THE PREDICTION OF SEPARATION-INDIVIDUATION THROUGH INTERNAL-EXTERNAL LOCUS OF CONTROL IN TURKISH LATE ADOLESCENTS

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Abstract
This study determines the relationship between separation-individuation and internal-external control in terms of how Turkish late adolescents evaluate themselves with the help of the prediction of internal-external control. The study group consisted of 1-4th year students studying at Ankara University, Hacettepe University, and Kirikkale University. The Scale of Adolescent Separation-Individuation and Rotter’s Internal-External Locus of Control Scale were used as research instruments. The data gathered were analyzed with a multiple regression analysis method. The findings of this study revealed that internal-external control predicts separation anxiety, engulfment anxiety, and nurturance seeking in a meaningful way. However, internal-external control does not predict peer enmeshment, teacher enmeshment, practicing mirroring, need denial, rejection expectancy, and healthy separation. Research findings from the literature were discussed with those of the previous research and recommendations are presented.

Keywords: separation-individuation; internal-external locus of control; late adolescent; prediction

Introduction
Separation-individuation is redefining the relationship between an individual and their caregivers such as mother and father by getting away from this addiction to their parents on their way to independence and autonomy. It is
expected that adolescents separate from their parents at an increasing pace with the help of physical, cognitive, interpersonal and emotional developments during separation-individuation process. Cevikbas (2005) perceives the main issue, individuation, as seeing something as a unique item, a person, a character, enabling us to differentiate something from another thing, in other words being an individual. According to Blos (1989), an adolescent who is in the process of separation-individuation changes direction from dependence on parents to themselves. The nature of adolescents is changeable. This condition suggests that the personality of an adolescent is in the process of embodiment.

During adolescence, an individual encounters problems such as adjusting and taking decisions more often than they do in the other periods of life. An adolescent is a person who experiences a period of conflicts and inconsistency. Adolescence is especially different from other periods of life. An adolescent faces typical problems regarding less or more adjustment and decision taking in the later periods of life. At the same time, it becomes more significant for them to gain a place among their peers and also establish relationships with them rather than their parents. Studies have revealed that adolescents believe their parents misunderstand them. The feelings of adolescents undergo a transition period. Some adolescents always misperceive their feelings regarding their parents; some misperceive their feelings regarding their parents under some circumstances and about some issues; and some never misperceive their feelings regarding their parents (Horrocks, 1962).

Meanwhile, how individuals express themselves in terms of their gender also undergoes a change. According to psychoanalytic theory, there is a difference between males and females in that females are more intuitive and seem to be less interested in the outer world than males. Morale and empathy are important features for females because these characteristics enable them to realize their roles successfully. On the other hand, these features help males less in order to reach their goals. Therefore, socialization is the focal point for males (Deutsch, 1944; Erikson, 1975/1979, cited in Lennon & Eisenberg, 1987).

Freud described sexual energy as the main driving force behind an individual's behaviour and suggested a developmental model which includes an individual's transition from childhood to adolescence (Brandell & Ringel, 2007). Individuals often make an effort to establish a potential control over the amount and kind of information gained from an object or incident that they experience in many cases in their real lives (Davis & Phares, 1967). Internal
and external locus of control concepts are derived from Rotter's Social Learning Theory. The Locus of Control concept is regarded as a consequence of an individual's behaviour in the first place. Individuals with internal locus of control believe events result from their own behaviour and actions whereas those with external locus of control believe that powerful others, fate or chance primarily determine events. Unlike individuals with internal locus of control, those with external locus of control have a negative assumption about success and they believe that their success is not achieved through their individual behaviours and actions (Rotter, 1954, 1966). Individuals with internal locus of control believe that willpower is related with causal connection of an individual's behaviour. On the other hand, those with external locus of control assume that willpower is independent from an individual's behaviour (Davis & Davis, 1972).

