused coping strategies like direct action and planning positively (Obrien & Delongis, 1996; Penely & Tomaka, 2002; Fickova, 2009; Marnie Barow, 2008; Leandro & Castilo, 2010). Furthermore extraversion predicts emotion-focused coping strategies like avoidance negatively and active coping strategies and looking for social support positively (Watson & Hubbard, 1996). Openness can only predict emotion-focused coping strategies like hostile reaction, relaxation and recurrent appraisal positively (Macrae & Casta, 1986). On the other hand Agreeableness has positive correlation with emotion-focused coping strategies like social support and positive reappraisal and problem-focused coping strategies like planning (Obrien & Delongis, 1996; Watson & Hubbard, 1996).

Leandro and Castilo (2010) studied different coping styles and their relation with personality dimensions, anxiety and depression. Results of this study like previous researches showed neuroticism and conscientiousness have more correlation with specific coping styles as in dimension of neuroticism, men with lower scores choose problem-focused coping styles like positive reinterpretation and growth more and men with higher scores choose emotion-focused coping styles like tendency to religion and denial more. Participants with high scores in conscientiousness tend to choose problem-focused coping styles like positive reinterpretation, growth and active coping and individuals with lower scores in this dimension choose emotion-focused coping styles like behavioral indifference. Three other personality traits including extraversion, openness and agreeableness had low correlation with coping styles so that a positive relation between extraversion, avoidance styles and looking for social support was found. Openness and agreeableness have a regulating effect on some coping styles that is less evident.

The main goal of this study is examination of the relationship between five main personality traits and three styles of problem-focused and positive and negative emotion-focused copings.

## **2. Method**

### *2.1. Participants and Procedure*

Statistical population studied in this research is consisted of bachelor students that studied at Malayer University. Selection of research sample was done through accessible sampling of all majors proportional with all enrolled students. Total number of our sample was 300 students (150 male, 150 female).

## 2.2. Measures

Personality scale NEO-FFI: this scale has 60 questions and examines five personality dimensions of neuroticism, extraversion, openness, agreeableness and conscientiousness in five graded Likert scale. Minimum and maximum score of participant in any subscale would be 0 and 60. Test-retest Reliability in a biweekly period is between 0.86 to 0.9 for five factors (Robins, Ferly, Roberts, 2001; according to Casta and Macrae, 2004) and internal consistency is between 0.68 to 0.86 (Macrae and Casta 1992).

*Tehran coping style scale: it has 60 questions and examines three styles of problem-focused and positive and negative emotion-focused copings in four graded Likert scale. Minimum and maximum score of participant in each subscale would be in a range of 0 to 60. Carver, Scheier and Weintraub (1989) examined reliability and validity of this scale. Test-retest reliability coefficient from  $r=0.42$  to  $r=0.67$  was endorsed for different scales. Convergent and differential validities of coping styles inventory were studied and confirmed according to correlation between subscales of this inventory and other scales including optimism, self-esteem, hardiness, type A and anxiety (carver, scheier and weintarub, 1989).*

## 3. Results

To determine the direction of influence in each variable of neuroticism, extraversion, openness, agreeableness and conscientiousness on the variance of coping styles, personality dimensions were analysed as predicting variables and problem-focused and positive and negative emotion-focused coping styles were analysed as criterion variables in regression equation.

According to results, observed F in girls is significant in predicting problem-focused coping style regarding to personality dimensions ( $p<0.001$ ) and 0.18 of the variance related to problem-focused coping style is determined with personality dimensions. Regression coefficients show only conscientiousness ( $t=2.69$ ,  $B=0.239$ ) and extraversion ( $t=2.82$ ,  $B=0.265$ ) can determine the variance of solution-focused coping style significantly. Meaning that individuals with high scores in the dimensions of conscientiousness and extraversion use problem-focused coping strategies in facing with stressful situations more.

According to results, observed F in girls is significant in predicting positive emotion-focused coping style regarding to personality dimensions ( $p<0.005$ ) and 0.11 of the variance related to positive emotion-focused coping style is determined significantly. Meaning that individuals with high scores in the dimension of extraversion use positive emotion-focused coping strategies if facing with stressful situations more.

According to results, observed F in girls is significant in predicting negative emotion-focused coping style regarding to personality dimensions ( $p<0.001$ ) and 0.14 of the variance related to negative emotion-focused coping style is determined with personality dimensions. Regression coefficients show only conscientiousness ( $t=-3.052$   $B=-0.245$ ) can determine the variance of negative emotion-focused coping style negatively and significantly. Meaning that individuals with low scores in the dimension of conscientiousness use negative -focused coping in facing with stressful situations more.

According to results, observed F in girls is significant in predicting problem-focused coping style regarding to personality dimensions ( $p<0.001$ ) and 0.10 of the variance related to problem-focused coping style is determined with personality dimensions. Regression coefficients show only conscientiousness ( $t=2.24$   $B=194$ ) can determine the variance of problem-focused coping style negatively and significantly. Meaning that individuals with high scores in the dimension of conscientiousness use problem-focused coping in facing with stressful situations more.

According to results, observed F in boys is significant in predicting positive emotion-focused coping style regarding to personality dimensions ( $P<0.001$ ) and around 14% of the variance related to positive emotion-focused coping style is determined with personality dimensions. Regression coefficients show extraversion ( $t=3.836$ ,  $B=0.29$ ) and openness ( $t=2.995$ ,  $B=0.286$ ) can determine positive emotion-focused coping style significantly.

Meaning that individuals with high levels of extraversion and low levels of openness use more positive emotion-focused coping strategies in facing with stressful situations.

