The role of personality traits predicting emotion regulation strategies

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Abstract

Emotions are strong navigators in people lives and people try to regulate their emotions in order to be compatible with environment and reaching their goals. People regulate their emotions in different ways because of their individual differences and personalities. The current study was aimed at investigating the relationships between personality factors including neuroticism, extraversion, openness, agreeableness and conscientiousness and emotion regulation strategies including reappraisal and suppression as well as to predict emotion regulation strategies by personality traits. 381 subjects (192 males, 189 females) were chosen by stratified cluster sampling from Hakim Sabzevari University and responded to Emotion Regulation Questionnaire (ERQ) and NEO Five Factor Inventory (NEO-FFI). The present study was descriptive and correlational and Pierson’s correlation coefficient and standard multiple regression were used to analyze the data. Pierson correlation analysis showed that there were positive relations between reappraisal with extraversion, agreeableness and conscientiousness and also there was a positive relation between suppression and neuroticism and there were negative relations between suppression with extraversion, openness and conscientiousness. The results of multiple regression showed that extraversion and conscientiousness could predict 7% of reappraisal variance positively, and also extraversion and openness could predict 8% of suppression variance negatively. The results of the study showed that individuals’ personality traits can predict how people regulate their emotions.

Keywords: Big Five, Emotion regulation, Personality
Introduction:
Emotions and moods are pervasive phenomena; they are almost giving subjective sense to all moments of a person's awakening (Lucas and Diener, 2008). In Darwin's theory (1965; quoted in Izard and Ackerman, 2004) emotion expressions which distinguish emotions from each other, are movement patterns that serve as adaptive functions through evolution. In his opinion emotions remain useful functions which help a man in adapting to environment either socially or through emotion regulation, for example, in the first case which is social function, mother’s confirming smile or disconfirming frown puts her children in the right direction, and in the second function which is emotion regulation, suppressing the expression of an emotion reduces its experience and expressing an emotion freely and fully increases its experience. But emotions are not always helpful, they sometimes harm, emotions are harmful when they happen in the wrong kind, or at the wrong time or in the wrong level. At such times must be so motivated to try for regulating the emotions (Lucas & Diener, 2008). For example, extreme fear at presenting to the audience is an inappropriate emotion that occurs at the wrong time and in the wrong level which is not only helpful but also it is preventing a good presentation. Campos, Frankel, and Camras (2004) discuss that emotion and emotion regulation are functionally inseparable. There is no "pure" emotion in the feeling of an event that occurs in a measurable way separate from regulation.
Emotion regulation is the ability of individuals to influence the type of emotions they have and when and how to experience and express them and also it is the ability to change the duration or severity of behavioral, experiential and physical processes which are conscious or unconscious and through emotion regulation strategies (Gross & Thompson, 2007). Emotion and emotion regulation are simultaneous processes, and an emotional response to a given incentive stimulus depends on earlier regulatory processes, such as cortical inhibition or the way the stimulus is understood (Lucas & Diener, 2008). Several existing diagnostic criteria clearly refer to emotion regulation difficulties. For instance, the criteria "persistent avoidance of stimuli associated with the trauma" in posttraumatic stress disorder, "quick angry reactions" in paranoid personality disorder, "difficulty with impulse control" in substance abuse, "fear of gaining weight" in anorexia nervosa, and "elevated, expansive, irritable mood" in bipolar disorder all show difficulties in regulating emotion (Werner and Gross, 2010).
As Grass (2008) said, there is evidence that shows individuals differ in the use of emotion regulation processes and these differences are important, for example, studies of individual differences in attention processes related to emotion, focus on the role of attention bias in mood and anxiety disorders. A study found that people with high levels of anxiety showed quicker attention toward threatening stimuli compared to those with lower levels of anxiety (Macleod et al., 1986; Mogg and Bradley, 1999). Sometimes individual differences such as low self-esteem affect the way a person regulate his/her emotions. In another study it was found that in people with low self-esteem, severe life events increases the risk of depression more than double (Brown et al., 1986). Bolger and Schilling (1991) used daily diaries to track stressors in a sample of married subjects. They found that subjects with high scores on neuroticism in compare to subjects with low scores on neuroticism were more argumentative with their spouses. Even in similar environments, provocative interaction patterns lead to significant differences in the emotional backgrounds and then individual differences in emotional responses. These individual differences which are investigated in form of personality traits are considered as an important factor
affecting emotion regulation. It is very important to study the effect of these personality traits on emotion regulation to understand the mechanism of emotion regulation.