Individuals with internal locus of control show resistance to social influences and success activity while those with external locus of control exhibit defensiveness and have relatively more high anxiety (Phares & Lamiell, 1975). There is no behavioural difference between internal and external locus of control towards environment. It was observed that individuals with internal locus of control are persistent in giving verbal responses. Moreover, they also show more resistance against the influence of their behaviours compared with those with external locus of control (Gore, 1962; Strickland, 1962, cited in Borden & Hendrick, 1973). It was found that individuals with external locus of control mark pathological items in personality measurement tests since they are more anxious and affirming compared with those with internal locus of control. It was also found that individuals with internal locus of control tend to exhibit more desirable reactions. Theoretically, it causes both extremes to exhibit incompatible behaviours and unrealistic expectations of control regardless of having either internal or external locus of control (Wennerholm & Zarle, 1976).

When separation-individuation literature is reviewed, Blazina, Settle, and Eddins (2008) found that college male students have difficulty in both separation-individuation from their parents and their experiences regarding being alone. Daniels (1990) found that relationships with parents influence the realization of individuals' separation-individuation process. Bailey (1988) suggested that children going through the developmental stage should be supported in terms of individuation which is in progress during the process of reconciliation. In her study on college students, Choi (2002) found that there is...
a positive relationship between cultural factors and the two dimensions (independency from parents and positive separation emotions) of psychological separation-individuation, however there is a negative relationship regarding adjustment to university life. The same study findings suggested that there is a negative relationship between individuation and conflictual independence from parents, on the other hand, there is a positive relationship between individuation and adjustment to university life. Meanwhile, there is a negative relationship between independence from parents both adjustment to university life and collectivism.

In Turkey, Goral (2002), carried out some research into the second separation-individuation of Turkish university students. Goral found that overprotective, over-disciplined and democratic attitudes of parents have a slight effect on separation-individuation (separation-disintegration, separation difficulty and relationship problems) and experiences in romantic relationships (separation anxiety, fear of abandonment, being uncomfortable with closeness and self-efficacy) of young adults. In his study, Yaman (2005) found that high school students with a low level of psychological adjustment experience more problems in many dimensions of separation-individuation process. It was found that, there are more negative outcomes both in terms of separation-individuation process and psychological adjustment of the children whose mothers experience dependency, disconnection, controlling, dependability with their spouses. It was also found that adolescents with a low level of psychological adjustment have much more problematic relationships with their parents than those with a high level of psychological adjustment. Furthermore, it was observed that females experience more problems when compared with males in terms of both separation-individuation process and psychological adjustment. In their study, Aslan and Guven (2010) found that there is a mediation of separation-individuation in the relationship between secure attachment to parents and personal adjustment in late adolescents.

When the literature regarding internal-external locus of control is reviewed, Scheck, Emerick, and El-Assal (1973) found that parental support is strongly correlated with the internal-external locus of control of high school students. Messer and Meinster (1980) determined that internal locus of control is directly influential in therapy while external locus of control is indirectly influential in therapy in terms of interaction effects hypothesis. Gordon (1977) found that there is a correlation between internal locus of control and self-
confidence and academic success and that the difference between males and females in terms of their socialization patterns results from the fact that there is no relationship between academic grades and internal locus of control. In her study on mothers-fathers aged between 46-48, Lao (1976) indicated that there is a correlation between internal-external locus of control and education level of fathers. In her study on children aged between 9-14, Lifshitz (1973) found that children develop internal-external locus of control when they have more freedom and responsibility. Tucker (1980) found that high and low environmental responsibilities differ according to level of internal-external locus of control. In their study on university students, Gilmor and Minton (1974) found that students with internal locus of control attribute their academic success to internal charging significantly more than those with external locus of control. It was also found that students with academic success have more internal charging compared with those who have no academic success. In their study on fifth grade students, Piotrowski and Dunham (1983) determined that students have a stabilized internal-external locus of control structure over a period of six months. Messer (1972) found that children with internal locus of control have higher grades in academic tests and cognitive impulsivity than those with external locus of control. It was also found that boys who take credit for their success and girls who accept blame for their failures are those most likely to have higher grades and higher achievement test scores. In their study on children aged 9-10, Cunningham, Gerard, and Miller (1978) found that children performing badly in cognitive tasks have more external locus of control. In his study on young females studying at college, Bledsoe (1979) indicated that young females with internal locus of control are more reliable, creative, sophisticated, sincere, controlled, attentive, have a stronger ego and usage of controlled power. In her study on college students, Lao (1977) found that students with internal locus of control show reactions towards winning or losing situation since they believe that they can change the conditions, on the other hand, students with external locus of control hold the belief that they cannot change the conditions.

