THE MEDIATING ROLE OF EARLY MALADAPTIVE SCHEMAS IN RELATION BETWEEN PERSONALITY TRAITS AND SUBJECTIVE WELL-BEING

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ABSTRACT
The aim of current research was to investigate the mediating role of maladaptive schemas in relation between personality traits and subjective wellbeing. To accomplish this goal, in a descriptive-correlation study, 366 university students of Azad university of Qazvin (171 males and 195 females) were selected through the multistage cluster sampling method and responded to maladaptive schema questionnaire, big five inventory and subjective wellbeing questionnaire. Data were analyzed using Structural equation modeling. The results showed that, the latent variables, maladaptive schemas and personality traits could explain 47 percent of variance of subjective wellbeing. Also extraversion positively and neuroticism negatively could significantly predict subjective wellbeing. In addition, maladaptive schemas could positively mediate the relation between agreeableness and subjective wellbeing, and the relation between extraversion and subjective wellbeing. Also maladaptive schemas could negatively mediate the relation between neuroticism and subjective wellbeing. According to the results of current research, it can be concluded that maladaptive schemas have a Fundamental role in relation between personality traits and subjective wellbeing.

Keywords: Early Maladaptive Schema, Personality Traits, Structural Equation Modeling, Subjective Well-being

INTRODUCTION
Subjective wellbeing is one of psychological indexes of a favorable quality of life (Roothman et al., 2003) that is a hierarchical and multidimensional concept which consists of two aspects namely cognitive and affective. Life satisfaction is the cognitive aspect and positive affect and absence of negative affect are the affective aspect of subjective wellbeing (Roysamb, 2006). The concept of subjective wellbeing is so important and Lucas (2008; quoting from Garcia and Erlandsson, 2011) believes that, subjective wellbeing is the final Goal of human being. Also the results of recent research shows that, individual that their happiness is desirable, see the world safer, make a decision easier, find their favorable job, have the sense of collaboration and helping others and finally they interpret the stimulus in such way that lead them to more happiness (Egan et al., 2014). Accordingly, it can be expected that subjective wellbeing have an important role in physical and psychological health (Peltzer and Pengpid, 2013).

Based on results of studies, the demographic factors (age, gender, income, education, race, marital status) can explain a tiny fraction of variance of subjective wellbeing (Durayappah, 2011). On the contrary there is much evidence to suggest that personality traits are important predictors of subjective well-being (Lucas, 2008; Pavot, 2004; Lent, 2004; quoting from Taghiloo, 2010) and it has been shown that personality traits could significantly predict 39 to 63 percent of subjective wellbeing (Steel et al., 2008). Neuroticism and extraversion as two personality trait are the most important predictors of subjective wellbeing. Neuroticism negatively and extraversion positive predict the variance of subjective wellbeing (Taghiloo et al., 2011). In another research Steel et al., (2008) in a meta-analysis research, showed that, there exist a strong relationship between Neuroticism, extraversion, conscientiousness, and agreeableness with all components of subjective wellbeing. In consistent with these results, Taghiloo et al., (2011) in a research used The Iranian Five Big Personality Factors Questionnaire (Gardoon) to assess the personality traits. The results indicated that, extraversion, neuroticism and also conscientiousness could significantly
predict subjective wellbeing. Also the relation between openness and positive affect with quality of life is significant. These finding, implicitly suggest that, we should consider the openness, conscientiousness, and agreeableness as an important factors of explaining subjective wellbeing. Otherwise, the relationship between personality traits and subjective well-being are not well understood.

In addition to the personality traits, early maladaptive schemas are other variables, which in recent years, in order to explain the subjective well-being are considered by scholars (Kachadourian et al., 2004). Perhaps the main reason is that the schemas are formed from the beginning of life, and influence a person in a lifetime (Young et al., 1999; quoting from Thimm, 2011). Primary schemas are beliefs, which people have about themselves, others, and their environment, and are stemmed normally from not satisfying basic needs, especially the childhood emotional needs (Renner et al., 2012; Zhang and He, 2010; Petroccelli, 2001). Schemas, in addition to laying the groundwork for the formation of irrational beliefs, on the one hand overwhelm attitudes, interpretations, perceptions, and emotions (Thimm, 2010; Beck, 1976; Alis, 1994; quoting from Sava, 2009; Maltby and Day, 2004), and on the other hand reduce the level of well-being of the individual (Anmuth, 2011; Halvorsen et al., 2009). In this regard, Park, 2004; quoting from Tahiloo, 2010) indicated that people, who are at risk of social and psychological problems such as depression, anxiety, conflict, lack of proper communication, and soon have low happiness and well-being. The results of a study by Renner et al., (2012) showed that specific schemas (like failure, emotional deprivation, and abandonment/ instability) have a sectional relationship with the severity of depressive symptoms.