Personality is a continuous pattern of affection, behavior, cognition and desires (goals) over time and place. A useful analogy to explain the relation between personality and emotion is that personality is to emotions as climate is to weather. Thus what the person is expected to do is personality, but what is seen at a particular moment is emotion (Revelle and Scherer, 2010). Studies show that extraversion and neuroticism (sometimes referred to as the other end of emotional stability dimension) are associated with affectional differences and environmental responsiveness (Corr, 2008; Revelle, 1995). Dimensional view of the emotion focuses on structural similarities between personality and emotion (Meyer and Shack, 1989). In particular, dimensional views suggest a mapping between positive dimension of emotion and extraversion and negative dimension of emotion and neuroticism. These links have been shown in several studies (Emmons & Diener, 1985; Tellegen, 1985; Watson & Clark, 1984; 1992; Watson et al., 1999). For example, Costa and McCrae (1980a) found that neuroticism predict negative affect in daily life while extraversion predict positive affect and these relationships remain even in 10 years. Based on these relationships, McCrae and colleagues (1986) have suggested that neuroticism and extraversion are ethical dimensions of personality that show people readiness to have negative and positive emotions respectively.

This study investigates the relationship between five factor of personality and emotion regulation strategies include reappraisal and suppression and aims at investigating a hypothesis which says: personality factors can predict the way of emotion regulation.

Research methodology

The population, sample and sampling

The sample consisted of 381 participants who were selected from among the 7,700 students at Hakim Sabzevari University of Iran in a categorical cluster random sampling. A number of 800 questionnaires were distributed among the sample group, among which 563 questionnaires were returned to the researchers and finally after data screening and removing the incomplete data, 381 questionnaires remained for final data analysis. 192 (50.4%) of the participants were males and 189 (49.6%) of them were females, 341 (89.5%) of them were single and 40 (10.5%) of them were married and they were studying in BA (284, 74.5%), MA (93, 24.4%) and PhD (4, 1%) levels.

Research tools

Emotion Regulation Questionnaire (ERQ): This 10-item questionnaire was made by Gross and John (2003), which includes two subscales measuring cognitive reappraisal and expression suppression by 6 and 4 items, respectively. Items are measured on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The questionnaire showed very good reliability, Cronbach’s alpha reported by Gross and John (2003) for reappraisal and suppression which were 79/0 and 74/0, respectively. In another study that was conducted on 866 participants Cronbach’s alphas for each factor were 79/0 and 75/0, respectively (Cabello et al., 2013). Persian version of Emotion Regulation Questionnaire was standardized by Ghasempour and colleagues
(1391), which results in their study indicated good validity and reliability and homogeneity of the questionnaire and its subscales, Cronbach's alphas for reappraisal and suppression were 78/0 and 60/0, respectively.

NEO Five Factor Inventory (NEO-FFI): The Short Form of NEO PI-R is the NEO Five-Factor Inventory which has been made by Costa and McCrae (1992). NEO-FFI includes 60 items, which each 12 items measure one of the 5 factors including extraversion, agreeableness, conscientiousness, neuroticism and openness to experience and each item is evaluated on a Likert scale of 1 to 5. Short form and long form of the questionnaire show 0.68 correlation and good internal reliability (Costa and McCrae, 1989). In a research conducted by the Ramos, Astorga & Manga (2004) on 1,136 Spanish participants, Cronbach's alpha for each of neuroticism, extraversion, openness to experience, conscientiousness, agreeableness, respectively, were 0.82, 0.81, 0.76, 0.71, 0.81 which are good values for reliability.