In addition to the abovementioned studies, there is also some research into the relationship between internal-external locus of control and the use of health information from the internet (Fogel & Israel, 2009); obese women (Kincey, 1981); the performance of children in embedded figures test in primary education (Crandall & Lacey, 1972); prejudice (Hausmann & Ryan,
imagination and being awarded (Lau, Cheung, & Chau, 1982) and committing suicide (Boor, 1979).

In Turkey, meanwhile, in their study on university students, Sardoğan, Kaygusuz, & Karahan (2006) determined that human relations skills training has an impact on locus of control levels. In their study on individuals aged between 20-60, Tabak and Erkus (2008) indicated that individuals with internal locus of control have high tolerance to ambiguity whereas those with external locus of control have less tolerance. In their study on high school senior students, Coban and Hamamcı (2006) found that there is a negative and low level relationship between locus of control and sound decision-making strategies. It was determined that students with internal locus of control use more rational decision-making strategies, take less impulsive decisions and experience indecisiveness. In their study on working individuals aged between 22-49, Basım and Senen (2006) found that individuals with internal locus of control have more tendency to display courtesy and helping behaviour patterns when compared with those with external locus of control.

**Objective**

Adolescents experience problems regarding locus of control during the process of separation-individuation from parents since they have a changeable nature and an unformed character. On the one hand, an adolescent is in the process of separation-individuation, on the other hand, they start feeling responsible for the consequences of their behaviours. An adolescent changes direction especially from dependence on their parents to themselves through separation-individuation and therefore they start forming an adult identity, which will enable them to move towards becoming an independent individual. Internal-external locus of control plays a crucial role in their behaviours during this process. Thus, in this study, it is aimed to determine the relationship between separation-individuation and internal-external locus of control in terms of the predictive feature of internal-external locus of control in the evaluation of separation-individuation in Turkish late adolescents.
Method

Convenience Sampling Method (Wallen & Fraenkel, 2001; Cohen, Manion, & Morrison, 2007) was used by the researcher who involved the participants that can be reached during the course of the study in order for the researcher to conduct this research.

Participants

The study group consisted of a total of 270 1-4th year students studying at Ankara University Faculty of Political Sciences, Hacettepe University Faculty of Economics & Administrative Sciences, and Kirikkale University Faculty of Education in Spring 2009-2010 academic year. However, the data gathered from 7 participants were excluded from the analysis since their marking was either missing or incorrect. Thus, the analysis was conducted using a 263-person data set. The study group consisted of 159 females (60.5%, mean age=20.58, SD=1.57) and 104 males (39.5%, mean age=21.53, SD=1.62).

