EMOTIONAL INTELLIGENCE AND LIFE SATISFACTION IN ROMANIAN UNIVERSITY STUDENTS: THE MEDIATING ROLE OF SELF-ESTEEM AND SOCIAL SUPPORT

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Emotional Intelligence and Life Satisfaction in Romanian University Students: The Mediating Role of Self-Esteem and Social Support

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Abstract

This study examines a mediation model for the relationship between emotional intelligence and life satisfaction for students. Self-esteem and social support were used as mediators. The participants were 131 Romanian undergraduate students. Data were collected by using the Wong Law Emotional Intelligence Scale, the Multi-Dimensional Scale of Perceived Social Support, the Rosenberg Self-esteem Scale, and the Satisfaction with Life Scale. Bootstrap analysis showed that both self-esteem and social support partially mediated the relationship between EI and life satisfaction. Implications for future research and limitations of the present findings are discussed.

Keywords: emotional intelligence; self-esteem; social support; life satisfaction; students;

Introduction

Traditionally, when referred to intelligence one focuses mainly on cognition (e.g. Piaget, 1972). The publication of Goleman’s book Emotional Intelligence (1995), asserted the controversial idea that experience and expression of emotions is a domain of intelligence (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, Dornheim, 1998). Since then, the construct has received considerable attention from researchers in different areas, but Ashkanasy and Daus (2005) conclude that

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opinions about emotional intelligence (EI) as a construct varies greatly among researchers and still produces much controversy about its definition, measurement and practical impact. To date we can talk about two conceptual models of EI: (1) ability-EI defined as “the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others”, and (2) trait-EI defined as a constellation of emotion-related self-perceptions which locates at the lower-levels of personality hierarchies (Petrides, 2011: 657).

The present study is focused on trait EI and uses a self-report questionnaire to assess the construct.

**Trait EI and life satisfaction**

Life satisfaction refers to the individual’s global judgment on his/her life as a whole (Diener, Emmons, Larsen, Griffin, 1985). It is one important indicator of subjective well-being. Several studies examined the relationship between these two concepts reporting significant correlations, concluding that abilities to understand and accept one’s own emotions, set goals in order to develop one’s own potentials, and see events in the right perspective are the most important factors of subjective well-being (Avsec, Kavèiè, 2011). Previous research shows positive associations between EI and life satisfaction (Palmer, Donaldson, Stough, 2002; Saklofske, Austin, Minski, 2003; Austin, Saklofske, Egan, 2005; Extremera, Fernández-Berrocal, 2005; Gignac, 2006; Gallagher, Vella-Brodrick, 2008; Rey, Extremera, Pena, 2011).

**Trait EI, life satisfaction, self esteem and social support**

Although as we noticed the research literature is quite clear about the relationship EI and life satisfaction, little is yet known about the processes that sustain this relationship. What potential mediating or moderating variables can account for the association between trait EI and life satisfaction? One recent review (Zeidner, Matthews, Roberts, 2012) notes a number of mediating factors in the EI–socio-emotional well-being relationship.

In respect to their model, self-esteem might be hypothesized to mediate the association between EI and life satisfaction. Self-esteem refers to an individual’s stable sense of personal worth or worthiness (Rosenberg, 1965). On the one hand, self-esteem has been found to be associated with life satisfaction (Westaway, Martiz, Golele, 2001; Rey et al. 2011; Yamawaki, Peterson Nelson, Omori, 2011; Kong, Zhao, You, 2012). On the other hand research has indicated that higher EI is associated to with high self esteem (Schutte, Malouff, Simunek, McKenley, Hollander, 2002; Dong, Urista, Gundrum, 2008; Kong et al, 2012). Thus, trait EI
is likely to be associated with greater life satisfaction by means of the greater sense of self-esteem.

In a similar way, social support is another ‘candidate’ variable to mediate the association between EI and life satisfaction. Some research already shows that people with high trait EI are likely to perceive greater social support from others and people who perceive much social support also report greater life satisfaction (Gallagher, Vella-Brodrick, 2008). Recently, some researchers have verified the relationship concluding that social support acted as a mediator of the relationship between EI and life satisfaction (Kong et al. 2012).

**Methods**

**Aim**

Considering all these previous studies analyzing the complex relationships between emotional intelligence, life satisfaction, self-esteem and social support, the purpose of the current research is to examine the concurrent mediating effects of self esteem and social support between trait emotional intelligence and life satisfaction in a Romanian sample of students. Figure 1 presents the conceptual relationships going to be tested by the mediating model.

![Mediation model of the Ei and life satisfaction](image)

Figure 1. *Mediation model of the Ei and life satisfaction*

On the other hand, an important limitation in the EI literature is that the majority of the studies were conducted within different Western or Asian countries. Testing these relationships in a Romanian culture would add meaningful evidence for practice (Stănescu, Cicei, 2012).