The importance of maladaptive schemas in explaining subjective well-being is outstanding when they show there is a relationship between the schema and personality traits - as one of the key determinants of the psychological well-being. Results of Bahrami and Bahramizadeh (2011) showed that early maladaptive schemas like Mistrust/Abuse, Social Isolation, unrelenting standards/hyper criticalness and Failure can predict agreeableness. Furthermore, the results of the Sava (2009), which study the early maladaptive schemas and irrational beliefs and their relationship with the five-factor model of personality show that agreeableness is negatively associated with schemas. The researches of Thimm (2011& 2010) and Halvorsen et al., (2009) and Montazeri et al., (2012) showed that there is a considerable overlap between the personality trait of neuroticism, and early maladaptive schemas. Moreover, the schemas can explain subjective well-being negatively. In this regard, results of the research by Dindelegan et al., (2014), Renner et al., (2012), Burns et al., (2011), Yoosofnejad and Peyvastegar (2012), also showed that the presence of schemas can be associated with reduced subjective well-being and increased psychological disorders.

Based on the evidence mentioned, this study intends to study the role of early maladaptive schemas and personality traits in explaining the subjective well-being. The role of early maladaptive schemas was of interest because of its effectiveness as a cognitive phenomenon in shaping personality traits, and can help to understand the internal sources of subjective well-being. On the other hand, several studies shown that the personality is one of the key determinants of subjective well-being, however its impact mechanism is not clear (Lucas and Dinner, 2008; quoting from Tagiloo, 2010; Style et al., 2008). In this regard, the results of the present study by investigating the role of early maladaptive schemas in the relationship between personality traits and subjective well-being can help to clarify the mechanisms linking personality and subjective well-being. On the other hand, unlike the other studies, which have studied the variables (early maladaptive schemas, personality traits, and subjective well-being) in the form of mutual groups, this study intended to examine the mediating role of early maladaptive schemas in the relationship between personality traits and subjective well-being as a model. Therefore, the aim of this study is to answer the following questions:

1. Is there a relationship between personality traits and subjective well-being?
2. Is the relationship between personality traits and subjective well-being significant?
3. To what percentage do the early maladaptive schemas explain the variance of subjective well-being?
4. Do early maladaptive schemas mediate the relationship between personality traits and subjective well-being?
MATERIALS AND METHODS

The research method is descriptive-correlation and the statistical society were all bachelor (BA) university students of Azad university of Qazvin. The sample size includes 366 people (171 males and 195 females) who were selected through the multistage cluster sampling method. 366 people participated in the study, 98 people (26.8%) were between 18 to 20 years of age, 237 people (64.6%) were between 21 to 25 years of age and 31 people (8.6%) were more than 25 years. The mean and standard deviation was 22.88 and 4.48 respectively.

Early Maladaptive Schemas Inventory

This questionnaire was made by Young (1993). The short form of the questionnaire contains 75 items. The questionnaire is self-reported, and is based on the findings of Smith et al., (1995; quoting from Hoffart et al., 2006), which measures sixteen schemas in 4 areas, which are Disconnection (Emotional Deprivation, emotional inhibition, Mistrust/Abuse, Social Isolation, Defectiveness), Impaired Autonomy (Subjugation, Dependence, Failure, vulnerability, Abandonment, Enmeshment) Impaired Limits (insufficient self-control, Entitlement) and exaggerated standards (self-sacrifice, unrelenting standards. The questions have 6-degree Likert scale from completely false (1) to completely correct (6). Rafiee (2011) reported the reliability of the coefficients of the questionnaire through Cronbach's alpha between 0.68 and 0.87 in Iran.