Instruments

The Scale of Adolescent Separation-Individuation (SITA) was developed by Levine, Green and Millon (1986) and adapted by Aslan and Guven (2008) for Turkish university students, the Scale of Adolescent Separation-Individuation (SITA) is a 5-point Likert-type scale comprising of 9 sub scales and 103 items. SITA subscales are as follows (Levine and Saintonge, 1993): Separation Anxiety, Engulfment Anxiety, Nurturance Seeking, Peer Enmeshment, Teacher Enmeshment, Practising Mirroring, Need Denial, Rejection Expectancy, Healthy Separation. The study conducted in Turkey regarding the scale (Aslan & Guven, 2008) revealed that the factor loadings of separation anxiety, rejection expectancy, engulfment anxiety, practising mirroring, need denial, teacher enmeshment, peer enmeshment and nurturance seeking subscales vary between .20 and .84. Test-retest reliability coefficient of SITA was found .85 for Rejection Expectancy, .86 for Separation Anxiety, .85 for Engulfment Anxiety, .78 for Nurturance Seeking, .66 for Peer Enmeshment, .65 for Teacher Enmeshment, .82 for Practicing-Mirroring, .70 for Need Denial and .55 for Healthy Separation. Meanwhile, Cronbach Alpha coefficient was
found .79 for engulfment anxiety, .75 for separation anxiety, .82 for rejection expectancy, .91 for practising mirroring, .71 for peer enmeshment, .72 for need denial, .63 for teacher enmeshment, .65 for nurturance seeking and .39 for healthy separation.

Rotter’s Internal-External Locus of Control Scale (RIELCS) was developed by Rotter (1966) and adapted by Dağ (1991) for Turkish university students. Rotter’s Internal-External Locus of Control Scale consists of 29 items and a total of 7 dimensions; lack of chance control, external control in political events, chance control, lack of control in academic success, lack of control in interpersonal relationships, belief in fatalism and lack of control in political events. The factor loadings of the 7 dimensions were over .50. The total score that can be gained from the scale ranges between 0 and 23 and each item is comprised of two alternatives (A or B). The test-retest reliability coefficient and Cronbach Alpha coefficient of the scale were found respectively .83 and .71. KR-20 reliability coefficient was found .68 (cited in Savasır & Sahin, 1997).

Procedure

The question forms were implemented by the researchers during the lectures of the participants. The participants were informed that they could reach the results if they wanted.

Design

In this study, the explanation level of internal-external control of separation-individuation was analyzed. Therefore, multiple regression analysis method was used in this study. This study also involves descriptive statistics regarding different variables.

Results

The findings and the correlations of variations among themselves were analyzed in the frame of a multiple regression analysis. Table 1 shows the descriptive statistics of the scales implemented on the participants.
Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separation Anxiety</td>
<td>35.03</td>
<td>8.24</td>
</tr>
<tr>
<td>Engagement Anxiety</td>
<td>18.12</td>
<td>5.70</td>
</tr>
<tr>
<td>Nurturance Seeking</td>
<td>23.47</td>
<td>4.75</td>
</tr>
<tr>
<td>Peer Enmeshment</td>
<td>38.00</td>
<td>5.32</td>
</tr>
<tr>
<td>Teacher Enmeshment</td>
<td>10.98</td>
<td>3.77</td>
</tr>
<tr>
<td>Practising-Mirroring</td>
<td>46.63</td>
<td>10.14</td>
</tr>
<tr>
<td>Need Denial</td>
<td>27.19</td>
<td>6.74</td>
</tr>
<tr>
<td>Rejection Expectancy</td>
<td>27.06</td>
<td>8.49</td>
</tr>
<tr>
<td>Healthy Separation</td>
<td>9.21</td>
<td>2.28</td>
</tr>
<tr>
<td>Internal-external control</td>
<td>11.96</td>
<td>4.16</td>
</tr>
</tbody>
</table>

As can be seen in Table 1, the Scale of Adolescent Separation-Individuation (SITA) regarding the participants involved in this study, the mean for separation anxiety is 35.03 and the standard deviation is 8.24, the mean for engulfment anxiety is 18.12 and the standard deviation is 5.70, the mean for nurturance seeking is 23.47 and the standard deviation is 4.75, the mean for peer enmeshment is 38.00 and the standard deviation is 5.32. For teacher enmeshment, the mean is 10.98 and the standard deviation is 3.77, the mean for practicing mirroring is 46.63 and the standard deviation is 10.14, the mean for need denial is 27.19 and the standard deviation is 6.74, the mean for rejection expectancy is 27.06 and the standard deviation is 8.49, the mean for healthy separation is 9.21 and the standard deviation is 2.28, and the mean for internal-external control is 11.96 and the standard deviation is 4.16.