In summary, the present study examines a double mediator model. The model is used to determine whether emotional intelligence affects life satisfaction through two proposed mediators: self esteem and social support.
Participants

One hundred and thirty-one social science undergraduates students from one public higher education institution in Romania volunteered to take part in the study (Mean age = 23.18 - years, standard deviation = 5.74 years, age range = 18–43 years). In the sample, 103 were females and 28 were males.

Measures

*Emotional intelligence* was assessed by a translated version of the self-report Wong Law Emotional Intelligence Scale (WLEIS) (Wong, Law, 2002). This is a 16-item self-report measure based on the Mayer and Salovey model of EI. It can be used free of cost (Jensen, Kohn, Rilea, Hannon, Howells, 2007). The scale includes four dimensions: Regulation of Emotion (ROE), Self Emotion Appraisals (SEA), Others’ Emotion Appraisals (OEA), and Use of Emotion (UOE). Respondents are asked to rate their agreement on a 5-point Likert type scale ranging from 1 = strongly disagree to 5 = strongly agree. The WLEIS has proven good reliability and validity in several studies on Chinese students (Shi, Wang, 2007; Kong et al., 2012), but also on European samples (Libbrecht, De Beuckelaer, Lievens, Rockstuhl, 2012) or compared to other measures of EI (Libbrecht, Lievens, Schollaert, 2010). In this study, the Cronbach alpha coefficients for the four subscales were: SEA: .66; ROE: .80; OEA: .73; UOE: .74. The Cronbach alpha coefficient for all 16 items was .82.

*Self-esteem* was accessed by the Rosenberg Self-esteem Scale (RSES) (Rosenberg, 1965), which is a 10-item self-measure of global self-esteem. Responses are coded on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). The RSES contains an equal number of positively and negatively worded items. Upon reverse coding, the scores range from 10 (high level of self-esteem) to 40 (low level of self-esteem). The relative simplicity and accessibility of the RSES has favored a considerable number of translations and validation in many countries (including Romania), proving similar structural equivalence of the global self esteem as measured by the instrument (Schmitt, Allik, 2005). In this study, the Cronbach alpha coefficient for the RSES was .85.

To assess perceived *social support* in participants, we administered the Multi-Dimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, Farley, 1988), consisting of 12 items. The scale assesses three sources of support: Significant Other, Family and Friends. Each item is answered on a 7-point Likert type scale ranging from 1 = strongly disagree to 7 = strongly agree. The MSPSS has good reliability and validity (Kong et al., 2012). Adequate internal consistency was also shown on Romanian population (Marian, Roseanu, 2005). In this study, the Cronbach alpha coefficients for the three subscales were: Significant Other: .87; Family: .92; and Friends: .93. The scale had a Cronbach alpha coefficient of .89.

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Life satisfaction was measured using the Satisfaction with Life Scale (SWLS) (Diener et al., 1985) consisting of five items. Participants are instructed to indicate the extent to which they agree or disagree with each statement using a 4-point Likert type scale. The SWLS has good reliability and validity (Kong et al., 2012). Usage in Romanian context has shown similar results (Stevens, Constantinescu, Lambru, Butucescu, Sandu, Uscătescu, 2012). In this study, the Cronbach alpha coefficient for the SWLS was .68.

Demographic information was also collected including age and gender.

Procedure

Participants were asked to fill a questionnaire survey consisting of the WLEIS, RSES, MSPSS and SWLS in the classroom environment. The participants did not place their names on the papers and were told that their responses would be treated anonymously. Also, they were given the option of refusing filling in the questionnaire. It took approximately 30 min for the students to complete all the measurements.

Data analysis

The analysis was performed with SPSS 17.0. Means, correlations, and standard deviations were computed for the variables. Multiple mediation analysis was chosen as the appropriate method of data analysis because it has the ability of testing multiple indirect effects simultaneously (Preacher, Hayes, 2008). The multiple mediation analysis was conducted with Preacher and Hayes’ (2008) SPSS Indirect Macro for Multiple Mediation. This macro uses a bootstrap technique to test the mediation hypotheses, which is a powerful method for testing the statistical significance of indirect effects (Mallinckrodt, Abraham, Wei, Russell, 2006). Bootstrap analysis is a nonparametric approach and not based on large-sample theory, which means that it can be applied to small and moderate samples with more confidence (Shrout, Bolger, 2002; Preacher, Hayes, 2004). Bootstrapping involves generating series of unique data sets, called bootstrap samples, by directly taking samples from the original sample and estimating the indirect effects in each resampled data set (Shrout, Bolger, 2002). The resampling process is conducted with replacement, which means that each case is put back such that every case has equal chances of being redrawn while the new samples are constructed (Hayes, 2009). This process is repeated thousands of times creating an empirically estimated sampling distribution of the indirect effects, which is then used to derive bootstrap confidence intervals to test the statistical significance of total and specific indirect effects (Mallinckrodt et al., 2006). An effect is considered as significant if the confidence interval does not contain zero (Preacher, Hayes, 2008).
Results