Big Five Inventory (BFI-44)

The Big Five Inventory measures the main five features (openness, conscientiousness, extraversion, agreeableness, and neuroticism) by short expressions. In other words, the need to measure the components of the five-factor personality through short expressions provoked John et al., (1991; quoting from Korotkove, Hannah, 2004) to build BFI questionnaire. The questionnaire enables the efficient and flexible measuring of five dimensions of personality, when measuring different aspects of a person's mind in not intended (Srivastava, 1999; quoting from Korotkove, Hannah, 2004). The Big Five Inventory (Srivastava, 1999; John et al., 1991) is consisted of 44 short questions, which measures a five-degree scale from strongly disagree (1) to strongly agree (5) of the five factors. Shokri (2007) reported the Cronbach's alpha for the factors neuroticism, extraversion, openness, agreeableness and conscientiousness, 0.80, 0.70, 0.77, 0.56, and 0.82, respectively.

Subjective Well-Being Questionnaire

This questionnaire was provided by Keyes et al., (2002), and was used by Shokri et al., (2007) in Iran. In this questionnaire, the obtained scores point to the subjective well-being in positive affection scale, negative affection scale, and general life satisfaction (Keyes et al., 2002). The component of general life satisfaction by a single-item scale, and positive and negative components are assessed by help of the 6 positive and negative items, respectively. In the questionnaire, participants should rate their satisfaction with life in general on a scale of 10 degrees from zero (worst possible) to 10 (best possible). In the positive affection scale, participants must use 6 markers such as “Cheerful “, In good spirits “and so on, and indicate their status on a scale of 5 degrees from never (1) to full-time (5). In the negative affection scale, participants in the past 30 days must use 6 markers such as "I was so sad that nothing could bring me well," "nervous," "restless or fidgety" and so on, and indicate their status on a scale of 5 degree from never (1) to full-time (5). Negative affection items are scored reversely. Thus, higher positive scores on this scale indicate less negative emotional experience, and in the positive affection items, higher scores indicate more positive emotional experience. To make each scale, scores are added together. Shokri et al., (2007) reported the validity of positive affection, and the absence of negative affection of the scale using Cronbach's alpha coefficient 0.81 and 0.83, respectively.

RESULTS AND DISCUSSION

Results

Before determining and reporting the research model, the matrix correlation between observed variables, should be calculated. Table 1, shows the matrix correlation between observed research variables.
Research Article

According to the results of correlation analysis, there exist a negative and significant relationship between subjective wellbeing and neuroticism. Also the relation between subjective wellbeing and other personality traits are positive and significant. Also there exists negative relationship between three variables of maladaptive schemas with personality traits (except neuroticism). Thus, in the current research in order to investigate the mediating role of maladaptive schemas, the Structural equation modeling is used.

Because the structural equation modeling consists of two parts of measurement model and the structural model, therefore, it was necessary to assess the research measurement model. That is why confirmatory factor analysis using AMOS 7.0 software and estimating the maximum likelihood (ML) were performed. Assessing the fitness index showed that the model doesn’t have a fit to the data. For this reason, following the assessment of indexes of corrections and error covariance between two faults related to impaired limits and exaggerated standards indicators, modified standards will be improved (X²(N= 366, df= 12)=50.29, P< 0.05). Another study of the fitness criteria showed that comparative fit index (CFI) was equal to 0.956, the root mean square error of approximation (RMSEA) was equal to 0.073, Adjusted Goodness of Fit Index (AGFI) was equal to 0.927, and Goodness of Fit Index (GFI) was equal to 0.971. Accordingly, it was deduced that the structural model, like measurement model is fitted with the data, and indicators of personality traits and early maladaptive schemas are able to predict the latent variables.

Table 1: Correlation matrix table

<table>
<thead>
<tr>
<th>Components</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. extraversion</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. agreeableness</td>
<td>0.125</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. conscientiousness</td>
<td>0.165</td>
<td>0.31</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. neuroticism</td>
<td></td>
<td>-0.218</td>
<td>-0.31</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. openness</td>
<td>0.147</td>
<td>0.186</td>
<td>0.25</td>
<td>-0.067</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. positive affect</td>
<td>0.303</td>
<td>0.157</td>
<td>0.169</td>
<td>-0.421</td>
<td>0.064</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. negative affect</td>
<td>0.239</td>
<td>0.196</td>
<td>0.23</td>
<td>-0.465</td>
<td>0.152</td>
<td>0.506</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Life satisfaction</td>
<td>0.25</td>
<td>0.134</td>
<td>0.24</td>
<td>-0.25</td>
<td>0.135</td>
<td>0.506</td>
<td>0.47</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Disconnection</td>
<td>-0.041</td>
<td>-0.152</td>
<td>-0.22</td>
<td>-0.193</td>
<td>-0.137</td>
<td>-0.142</td>
<td>-0.221</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Impaired Autonomy</td>
<td>-0.082</td>
<td>-0.116</td>
<td>-0.201</td>
<td>0.300</td>
<td>-0.224</td>
<td>-0.270</td>
<td>-0.252</td>
<td>0.330</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Impaired Limits</td>
<td>-</td>
<td>-0.267</td>
<td>-0.167</td>
<td>0.277</td>
<td>-0.317</td>
<td>-0.259</td>
<td>-0.402</td>
<td>0.427</td>
<td>0.615</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.210</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.045</td>
<td></td>
</tr>
</tbody>
</table>