Table 2. Correlations of Dependent and Independent Variables

<table>
<thead>
<tr>
<th>Dimension</th>
<th>SA</th>
<th>EA</th>
<th>NS</th>
<th>PE</th>
<th>TE</th>
<th>PM</th>
<th>ND</th>
<th>RE</th>
<th>HS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal-external control</td>
<td>.23**</td>
<td>.13*</td>
<td>.17**</td>
<td>.00</td>
<td>-.11*</td>
<td>-.10*</td>
<td>-.06</td>
<td>.08</td>
<td>.02</td>
</tr>
<tr>
<td>N</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
<td>263</td>
</tr>
</tbody>
</table>

Note: SA-Separation Anxiety; EA-Engulfment Anxiety; NS-Nurturance Seeking; PE-Peer Enmeshment; TE-Teacher Enmeshment; PM-Practising-Mirroring; ND-Need Denial; RE-Rejection Expectancy; HS-Healthy Separation; * p<.05, **p<.01
Table 2 proves that there is a positive meaningful relationship between internal-external control and separation anxiety ($r=.23$, $p<.01$), engulfment anxiety ($r=.13$, $p<.05$), nurturance seeking ($r=.17$, $p<.01$), teacher enmeshment ($r=-.11$, $p<.05$), and practicing mirroring ($r=-.10$, $p<.05$) subscales of SITA.

Table 3. Results of Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Dimension</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>.05</td>
<td>15.07**</td>
<td>.23</td>
<td>3.88*</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>.01</td>
<td>4.96*</td>
<td>.13</td>
<td>2.22*</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS</td>
<td>.03</td>
<td>8.35**</td>
<td>.17</td>
<td>2.89*</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.03</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TE</td>
<td>.01</td>
<td>3.70</td>
<td>-.11</td>
<td>-1.92</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>.01</td>
<td>2.93</td>
<td>-.10</td>
<td>-1.71</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ND</td>
<td>.00</td>
<td>.95</td>
<td>-.06</td>
<td>-.97</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RE</td>
<td>.00</td>
<td>1.69</td>
<td>.08</td>
<td>1.30</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS</td>
<td>.00</td>
<td>.16</td>
<td>.02</td>
<td>.40</td>
</tr>
<tr>
<td>Internal-external control</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

As a result of the study, the developed model which aimed to determine whether Rotter's Internal-External Locus of Control Scale predicts the nine subscales of Separation-Individuation Scale revealed that internal-external locus of control ($\beta=.23$, $p<.05$) meaningfully predicts separation anxiety ($R=.23$, $R^2=.05$, $F_{(1, 261)}: 15.07$, $p<.00$). Internal-external locus of control ($\beta=.13$, $p<.05$) meaningfully predicts engulfment anxiety ($R=.13$, $R^2=.01$, $F_{(1, 261)}: 4.96$, $p<.05$). Internal-external locus of control ($\beta=.17$, $p<.01$) meaningfully predicts nurturance seeking ($R=.17$, $R^2=.03$, $F_{(1, 261)}: 8.35$, $p<.01$). However, internal-external locus of control does not predict peer enmeshment, teacher...
Discussion

In this study, it was found that there is a positive and mid-level relationship between internal-external locus of control and separation anxiety in late adolescents. During adolescence period, an individual tends to get away from their parents and their home where they take shelter. According to Blos, adolescents' psychological separation from their parents is on the increase during separation-individuation period. This change towards more independence is reinforced with their physical, cognitive and interpersonal sensations (Blos, 1989; Quintana & Lapsley, 1990). For late adolescents, mother and father are the first role models for social learning which forms the basis of internal-external locus of control (Baumrind, 1980). Thus, it can be argued that there is a positive relationship between internal-external locus of control and the anxiety regarding separation from mother, father, etc. which a late adolescent experiences.