Descriptive statistics

Means, standard deviations, and bivariate correlations for the study variables are presented in Table 1. In general, students displayed moderate to high levels of emotional intelligence, with the highest scores for the SEA (M = 16.24). This shows that respondents are quite competent in understanding their own emotions and the causes of their emotional state. Also, students have an average level of their global personal value and self acceptance as shown by RSES. As for the social support they indicate that they benefit from the family, friends or other’s support. But while significant other had the highest mean (25.22), significant friends had the lowest mean (21.94), indicating the tendency of using social support as a coping resource mainly related to others (special person that is always reliable). The mean value recorded for life satisfaction shows moderate level of satisfaction.

Table 1. Means, Standard Deviations and Bivariate Correlations of the Study Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>EI</th>
<th>SE</th>
<th>SS</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Emotional intelligence (EI)</td>
<td>63.27</td>
<td>6.93</td>
<td>-0.429**</td>
<td>0.313</td>
<td>-0.327**</td>
<td></td>
</tr>
<tr>
<td>Mediators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-esteem (SE)</td>
<td>18.84</td>
<td>5.34</td>
<td></td>
<td>-0.274**</td>
<td>0.341**</td>
<td></td>
</tr>
<tr>
<td>3. Social support (SS)</td>
<td>70.89</td>
<td>11.86</td>
<td></td>
<td></td>
<td>-0.476*</td>
<td></td>
</tr>
<tr>
<td>Dependent variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Life satisfaction (LS)</td>
<td>11.13</td>
<td>2.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: N = 131 for all variables. ** p<.01

To ensure that there was no problem with multicollinearity due to a significant correlation between the two mediators, collinearity diagnostics were performed in linear regression analysis. The Tolerance-level was high (.92) and the VIF-value was low (1.08), indicating that multicollinearity was not an issue (Leech, Barrett, Morgan, 2005).

Multiple mediation analysis

Figure 2 provides a graphic representation of the estimated multiple mediation model. Overall, the double mediation model explained 27% of the variance in life satisfaction (R² = .27, p < .001). The individual relations between the variables need further attention. As seen in Figure 1 (path c), the results showed that emotional intelligence was significantly related to life satisfaction (b = -.119, p < .05). This finding indicates that high levels of emotional intelligence lead to...
satisfaction in life. However, the results also demonstrated that the direct effect (path $c'$) of emotional intelligence on life satisfaction was not significant ($b = -.047, p > .13$). That is, the effect of emotional intelligence on life satisfaction, when controlled for the effect of the mediators, was considerably reduced and no longer significant. The fact that the influence of emotional intelligence was not significant once it was adjusted for the set of mediators indicates that the mediators completely mediated the effect of EI on life satisfaction (Baron, Kenny, 1986).

The figure also shows that emotional intelligence was significantly related to the two mediators (path $a$). Emotional intelligence had a positive influence on self esteem ($b = -.331, p < .001$). The results also showed that emotional intelligence had a positive effect on social support ($b = .534, p < .01$). These indicate that students who feel adequate emotionally competent display good global personal value and self acceptance. Similarly, because of their openness they report more support either from the family, others or friends.

Life satisfaction was also influenced by the two mediators (path $b$). Self esteem ($b = .085, p < .05$) and social support ($b = -.082, p < .001$) both had a significant effect on life satisfaction. These results indicate that students that display good levels of self esteem and benefit from support feel more satisfied about their life.

![Diagram](image-url)

Figure 2. The estimated multiple mediation model for the relationship between EI and LS as mediated by SE and SS. The numbers in the figure represent unstandardized regression coefficients

***$p<.001$, **$p<.01$, *$p<.05$

**Bootstrap Analysis**

Table 2 displays the parameter estimates and the bias-corrected and accelerated confidence intervals (BCa CIs) for the total and specific indirect effects obtained from the bootstrap analysis. The total indirect effect of the set of mediators was statistically significant, with a parameter estimate of -.0711 and a BCa 95% CI of -.1124 to -.0433. That is, the confidence interval did not contain a zero. In agreement with the interpretation of the direct effect (path $c'$), this result
demonstrates that the set of mediators mediated the effect of emotional intelligence on life satisfaction.