**P<0.01; *P<0.05

After ensuring of indicator’s ability in measuring two latent variables of subjective wellbeing and maladaptive schemas, the structure research model is tested using Structural equation modeling. As expected, Fitness index showed that the obtained Chi-square has a lack of fit to the data (X²(N=366, df= 36) = 148.44, P<0.05).

But due to the high sensitivity of chi square to high sample size, the other fitness indexes was measured, and the results showed that model doesn’t have an acceptable fit to the data. Surveying the other fitness indexes showed that, Goodness of Fit Index (GFI) was equal to 0.916, root mean square error of approximation (RMSEA) was equal to 0.077, Adjusted Goodness of Fit Index (AGFI) was equal to 0.907, and Goodness of Fit Index (GFI) was equal to 0.942, accordingly it can be concluded that, structural model like measurement model has a good fit to the data and the dimension of personality traits and maladaptive schemas could predict subjective wellbeing as a model.

Figure 1, shows the multiple correlation coefficients squared, path coefficients, and their significance level.
Based on the above figure, the 5 factors of personality explain 17% of the variance of schemas, and together they explain 47 percent of the variance of subjective well-being. As seen in Figure 1, on one side, among the path coefficients, there are significant relationships between personality traits and subjective well-being, path coefficients between E and N and subjective well-being. On the other hand, among the path coefficients there are significant relationships between personality traits and path coefficients between E, N, and A, and schemas are significant at 0.01 level. The path coefficient between schemas and subjective well-being is also significant (P< 0.01, β= -0.034). The following table shows the general, direct, and indirect path coefficients between personality traits and subjective well-being, mediated by early maladaptive schemas.

Table 2: The all, direct and indirect path coefficients between personality traits, maladaptive schemes and subjective wellbeing

<table>
<thead>
<tr>
<th>Path</th>
<th>All effect</th>
<th>Standard Error</th>
<th>Direct affect</th>
<th>Standard Error</th>
<th>Indirect affect</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>neuroticism- wellbeing</td>
<td>-0.443**</td>
<td>0.038</td>
<td>-0.350**</td>
<td>0.058</td>
<td>-0.093**</td>
<td>0.030</td>
</tr>
<tr>
<td>extraversion- wellbeing</td>
<td>0.322**</td>
<td>0.039</td>
<td>0.264**</td>
<td>0.060</td>
<td>0.058**</td>
<td>0.032</td>
</tr>
<tr>
<td>openness- wellbeing</td>
<td>0.091</td>
<td>0.043</td>
<td>0.107*</td>
<td>0.058</td>
<td>-0.016**</td>
<td>0.020</td>
</tr>
<tr>
<td>agreeableness- wellbeing</td>
<td>0.029</td>
<td>0.042</td>
<td>-0.046</td>
<td>-0.046</td>
<td>0.075**</td>
<td>0.24</td>
</tr>
<tr>
<td>neuroticism- schema</td>
<td>0.267**</td>
<td>0.048</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>extraversion- schema</td>
<td>-0.166**</td>
<td>0.049</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>openness- schema</td>
<td>0.046</td>
<td>0.43</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>agreeableness- schema</td>
<td>-0.215**</td>
<td>0.057</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Schema- wellbeing</td>
<td>-0.347**</td>
<td>0.067</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

As seen in Table 2, direct coefficient, as indirect path coefficient is significant between neuroticism and subjective well-being in 0.01 levels (β coefficients are equal to -0.350 and -0.093, respectively). Direct and indirect relationship between extraversion and subjective well-being is significant at 0.01 level (β coefficients are equal to 0.264, and 0.058, respectively). This suggests that early maladaptive schemas mediate the relationship between extraversion and subjective well-being on one hand, and the relationship between neuroticism and subjective well-being on the other hand. Furthermore, according to the table, the...
only direct relationship between openness and subjective well-being at 0.05 level was significant, and their indirect relationship was not significant (β coefficients 0.107 and -0.016). Finally, according to the results in Table 2, despite the lack of significant direct relationship between the agreeableness factor and subjective well-being, their indirect relationship was significant by the mediating of schemas at 0.01 level (β= 0.075 and p< 0.01).