Levine and Saintonge (1993) suggested that engulfment anxiety reflects a negative expectation in interpersonal attachments. It can be said that tight, passive and simple cultures bear the characteristics of a collectivist culture more than others (Triandis, 1996). Thus, it can be argued that in Turkish culture, it is an expected condition that mother-father control the life of their children by applying restrictions on them and this might be the reason why there is a positive relationship between internal-external locus of control and engulfment anxiety. Independency from parents is not a desirable and supported condition in collectivist cultures (Takano & Osaka, 1999). Therefore, independency from parents is not encouraged in Turkish culture either, which bears the features of collectivist cultures. Thus, it can be argued that there is a positive relationship between nurturance seeking and internal-external locus of control which determines the direction of an adolescent's behaviour during the course of separation-individuation. Nevertheless, there is a negative relationship between internal-external locus of control and need denial, which means refusing attachment needs, and also between rejection expectancy which means experiencing the feeling that an adolescent is unwanted by mother-father.
Gilligan (1982) emphasized the importance of separation towards the end of the attachment process when an adolescent starts forming an identity during adolescence period. This period is a transitional development period in which an adolescent is neither a child nor an adult. In other words, it can be argued that a late adolescent has not completed separation-individuation process. There is no difference between internal and external locus of control in their attitude towards environment (Gore, 1962; Strickland, 1962, cited in Borden & Hendrick, 1973). Therefore, it can be argued that this might be the reason why there is no relationship between internal-external locus of control and teacher enmeshment and peer enmeshment dimensions of separation-individuation. Dependency, in other words healthy separation, independency efforts and thus reconciliation to be achieved result from the experiences with mother in particular (Blos, 1989; Mahler, Pine, & Bergman, 1975). Since separation-individuation and identity embodiment processes of late adolescents are ongoing, it can be argued that they might not achieve internal-external locus of control which plays a crucial role in determining the direction of their behaviours. Thus, this may be the reason why there is no relationship between healthy separation and internal-external locus of control. According to Quintana and Kerr (1993), practising mirroring needs refer to adolescents’ needs to have their sense of self appreciated, respected, validated, or admired, and also the Practicing-Mirroring subscale reflects relationships in which practising mirroring needs are gratified and evaluates supportive forms of relationships. On the other hand, locus of control is regarded as the outcome of an individual's own behaviours (Rotter, 1954, 1966). Therefore, it can be argued that late adolescents cannot meet their practising mirroring needs during separation-individuation period in progress. And thus, it can be argued that this might be the reason why there is no relationship between internal-external locus of control and practising mirroring.

Conclusions

As a result of this study, it was found that there is a low-level positive relationship between internal-external locus of control and separation anxiety, engulfment anxiety, and nurturance seeking subdimensions of separation-individuation. It was also found that there is no correlation between peer
enmeshment, teacher enmeshment, need denial, practising mirroring, rejection expectancy, healthy separation, and internal-external locus of control.

Some recommendations for future studies are as follows:

- Psychological counselling practices can be carried out in order to stabilize the internal-external locus control of late adolescents who experience anxiety regarding separation from parents during the course of separation-individuation.

- Parents' restrictive control on an adolescent's life do not reinforce the relationships of an adolescent during separation-individuation period. Hence, psychoeducational counselling programmes can be developed and carried out in order to stabilize the internal-external locus of control of late adolescents who experience engulfment anxiety.

- Similar studies into the effects of cultural factors on the relationship between separation-individuation and internal-external locus of control can be conducted in different cultures. In addition, students from different regions can be involved in studies on the relationship between separation-individuation and internal-external locus of control.

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