The results of a study that was conducted for couples showed acceptable reliability and validity of the Persian version of NEO-FFI and Cronbach’s alphas of neuroticism, extraversion, openness to experience, conscientiousness, agreeableness were 0.76, 0.63, 0.31, 0.48, 0.81, respectively (Nilforooshan, Ahmadi, Fatehizadeh, Abedi and Ghasemi, 1390).

The Analysis of Data
Descriptive statistics and inferential statistics such as T-test, Analysis of variance (ANOVA), Pierson’s correlation coefficient and standard multiple regressions were used for analyzing data.

Research Findings
To investigate the relationship between personality traits and emotion regulation strategies, Pearson correlation analysis were used and results are shown in Table 1.

Table 1: Correlations coefficients matrix between personality traits and emotion regulation strategies

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Reappraisal</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 -Suppression</td>
<td>0.17**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 -Neuroticism</td>
<td>0.05</td>
<td>0.13**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 -Extraversion</td>
<td>0.18**</td>
<td>-0.23**</td>
<td>-0.46**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 -Openness</td>
<td>0.09</td>
<td>-0.16**</td>
<td>0.06</td>
<td>0.07</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 -Agreeableness</td>
<td>0.13**</td>
<td>-0.09</td>
<td>-0.34**</td>
<td>0.39**</td>
<td>0.02</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Table 1 Results show significant positive relations between reappraisal with extraversion, agreeableness and conscientiousness. There is also a significant positive relation between suppression and neuroticism and significant negative relations between suppression with extraversion, openness and conscientiousness.

Standard multiple regression was used to investigate the role of personality traits in predicting emotion regulation strategies which in one of them reappraisal was dependent variable and five factor of personality were predictors and in the other one suppression was dependent variable and five factor of personality were predictors. Tables 2, 3 indicate the results of the regression analyses.

Table 2: Regression analysis of predicting reappraisal by personality traits

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>0.054</td>
<td>0.942</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.122</td>
<td>1.994</td>
<td>0.047</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openness</td>
<td>0.072</td>
<td>1.440</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.052</td>
<td>0.936</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.171</td>
<td>3.125</td>
<td>0.002</td>
<td>0.26</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Table 2 shows that personality traits with a multiple correlation coefficient of 0.26 can explain and predict 7% of reappraisal. With regard to the beta coefficients just extraversion and Conscientiousness could predict reappraisal positively.

Table 3: Regression analysis of predicting suppression by personality traits

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t</th>
<th>Sig</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>0.047</td>
<td>0.823</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>-0.203</td>
<td>-3.334</td>
<td>0.001</td>
<td>0.28</td>
<td>0.08</td>
</tr>
<tr>
<td>Openness</td>
<td>-0.156</td>
<td>-3.113</td>
<td>0.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.012</td>
<td>0.207</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3 shows that personality traits with a multiple correlation coefficient of 0.28 can explain and predict 8% of suppression. With regard to the beta coefficients just extraversion and openness could predict suppression negatively.

To investigate the difference in using reappraisal and suppression in demographic variables, ANOVA and t-test were used. Results showed no significant difference in undergraduates, masters and doctorates in using reappraisal (F (2, 378)= 0.01, Sig=0.99) and suppression (F (2, 378)= 1.06, Sig=0.34). There was also no significant difference between married and single people in using reappraisal (F=3.889, singles mean=27.44, married mean=27.94, Sig=0.61 ) and suppression (F=0.01, singles mean=13.78, married mean=13.17, Sig=0.51 ). There was no significant difference in using reappraisal (F=0.06, men mean=27.33, women mean=27.67, Sig=0.64 ) Between men and women, but there was a significant difference in use of suppression Between men and women (F=0.255, men mean=14.61, women mean=12.81, Sig=0.02 ) which in men suppression were used more than women.