According to results, observed F in boys is significant in predicting negative emotion-focused coping style regarding to personality dimensions ( $P < 0.001$ ) and around 28% of the variance related to negative emotion-focused coping style is determined with personality dimensions. Regression coefficients show neuroticism ( $t = 4.901$ ,  $B = 0.376$ ) and agreeableness ( $t = -2.742$ ,  $B = -0.302$ ) can determine negative emotion-focused coping style significantly. Meaning that individuals with high levels of neuroticism and low levels of agreeableness use more negative emotion-focused coping strategies in facing with stressful situations.

#### **4. Discussion and conclusion:**

Results of this research show neuroticism in girls has negative correlation with positive emotion-focused coping style and positive correlation with negative emotion-focused coping style. Neuroticism in boys has positive correlation with negative emotion-focused coping style. Results of regression analysis of coping with stress styles on personality dimensions in boys and girls show neuroticism don't predict no coping styles in boys and girls it means correlation between neuroticism and coping styles is in direction of hypothesis but it is not so strong to predict use of different coping styles. In explaining these findings it can be considered individuals with high neuroticism are susceptible to psychological helplessness and irrational thoughts and have less ability to control their impulses. They have general tendency to experience negative emotions (Casta & Macrae, 1992). So it is more possible that these individuals get involved in negative emotion-focused coping strategies like avoidance-escape, interpersonal withdrawal and self blaming (Macrae & Casta, 1986; Obrien & Dilongis, 1996; Ramirez-maestre, Martinez and Zarazaga, 2004; Roesch, Wee and Vaughn, 2006; Fickova, 2009; Marnie Brow, 2008; Leandro & Castilo, 2010) and direct their efforts to manage their destructive emotions. It seems these individuals have difficulty to cope adaptively. They tend to report emotion-focused coping strategies that have poor results (Lee-Bagglee, Dilongis & Preece, 2005) and don't decrease their negative emotions and they can even aggravate their negative emotions (Bulger & Zuckerman 1995).

Second hypothesis: extraversion has positive correlation with problem-focused and positive emotion-focused coping strategies and negative correlation with negative emotion-focused coping strategies.

Results of this research show extraversion in boys and girls has significant positive correlation with problem-focused and positive emotion-focused coping strategies. Results of regression analysis of coping styles on personality dimensions indicate extraversion in girls can predict use of positive emotion-focused coping style.

In explaining this finding it can be considered individuals with high extraversion like excitement and have happy mood. While facing with stress these individuals use coping styles that support their interpersonal relationship. This finding is consistent with their temperament. Previous researches have indicated these individuals use active coping strategies and positive reappraisal. In general people with high extraversion have flexible copings and can adapt their coping responses regarding to situation (Obrien & Dilongis, 1996; Fickova, 2009; Marnie Brow, 2008).

Third hypothesis: conscientiousness has positive correlation with problem-focused and positive emotion-focused coping styles and negative correlation with negative emotion-focused coping styles. Results of this research show conscientiousness in girls and boys has positive relation with problem-focused coping style and negative relation with negative emotion-focused coping style. Results of regression analysis of coping styles on personality dimensions indicate conscientiousness in girls can predict use of problem-focused coping positively and negative emotion-focused coping negatively. In explaining these findings it is considered individuals with high conscientiousness are goal-oriented and have powerful determination. While facing with stress they are good planners and extremely logical decision makers. These individuals tend to use active and in general problem-focused

coping strategies and avoid negative emotion-focused copings ( Macrae & Casta, 1986; Ramirez-maestre, Martinez and Zarazaga, 2004; Leandro & Castillo, 2010).

First question: Is there a relationship between openness, problem-focused and positive and negative emotion-focused coping styles?

Results of the research indicated openness in girls has positive relation with problem-focused coping style, but openness in boys has no relation with coping styles. Results of regression analysis of coping styles on personality dimensions indicate openness in girls do not predict any coping styles; it means correlation between openness and coping styles is in direction of hypothesis but it is not so strong to predict use of different coping styles. Openness in boys, predict use of positive emotion-focused coping negatively.

Findings of the research about significant positive relation between openness and use of problem -focused coping styles are consistent with some research. In explaining the finding it is considered individuals with high openness are more curious, flexible and creative. According to current studies lots of researchers conclude openness has weak influence on coping responses. However individuals with high openness use multiple coping styles to minimize stressful or devastating experiences. Individuals with high Openness experience their emotions comfortably and can accept emotions of others better. These individuals tend to use problem-focused coping styles more (Suls, Green, Hillis, 1998; Bosworth, & et al, 2003; Roesch, Wee, Vaughn, 2006; Leandro & Castillo, 2010)

Second question: Is there a relationship between agreeableness, problem-focused and positive and negative emotion-focused coping styles?

Results of the research indicate agreeableness in girls has positive relation with problem-focused and positive emotion-focused coping styles and negative relation with negative emotion-focused coping styles. Agreeableness in boys has positive relation with problem-focused and negative relation with negative emotion-focused coping styles. Results of regression analysis of coping styles on personality dimensions indicate agreeableness in girls do not predict any coping styles. It means correlation between agreeableness and coping styles in girls is in direction of hypothesis but this correlation is not so strong to predict use of coping styles. While agreeableness in boys can predict use of negative emotion-focused coping styles negatively.

In explaining the finding it can be considered individuals with high agreeableness have tendency to altruism, satisfaction, trust and usefulness. These individuals are easy and understandable and use the ways to have social support. While facing with stress these individuals use positive reappraisal strategies, social support and planning and have less tendency to use negative emotion-focused coping strategies like self blaming, avoidance and behavioural and intellectual indifference. It should be considered because agreeableness and openness to experience were less studied, findings of these two factors may not be strong. (Fickova, 2009; Leandro & Castillo, 2010)

At last it can be concluded: using of efficient coping strategies suitable with personality traits can make stressful situation more manageable and less damaging.

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