At the beginning of the study we predicted that self esteem is a mediator of the effect of emotional intelligence on life satisfaction. An examination of the specific indirect effects in Table 2 shows that the specific indirect effect of self esteem is significant. With a parameter estimate of -.0285 and a BCa 95% CI of -.0633 to -.0095, the confidence interval does not contain zero. Therefore, self esteem had a mediating effect. The relationship between EI and SE was significant and the effect of SE on LS is also significant. These results suggest that emotional intelligence has a positive influence on the students’ self-esteem and these beliefs about themselves encourage students to have more positive statements about life in general.

The other expectation was that social support also mediates the effect of emotional intelligence on life satisfaction. As shown in Table 2, the specific indirect effect of social support was significant. With a parameter estimate of -.0425 and a BCa 95% CI of -.0723 to -.0249, the confidence interval was different from zero. That is, social support was a significant mediator of the relationship between emotional intelligence and life satisfaction. The direction of the relationships was as expected: emotional intelligence had a positive influence on social support, which in turn had a positive impact on life satisfaction.

Table 2. Total Indirect Effect, Specific Indirect Effects, Contrasts, and their Corresponding Bootstrap Confidence Intervals of the Relationship between Emotional Intelligence and Life Satisfaction

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Parameter estimate</th>
<th>SE</th>
<th>95%BCa CI Lower</th>
<th>95%BCa CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>-.0711</td>
<td>.0173</td>
<td>-.1124</td>
<td>-.0433</td>
</tr>
<tr>
<td>SE</td>
<td>-.0285</td>
<td>.0133</td>
<td>-.0633</td>
<td>-.0095</td>
</tr>
<tr>
<td>SS</td>
<td>-.0425</td>
<td>.0177</td>
<td>-.0723</td>
<td>-.0249</td>
</tr>
<tr>
<td>Contrasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE vs SS</td>
<td>.0140</td>
<td>.0181</td>
<td>-.0198</td>
<td>.0505</td>
</tr>
</tbody>
</table>

NOTE: BCa CI = bias corrected and accelerated confidence intervals.
Based on 5000 bootstrap samples.

Contrasts between the specific indirect effects

As noted above, the examination of the specific indirect effects showed that both mediators were significant for the relationship between EI and LS. Pairwise contrasts between the specific indirect effects were therefore conducted to get information about the size of the differences. Table 2 also presents the results for contrasts.
However, the specific indirect effects of self esteem and social support could not be distinguished in terms of magnitude, despite the fact that both specific indirect effects were significantly different from zero. With a parameter estimate of .0140 and a BCa 95% CI of -.0198 to .0505, the confidence interval contained a zero. A possible explanation for this might be that the specific indirect effects of both mediators were not sufficiently far from zero.

Discussion

The present study tried to investigate the role self-esteem and social support might play in the relationship EI and life satisfaction in a sample of Romanian university students. Correlational analyses showed that trait EI was significantly related to life satisfaction, meaning that students who display high levels of understanding and expressing emotions also report greater satisfaction. These results are consistent with earlier studies (Palmer et al., 2002; Saklofske et al., 2003; Austin et al., 2005; Extremera, Fernández-Berrocal, 2005; Gignac, 2006; Gallagher, Vella-Brodrick, 2008; Rey et al., 2011). Moreover, those with high emotional abilities tend to develop positive images about the self. This is consistent with studies reporting the relation between EI and self-esteem (Schutte et al., 2002; Dong et al., 2008; Kong et al, 2012). The association EI-social support was not significant in our sample. In line with our expectations, the specific indirect effect of trait EI on life satisfaction via self-esteem and social support was significant in Romanian university students. This is in line with the previous findings on Chinese university students (Kong et al., 2012). Our findings suggest that trait EI influenced life satisfaction by two different pathways. In other words, the mediating effect of self-esteem suggests that students with higher emotional abilities can recognize and manage emotions in self well and are thus more prone to enhancing their self-esteem, which in turn leads to an increase in their life satisfaction. The mediating effect of social support suggests that individuals with higher emotional abilities can recognize and manage emotions in others and are thus more apt to enhance their social support, which also contributes to an increase in their life satisfaction.

With all its theoretical and practical significance, several important limitations of the present study must be mentioned. First, the study was a cross-sectional which did not allow us to establish possible causality relations. Future researchers must test mediating models through longitudinal studies, which will provide a better understanding of how these variables work. Second, the data in this study collected only through self-report measures.

This could be a threat to internal validity, because we still cannot avoid the self-report biases, such as social desirability. The use of mixed research designs where both quantitative and qualitative approach are employed and the enga-
gement of multiple subjects (e.g. parent, peer reports) may minimize the influence of subjectivity. Third, this sample was drawn from a university population, which limits the extent to which these findings can be generalized within the Romanian culture.

References