### Conclusion:

The aim of present study was to investigate the relationship between personality factors and emotion regulation strategies, the results showed that there were significant correlations between them. Consistent with other findings in the field (Gross and John, 2003; Gresham and Gullone, 2012; Balzarotti et al., 2010) there were significant positive relationship between extraversion and conscientiousness with reappraisal which shows that reappraisal correlated with healthy and adaptive properties of personality (Gross and John, 2003; Cabello et al., 2013). Clark and Watson (1997) have noted that positive emotionality should be seen as the core feature of extraversion and some studies have shown that extroverts have more positive experiences than introverts (Clark & Watson, 1997; Gross and John, 1998 ) and also it is known that greater use of reappraisal associated with positive emotions and well-being (Gross & John, 2003), these findings are consistent with the results of present study which indicates positive relationship between extraversion and reappraisal. In relation to positive relationship between conscientiousness and reappraisal it should be noted that people with high levels of conscientiousness are goal-oriented (McCrae and Costa, 1987). Being goal-oriented in conscientious people is consistent with reappraisal which is an adaptive emotion regulation strategy in order to reach the goals.

The results also shows that agreeableness is associated with reappraisal positively which is consistent with the other study in this field which show people with high levels of agreeableness automatically neutralize negative thoughts because otherwise interpersonal harmony reduces(Meyers et al., 2006; Tobin et al., 2000). Agreeableness is described with social adaptability, friendliness, welcoming kindness, hospitality and love (John and Srivastava, 1999) which is consistent with the aim of these people trying to reduce interpersonal inconsistency through using reappraisal to regulating their emotions.

Extraversion and conscientiousness could predict reappraisal significantly which is consistent with the definitions of extraversion and conscientiousness. Costa and McCrae (1980b) showed that extraversion
predict positive affect in life which was a stable relationship even during a period of 10 years, also McCrae and Costa (1991) suggested that extraversion is one of the ethical dimensions of personality which predicts positive emotions in people. With regard to the relation of reappraisal with positive emotions and well-being (Gross & John, 2003) and the relation between reappraisal with healthy and adaptive personality traits (Gross and John, 2003; Cabello et al., 2013), predicting reappraisal by extraversion in this study is consistent with the definitions. Considering that successful emotion regulation has a significant positive correlation with positive affect (Berking et al., 2008) and that reappraisal is an adaptive and successful emotion regulation strategy, the results show that extraversion with predicting more using of reappraisal, predicts successful emotion regulation which results in positive emotion and affect which is consistent with extraversion definition of experiencing more positive emotion. Using reappraisal regularly predicts higher scores in well-being and lower scores in negative mood, and also it is more probable that extroverts participate in positive reappraisal, so it is expected that higher scores in reappraisal should predict more well-being and less negative mood in extroverts strongly (Donohue, 2006).

Emotion regulation contains processes that modify emotional reactions in order to achieve a goal which can happen at any point of the emotion process including situation selection, situation modification and reappraisal to modulate physiological and behavioral reactions (Gross, 1998). Emotion regulation will be necessary when experiencing some emotions are annoying, for example when an emotion interfere with a person’s function during a test or when a positive emotion about weekend journey distract someone from the subject in class (Ivcevic & Brackett, 2014). Definitions about emotion regulation which noted before are consistent with the definitions of conscientiousness which are thinking before acting, delayed satisfaction, following the norms and laws, planning, organizing and prioritizing tasks (John and Srivastava, 1999), so this consistency confirms the results of the present study that shows conscientiousness predicts reappraisal. In this case people at high levels of conscientiousness because of their tendency for reaching goals and planning for it, avoid any distraction made by emotions by using reappraisal to regulate them and so they increase the possibility of reaching their goals. Notwithstanding that agreeableness had positive relation with reappraisal, it couldn’t predict reappraisal in presence of the other personality factors in regression analysis and was removed from prediction regression model and it was because of its weak correlation with reappraisal.