Discussion
Analysis of fit indices model of the study showed that the latent variables of personality traits, extraversion, agreeableness, neuroticism, and early maladaptive schemas, Disconnection, Impaired Autonomy and Impaired Limits are desirable predictors of subjective well-being. In other words, latent variables, personality traits (other than the conscientiousness that was removed because of poor grades), and early maladaptive schemas explained 47 of the total variance of subjective well-being. This finding is consistent with other studies, which have been performed in explaining subjective well-being, and the role of personality traits, especially extraversion and neuroticism (Diener, 2000; Vitterso, 2001; Eid and Larsen, 2008; Steel et al., 2008; Malkoc, 2011; Garcia and Erlandsson, 2011; Lamers et al., 2012; Romero et al., 2012). Previous findings have also shown personality traits alone explain 39 to 63 percent of the variance of subjective well-being (Steel et al., 2008).

Researchers have attributed the high performance of personality traits on subjective well-being to several factors including biological neuronal grounds and neurotransmitters. The amygdala is one of the most important areas, which concerns human emotions (Ledoux, 1996; Pessoa, 2008; quoting from Dattilio, translated by Asghari et al., 2014). Studies have shown the role of neurotransmitters (dopamine and serotonin) in personality traits (Costa and McCrae, 1992; Depue and Collins, 1999; Lasky-Su et al., 2005; quoting from Lamers et al., 2012). In addition, biological pathways of personality may express subjective health in the form of behavior (Ozer and Benet-Martínez, 2006; quoting from Lamers et al., 2012). Nervous people are more sensitive to negative emotions, generally experience more negative life events, and these negative feelings will affect other aspects of life (Suls, Martin, 2005; quoting from Lamers et al., 2012). Extroverts generally experience more positive things in life (Magnus et al., 1990; quoting from Lamers et al., 2012), and have more interactions in social situations (Watson et al., 1992; quoting from Lamers et al., 2012).

The conceptual model of the present study indicates that the early maladaptive schemas as pictures can explain subjective well-being. These findings are consistent with studies that have shown that high scores in the early maladaptive schemas are associated with psychological disorders, which could negatively predict subjective well-being (Dindelegan, 2014; Rennre et al., 2012; Burns et al., 2011). Researchers, in confirming the negative relationship of schemas and subjective well-being have proposed the inverse definitions of both structures conceptually, on one hand. On the other hand, they have referred to the adverse childhood experiences as cognitive infrastructure that leads to formation of irrational beliefs and influences behavior. The negative results of these exaggerated thoughts and irrational and dysfunctional beliefs are the psychological disorders such as anxiety, depression, and so on (Beck, 1976; Sava, 2009; Anmuth, 2011). Therefore, the people who have negative and pessimistic schemas consider the more negative aspects of their lives (like pain, death, loss, disappointment, etc.), and ignore the positive aspects. Results of the present study suggest a positive relationship between neuroticism and the schemas. These results, which are consistent with other researches (Bahramiehsan and Bahramizadeh, 2011; Thimm, 2010; Thimm, 2011) showed that there is a considerable overlap between early maladaptive schemas and personality traits (especially neuroticism). Researchers on the one hand propose the mood in the formation of schemas (Ingram and Siegle, 2002; quoting from Halvorsen, 2011), and on the other hand, they suggest the common areas of biology (amygdala and hippocampus) between the two structures (Young et al., translated by Hamidpoor et al., 2013).

Data analysis using structural equation modeling showed that according to our results, the factors of extraversion, neuroticism, agreeableness, and early maladaptive schemas have a very important and decisive role in explaining subjective well-being. Therefore, one can expect that by the training courses by mental health professionals, individuals become familiar with the positive role of extraversion and the
negative reduction neuroticism on subjective well-being. By recognizing early maladaptive schemas and its role in personality traits and subjective well-being, they can help individuals in having a healthy lifestyle.

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