The results show that there is a significant positive relationship between suppression and neuroticism that is consistent with similar studies which show that high scores in neuroticism are associated with suppression (Gresham, and Gullone, 2012) and people with high neuroticism levels prevent expressing their emotions and hide them from others (gross and john, 1998) which show that suppression associated with less healthy personality traits (Cabello et al, 2013; John and Gross, 2004). The results also indicate a negative relationship between extraversion and suppression that is consistent with similar studies (Gross and John, 2003; Cabello et al., 2013; Balzarotti et al., 2010). Based on definitions, extraversion contains self-expression, emotionality, positive emotion and characterize with more emotion expressing (McCrae and Costa, 1999) which confirms negative relation between extraversion and suppression. Results also are consistent with that negative attitude towards expressing emotion have negative relation with extraversion (Nightingale and Williams, 2000). There is a negative correlation between suppression and openness.
which is consistent with results of similar studies (Gross and John, 2003; Cabello et al., 2013; Balzarotti et al., 2010). McCrae and Costa (1997) said that imagination, feeling, excitement and values are experiences that individuals with high scores in openness are welcoming about them which are consistent with negative relation between openness and suppression in this study, so this relation shows that people with high scores in openness instead of fearing of emotions and trying to suppress their expressions welcome emotions with open arms and even these feelings and emotions pleased them. There is also a negative relation between conscientiousness and suppression which confirms results of the other studies (gross and john, 2003; Balzarotti et al, 2010). Conscientiousness is associated with knowledge of necessary strategies for emotion regulation and management (Ivcevic and brackett, 2014) which is consistent with positive relation between conscientiousness and reappraisal and negative relation between conscientiousness and suppression in this study. With regard to reappraisal as an adaptive emotion regulation strategy and suppression as a maladaptive emotion regulation strategy (Flynn et al, 2010), people with high scores in conscientiousness are able to use more adaptive strategies because of their better knowledge about emotion regulation strategies and their better management.

According to the results extraversion and openness were able to predict using of suppression significantly which this results are understandable with regard to definitions of extraversion and openness as well as literature. Negative prediction of suppression by extroversion is consistent with that introverts are more likely to suppress their emotions compare to extrovert (Roger and Najarian, 1989). Low scores in extraversion predict more use of suppression which in short term decrease activation but in long term with regard to possible revival of a thought and followed by increasing of emotional intensity, it is expected that higher scores in suppression predict lower scores in well-being and higher scores in negative mood (Donohue, 2006). In addition extroverts are less likely to use suppression strategies so it is less probable for them to get hurt from suppression destructive effects (Shulman, 2006). The results of the study indicate negative prediction of suppression by openness. Gross (2013) said that they found some experimental evidence for negative prediction of suppression by openness (for example open people appreciate both their emotion reality and behavioral autonomous). With regard to same studies, results of this study show that people with high scores in openness accept their emotions and feelings instead of suppressing them.

There were significant differences between men and women in the use of suppression which means that men use suppression more than women to regulate their emotions which is consistent with similar studies (Gross and John, 2003; Cabello et al., 2013; Balzarotti et al. 2010; Flynn et al, 2010; Kring and Gordon, 1998). In a study by Underwood et al (1992), they reported that mothers have taught their sons to control emotions more than their daughters and boys reported that they are expected to prevent expressing their emotions more than girls.

According to the results of study people with different personality traits regulate their emotions in a different way. These personality traits can predict frequency and stability of using a particular strategy of emotion regulation in a person during a long time, strategies that have different consequences. Extraversion and conscientiousness can predict more using of reappraisal, so extroverts and conscientious people are more likely to experience positive emotion, positive affect and well-being, and they are less
likely to experience disorders involve emotion dysregulation. In the other side extraversion and openness predict less use of suppression that means extroverts and open people use suppression less to regulate their emotions, therefore they are safer from this maladaptive strategy consequences including negative emotion and affect and depression. Given that suppression can be the cause of disorders involves dysregulation, more extroverts and open people are less likely to suffer from such disorders. Extroverted and open people with their positive attitudes toward stressful events and accepting their emotions instead of suppressing them, provide better emotional conditions for themselves that results in more well-being.

References:


