

The Mediator Role of the Cognitive Features in the Relationship between Adult Attachment Patterns and Psychopathology Symptoms: The Locus of Control and Repetitive Thinking*



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SUMMARY

Objective: The main aim of the study is to investigate the mediator roles of locus of control and repetitive thinking in the known relationship between adult attachment patterns and depression, obsessive compulsive disorder (OCD) and social anxiety symptoms. Together with this aim we sought to generate an integrative point of view to these relationships using a cognitive framework.

Method: There were 992 participants (661 women, 331 men) for the locus of control model, and 875 participants (581 women, 294 men) for the repetitive thinking model. All of the participants were college students and come from 14 different colleges across 9 different provinces. Participants were evaluated using the Locus of Control Scale, the Repetitive Thinking Questionnaire, the Experiences in Close Relationship Scale-II, the Beck Depression Inventory, the Maudsley Obsessive Compulsive Inventory and the Liebowitz Social Anxiety Scale. Structural Equation Modeling and mediator analysis were applied to the data.

Results: The results revealed that there are some partial mediator roles of the locus of control in the relationship between attachment anxiety and depression, OCD and social anxiety for women but there is only an association with depression for men. Regarding repetitive thinking, there are some partial mediator roles between attachment anxiety and depression, OCD and social anxiety for both women and men. These cognitive features do not mediate the relationship between avoidant attachment and psychopathology symptoms for either women or men.

Conclusion: This study uncovered that cognitive features are important and incontrovertible variables in the relationship between attachment patterns and psychopathology symptoms.

Key Words: Attachment, Psychopathology, Locus of control, Repetitive thinking

Attachment patterns are defined as a “from cradle to grave” process and shaping of these patterns begin from birth and affect the whole life (Bowlby, 1969, 1973, Ainsworth, 1989). These patterns are resistant to change (Bretherton, 1995) and related to many psychopathologies (e.g. Myhr et al. 2004, Sabuncuoğlu & Berkem 2006, Liu et al. 2009, Sümer et al. 2009). Despite many studies demonstrating the relationship between attachment patterns and psychopathology, an important study that is lacking is the mediating role of cognitive features. According to cognitive theory, human beings’ emotions and behaviors depend on their interpretation of the

situations and distorted and dysfunctional thoughts are the underlying common factors of psychiatric problems (Beck 1995). Based on this information, cognitive theory suggests that there are some mediating variables in this relationship.

In the previous report from our group, we studied the mediating role of cognitive flexibility in the relationship between attachment patterns and psychopathology and demonstrated that there is cognitive flexibility plays an important role (Dağ & Gülüm, 2013). In the frame of the current study we examined two different cognitive features in this relationship: Locus of control and repetitive thinking.

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The locus of control is the individual's durable perception that is related to the expectancy of reinforcements which either stems from himself or not and is contingent on either positive or negative reinforcement. If the individual thinks that the source of the reinforcement is himself then it is an "internal locus of control"; if the individual thinks that the source of the reinforcement is faith, luck or external forces then it is an "external locus of control" (Rotter, 1966, 1975). There are many studies that have examined the relationship between locus of control and psychopathology (e.g. Cheng et al. 2013, Inozu et al. 2012).

According to Response Style Theory (Nolen-Hoeksema, 1991), rumination is about an individual's passive and repetitive focus of depressive symptoms. There is a claim that other psychopathologies have a similar thought style like rumination and in general terms it is called repetitive thinking (McEvoy et al. 2010). There are numerous studies showing the relationship between repetitive thinking and psychopathology (Nolen-Hoeksema, 2000, Moulds, Kandris, Starr & Wong, 2007; Thompson, Mata, Jaeggi, Buschkuhl & Jonides, 2010, Yook, Keun Hyang, Soh & Lee, 2010, Abbott & Rapee, 2004).

Objective

The aims of the study are (a) investigate the mediating role of locus of control and repetitive thinking in the known relationship between attachment patterns and psychopathology (depression, OCD and social anxiety) for the first time; (b) generate an integrative perspective about these relationships.

METHOD

Participants

There were participants from 9 different provinces, including students from 14 different colleges. For the locus of control model, there were 661 women and 331 men. For the details of this sample, refer to Dağ and Gülüm (2013). Since some participants did not complete the Repetitive Thinking Questionnaire, the repetitive thinking model has different sample features. The repetitive thinking model's participants' demographic characteristics are shown in Table I.

Repetitive Thinking Questionnaire (RTQ): The RTQ has developed by McEvoy et al (2010) and aimed to investigate the repetitive thinking cycle which can be seen often in affective and anxiety disorders in a transdiagnostic manner. The questionnaire has 31 items and Turkish adaptation of the RTQ was compiled by Gülüm and Dağ (2012). Turkish RTQ's Cronbach alpha value is 0.94 and it explains 40.48 % of the total variance.

Locus of Control Scale (LCS): The questionnaire has 47 items and was developed by Dağ (2002). An increase of the score signifies an external locus of control. The score range of the LCS is between 47 and 235. Cronbach alpha value is .92 and test retest reliability is .88 (Dağ, 2002).

Experiences in Close Relationships Scale – Revised (ECR-R): This scale was developed by Fraley & Shaver (2000) and a Turkish reliability and validity study was completed by Selçuk et al. (2005). There are 18 anxiety and 18 avoidance items.

Table 1. Descriptive Statistics and Distributions of the Participants in Colleges for the Repetitive Thinking Model Sample

	N	Minimum	Maximum	Mean	sd
Women	581	17	29	20.8	1.82
Men	294	18	29	21.66	1.93
Total	875	17	29	21.1	1.90
Colleges	Women		Men		Total
	n	%	n	%	N
Atatürk University	30	5.2	44	15.0	74
Başkent University	70	12.0	14	4.8	84
Cumhuriyet University	24	4.1	20	6.8	44
Çukurova University	32	5.5	27	9.2	59
Dicle University	40	6.9	34	11.6	74
Dokuz Eylül University	27	4.6	1	0.3	28
Gazi University	41	7.1	28	9.5	69
Hacettepe University	79	13.6	31	10.5	110
Işık University	76	13.1	11	3.7	87
İzmir University of Economics	41	7.1	9	3.1	50
Karadeniz Technical University	38	6.5	11	3.7	49
Marmara University	39	6.7	29	9.9	68
Mersin University	29	5.0	28	9.5	57
Yaşar University	15	2.6	7	2.4	22

Each item is scored between 0-6. Cronbach alpha values for each subscale were 0.86 and 0.90 respectively, and the test-retest reliability of the anxiety and avoidance subscales were 0.82 and 0.81 (Selçuk et al., 2005).

Beck Depression Inventory (BDI): The original inventory was developed by Beck (1961) to investigate the risk of depression and the level and severity of depressive symptoms in adults. The purpose of the BDI is to quantify depressive symptoms and not to diagnose depression. A Turkish reliability and validity study was done by Hisli (1988, 1989). The BDI is a 21 item self-report questionnaire and each item is scored between 0 and 3. Higher scores indicate increased depressive symptoms. The range of scores is 0-63. The Cronbach alpha value was 0.90 (Arkar & Şafak, 2004).

Maudsley Obsessive-Compulsive Symptom Checklist (MOCSL): The MOCSL is a true/false self-report scale developed to investigate obsessive-compulsive symptoms and to differentiate obsessive patients from other neurotic patients (Sanavio & Vidotto, 1985). A Turkish adaptation study was completed by Erol & Savaşır (1988; cited in, Özsoylar et al., 2008). The scale has appropriate validity and reliability values for research and clinical use.

Liebowitz Social Anxiety Scale (LSAS): The LSAS includes 24 items designed to assess both fear and avoidance of social and performance situations (e.g., taking a test, giving a report

to a group) occurring within the last 7 days. A reliability and validity study of the LSAS was conducted by Heimberg et al. (1999). A Turkish adaptation was completed by Soykan et al. (2003), and Cronbach alpha values for the general scale, and fear and avoidance subscales were 0.98, 0.96 and 0.95, respectively. A reliability and validity study conducted by Bayramkaya (2009) to examine the scale as a self-reporting measure. Cronbach alpha values for the general scale, and fear and avoidance subscales were 0.94, 0.90 and 0.89 respectively.

Procedure

This study is part of a TUBITAK founded (111K016) project. All parts of the project were approved by the Hacettepe University Ethical Board. After collecting official consents from the colleges, the scales were administrated by an assistant of the researchers in a random order. We obtained informed consent from all participants.

RESULTS

The data set was evaluated for multivariate statistics assumptions (e.g. normality, linearity, variance homogeneity). We found that the data set met all multivariate statistical assumptions.

The relationships of the variables, means and standard deviations in the locus of control model can be seen in Dağ and Gülüm (2013). Women and men's LCS mean scores and standard deviations were, respectively: 3.49 (sd=0.83) and 3.86 (sd=0.78). The correlations between women's LCS mean score and ECR-R Anxiety, ECR-R Avoidance, BDI, LSAS and MOCSL were 0.26, 0.11, 0.26, 0.20, 0.24, respectively. The correlations between men's LCS mean score and ECR-R Anxiety, ECR-R Avoidance, BDI, LSAS and MOCSL were 0.29, 0.20, 0.23, 0.16, and 0.18. All correlations were significant at the 0.001 level.

The descriptive statistics of the variables which were in the repetitive thinking model are shown in Table 2. These values are based on the mean scores. The correlations of the variables are shown in Table 3.

Table 2. Descriptive Statistics of Variables

	Women (N=581)		Men (N=294)	
	Mean	sd	Mean	sd
ECR-R Anxiety	3.43	0.98	3.45	1.05
ECR-R Avoidance	3.47	1.00	3.13	1.00
RTQ	3.05	0.90	2.87	0.92
BDI	0.55	0.40	0.54	0.42
LSAS	1.84	0.44	1.78	0.47
MOCSL	1.63	0.16	1.63	0.18

ECR-R: Experiences in Close Relationships Scale – Revised, RTQ: Repetitive Thinking Questionnaire, BDI: Beck Depression Inventory, LSAS: Liebowitz Social Anxiety Scale, MOCSL: Maudsley Obsessive-Compulsive Symptom Checklist

Table 3. Correlations Between Variables Which are in the Repetitive Thinking Model

ECR-R Anxiety	-					
ECR-R Avoidance	0.16**/0.26**	-				
RTQ	0.40**/0.38**	0.05/0.02	-			
BDI	0.38**/0.34**	0.09*/0.14*	0.47**/0.39**	-		
LSAS	0.24**/0.25**	0.33**/0.22**	0.22**/0.21**	0.32**/0.28**	-	
MOCSL	0.28**/0.37**	0.23**/0.24**	0.32**/0.30**	0.43**/0.35**	0.28**/0.37**	-
	ECR-R Anxiety	ECR-R Avoidance	RTQ	BDI	LSAS	MOCSL

ECR-R: Experiences in Close Relationships Scale – Revised, RTQ: Repetitive Thinking Questionnaire, BDI: Beck Depression Inventory, LSAS: Liebowitz Social Anxiety Scale, MOCSL: Maudsley Obsessive-Compulsive Symptom Checklist

*p<0.05 **p<0.01

Note: Men are shown in bold fonts (N Women=581, N Men =294).

We produced three indicator variables for each latent variable for both of the models (for social anxiety, because of the LSAS subscale construction, we used only two indicator variables) and we applied a structural equation model to the data set.

Locus of Control

Analysis results demonstrated sufficient fit indices for the measurement models. Fit indices for the women were: χ^2 (104, N=661) = 250.5, $p < 0.001$, GFI: 0.96, AGFI: 0.94, NNFI: 0.97, CFI: 0.98, RMSEA: 0.046. The ratio of chi square and degree of freedom was statistically appropriate (between 2:1 and 5:1). Fit indices for the men were: χ^2 (104, N=311) = 227.3, $p < 0.001$, GFI: 0.93, AGFI: 0.90, NNFI: 0.95, CFI: 0.96, RMSEA: 0.06. The ratio of chi square and the degree of freedom was appropriate for men as well. After the measurement model, we tested the structural model which is shown in Figure 1.

The relationships in the model were shown on Figure 1. The fit indices of the structural model were good for both women and men. Fit indices for women were: χ^2 (103, N=661) = 214.5, $p < 0.001$, GFI: 0.96, AGFI: 0.94, NNFI: 0.98, CFI: 0.98, RMSEA: 0.04 and for men: χ^2 (103, N=661) = 209.5, $p < 0.001$, GFI: 0.94, AGFI: 0.90, NNFI: 0.96, CFI: 0.97, RMSEA: 0.056.

For women, the locus of control predicted by attachment anxiety ($\beta = 0.29$, $p < 0.001$) and the explained variance of this variable was 8%. Avoidant attachment did not predict the locus of control for women ($\beta = 0.06$, $p > 0.05$). Locus of control was predictive of depression ($\beta = 0.19$, $p < 0.001$), OCD ($\beta = 0.16$, $p < 0.001$) and social anxiety ($\beta = 0.15$, $p < 0.001$). Explained variances of these variables were 4%, 3% and 3% respectively. Explained variances of indirect effect of the locus of control in the relationship between attachment anxiety and psychopathology symptoms were 18% for depression, 13% for OCD and 7% for social anxiety.

For men, the locus of control predicted by attachment anxiety ($\beta = 0.27$, $p < 0.001$) and the explained variance of this variable was 7%. Avoidant attachment did not predict the locus of control for women ($\beta = 0.12$, $p > 0.05$). Locus of control was predictive of depression ($\beta = 0.15$, $p < 0.05$) but not of OCD ($\beta = -0.03$, $p > 0.05$) and social anxiety ($\beta = 0.08$, $p > 0.05$) were not predicted by locus of control. Explained variance in depression was 2%. Explained variance of indirect effect of the locus of control in the relationship between attachment anxiety and depressive symptoms was 18%.

To evaluate the mediator role of locus of control, we followed the method suggested by Baron and Kenny (1986). For demonstrating whether the data meets the conditions, we did

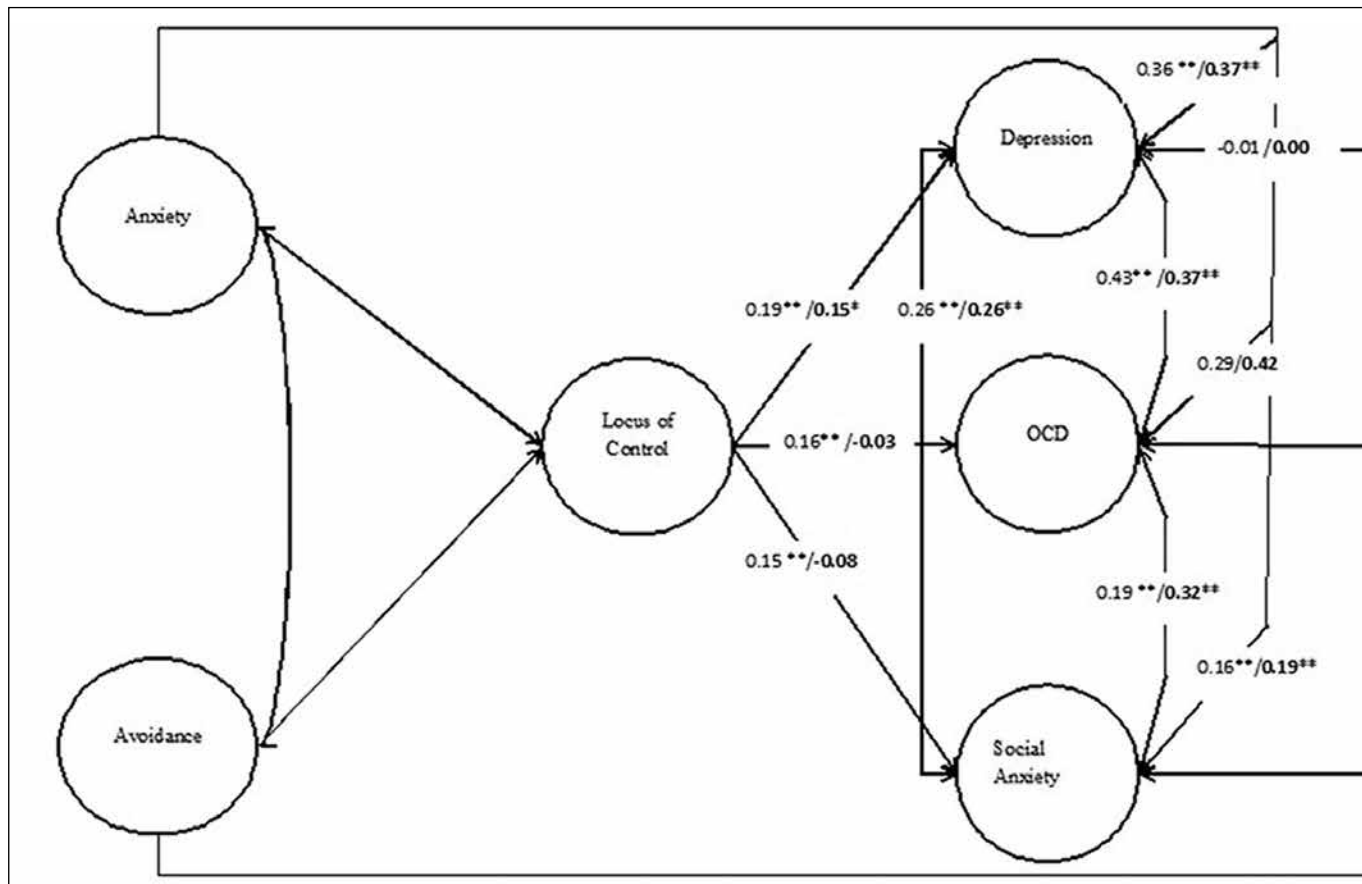


Figure 1. Locus of Control Model

* $p < 0.05$ ** $p < 0.01$ Note: Men are shown in bold fonts (N Women =661, N Men =331)

Table 4. Summary of the Mediation Analysis for the Locus of Control Model: Sobel Tests and Mediator Roles

Sex	Predictive Variables: Attachment Dimensions	Mediator Roles					
		Depression		OCD		Social Anxiety	
		Sobel Test	Explanation	Sobel Test	Explanation	Sobel Test	Explanation
Women	Attachment Anxiety	3.71**	Partial Mediation	3.60**	Partial Mediation	3.00**	Partial Mediation
	Avoidant Attachment	1.02	No Mediation	1.02	No Mediation	1.00	No Mediation
Men	Attachment Anxiety	2.05*	Partial Mediation	0.90	No Mediation	1.26	No Mediation
	Avoidant Attachment	1.55	No Mediation	0.84	No Mediation	1.11	No Mediation

*p<0.05 **p<0.001

a series of regression analyses and Sobel tests. Our analyses revealed that the locus of control has partial mediator roles in the relationship between attachment patterns and psychopathology symptoms for both women and men. Summary of the results are shown in Table 4.

Repetitive Thinking

Results demonstrated sufficient fit indices for the measurement models. Also, there was no need for the modifications. Therefore, there was an overlap between the measurement model and the structural model. Fit indices for the women

were: χ^2 (104, N=581) = 239.4, p<0.001, GFI: 0.95, AGFI: 0.93, NNFI: 0.97, CFI: 0.98, RMSEA: 0.047. The ratio of chi square and degree of freedom was statistically appropriate (between 2:1 and 5:1). Fit indices for the men were: χ^2 (104, N=294) = 211.3, p<0.001, GFI: 0.92, AGFI: 0.89, NNFI: 0.96, CFI: 0.97, RMSEA: 0.059. The ratio of chi square and the degree of freedom was appropriate for men as well. The structural model that we analyzed is shown in Figure 2.

For women, the repetitive thinking predicted by attachment anxiety ($\beta = 0.44$, p<0.001) and the explained variance of this

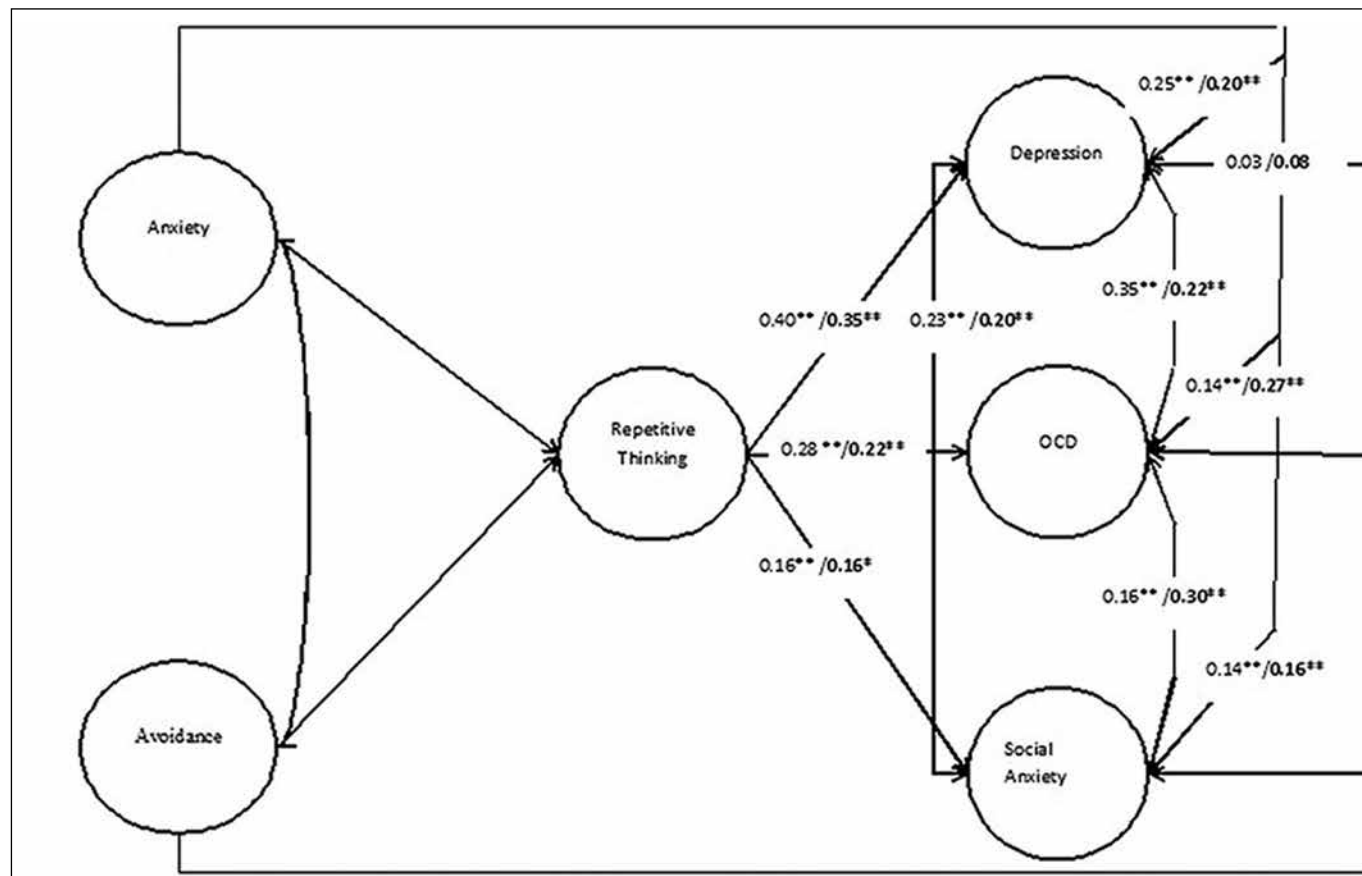


Figure 2. Repetitive Thinking Model

*p<0.05 **p<0.01 Note: Men are shown in bold fonts (N Women =581, N Men =294)

Table 5. Summary of the Mediation Analysis for the Repetitive thinking Model: Sobel Tests and Mediator Roles

Sex	Predictive Variables: Attachment Dimensions	Mediator Roles					
		Depression		OCD		Social Anxiety	
		Sobel Test	Explanation	Sobel Test	Explanation	Sobel Test	Explanation
Women	Attachment Anxiety	7.18*	Partial Mediation	5.27*	Partial Mediation	3.70*	Partial Mediation
	Avoidant Attachment	-0.71	No Mediation	-0.71	No Mediation	-0.70	No Mediation
Men	Attachment Anxiety	4.35*	Partial Mediation	3.16*	Partial Mediation	2.72*	Partial Mediation
	Avoidant Attachment	-1.85	No Mediation	-1.71	No Mediation	-1.63	No Mediation

*p<0.001

variable was 19%. Avoidant attachment did not predict the repetitive thinking for women ($\beta = -0.04$, $p > 0.05$). Repetitive thinking was predictive of depression ($\beta = 0.40$, $p < 0.001$), OCD ($\beta = 0.28$, $p < 0.001$) and social anxiety ($\beta = 0.16$, $p < 0.001$). Explained variances of these variables were 16%, 8% and 3% respectively. Explained variance of the indirect effect of the repetitive thinking in the relationship between attachment anxiety and psychopathology symptoms were 24% for depression, 14% for OCD and 9% for social anxiety.

For men, the repetitive thinking predicted by attachment anxiety ($\beta = 0.44$, $p < 0.001$) and the explained variance of this variable was 19%. Avoidant attachment did not predict the repetitive thinking for men ($\beta = 0.12$, $p > 0.05$). Repetitive thinking was predictive of depression ($\beta = 0.35$, $p < 0.001$), OCD ($\beta = 0.22$, $p < 0.001$) and social anxiety ($\beta = 0.16$, $p < 0.001$). Explained variances of these variables were 12%, 5% and 3% respectively. Explained variance of indirect effect of the repetitive thinking in the relationship between attachment anxiety and psychopathology symptoms were 19% for depression, 17% for OCD and 10% for social anxiety.

For determining the mediator roles we followed the suggestions of Baron and Kenny (1986) as we did in the locus of control model. Results showed that repetitive thinking has partial mediator roles in the relationship between attachment patterns and psychopathology symptoms in both women and men. Summary of results are shown in Table 5.

We aimed to investigate the mediator role of some cognitive features' in the known relationship between attachment patterns and psychopathology symptoms, in the frame of cognitive theory. For this purpose we reported the role of cognitive flexibility as a mediator (see Dağ & Gülüm 2013) and now present the other two results of the cognitive features: the locus of control and repetitive thinking. Thus, we completed some of the mediator analysis that was missed in the literature. Due to the limited writing area, our discussion of the results will focus on the cognitive features.

Due to attachment patterns varying across women and men (Schmitt et al., 2003, Matsuoka et al., 2006) and the sample size of women and men are not equal in our dataset we

analyzed and report the results separately. Aside from this, there are many participants who did not complete the RTQ. Thus, we considered the locus of control and repetitive thinking model separately. Also we considered and presented the cognitive features separately because we wanted to clarify the picture.

The results of the structural equation model analysis showed that our models have good fit indices for both women and men. Specifically, results of the locus of control model validate the decision of separate evaluation of the data for women and men. Similar results were reported in our prior paper (Dağ & Gülüm 2013).

In the sample for the locus of control model, we found several relationships between the attachment patterns and psychopathology symptoms, which were previously discussed in our prior paper. Therefore we will only discuss the locus of control in the concept of mediation analysis.

Avoidant attachment did not predict the mediator variables in both models and for both of the genders. Despite this unrelated position we included this variable because it has a significant relationship with attachment anxiety. This may mean that it has an important role in the model. This unrelated position of the avoidant attachment variable may come from its emotional repressive nature or inhibitive nature of emotion expression (Sümer et al., 2009).

Different from women, we found that locus of control has non-significant relations with OCD and social anxiety for men. This may be due to an unequal sample size of women and men or the differences in locus of control patterns (Sherman, Higgs and Williams, 1997).

The difference in locus of control model between women and men naturally affected the mediation analysis results. Mediation analysis and a series of Sobel Test results revealed that the locus of control has partial mediator roles in the relationships between the attachment anxiety and all three of the psychopathology symptom clusters for women. The explained variances differed from 8% to 22% and it shows us that we have to consider this variable in future studies.

There were insignificant relationships between locus of control and OCD and social anxiety for men. Because of this we did not do any mediation analysis for these variables. However we found a partial mediator role of locus of control in the relationship between attachment anxiety and depressive symptoms and the explained variance of this role was similar to the women's model.

In the repetitive thinking model we did not find any differences between women and men in terms of significant relationships and mediator roles. However, in the men's model the values were relatively smaller than the women's model. The reason for this difference may be due to the unequal sample size.

The results revealed that repetitive thinking has a partial mediator role in the relationship between attachment anxiety and all of the psychopathology symptom clusters for women and men. Sobel test results showed that the explained variances of these roles were quite large. The largest explained variance was in the relationship between anxiety attachment and depressive symptoms and this finding was consistent with why the researchers thought this cognitive feature is relevant to depression (Nolen-Hoeksema 1991). In spite of this, the three psychopathology symptom clusters have important roles in the models and this finding supports the McEvoy and colleagues' (2010) idea which claimed that the repetitive thinking has a transdiagnostic nature.

This study has several limitations. In addition to the limitations that Dağ and Gülüm (2013) mentioned, although it provided us a clean vision, we could not elucidate the interactions between the cognitive features because we analyzed these variables separately. Another limitation involves our unequal sample sizes for women and men. Apart from these, we had lots of participants who did not complete the RTQ. For a better understanding we have studied these participants in a different paper (for details see Gülüm & Dağ 2013).

Regarding the results about cognitive features, those reported here and before (Dağ & Gülüm 2013), we could say that our hypothesis which claimed that there are mediator variables in the relationships between attachment patterns and psychopathology symptoms is mostly verified. In sum, the examined cognitive features have important roles in the relationships between attachment patterns and psychopathology symptoms.

REFERENCES

- Abbott MJ, Rapee RM (2004) Post-event rumination and negative self-appraisal in social phobia before and after treatment. *J Abnorm Psychol* 113: 136-44.
- Ainsworth MDS (1989) Attachments beyond infancy. *Am Psychol* 44: 709-16.
- Arkar H, Şafak C (2004) Klinik bir örnekleme Beck Depresyon Envanteri'nin boyutlarının araştırılması. *Türk Psikoloji Dergisi* 19: 117-23.
- Bayramkaya E (2009) Sosyal fobi belirtileri, yetişkin bağlanma boyutları ve kişilerarası ilişki biçimleri arasındaki ilişkiler. Dissertation thesis. Hacettepe Üniversitesi, Ankara.
- Baron RM, Kenny DA (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *J Pers Soc Psychol* 51: 1173-82.
- Beck JS (1995) *Cognitive therapy: Basics and beyond*, N Hisli Şahin (çev.), Ankara, Türk Psikologlar Derneği Yayınları.
- Bowlby J (1969) *Attachment and Loss: Volume 1. Attachment*. New York, Basic Books,
- Bowlby J (1973) *Attachment and Loss: Volume 2. Separation*. New York, Basic Books,
- Bretherton I (1995) The origins of attachment theory: John Bowlby and Mary Ainsworth. *Dev Psychol* 28: 759-75.
- Byrne BM (2009) *Structural Equation Modelling With LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications and Programming*. New York, Psychology Press.
- Cheng C, Shu-fai C, Hin-man Chio J et al (2013) Cultural Meaning of Perceived Control: A Meta-Analysis of Locus of Control and Psychological Symptoms Across 18 Cultural Regions. *Psychol Bull* 139:152-88.
- Dağ İ (2002) Kontrol odağı ölçeği (KOÖ): Ölçek geliştirme, güvenirlik ve geçerlik çalışması. *Türk Psikoloji Dergisi* 17: 77-90.
- Dağ İ (1992) Kontrol odağı, öğrenilmiş güçlülük ve psikopatoloji ilişkileri. *Psikoloji Dergisi* 7: 1-9.
- Dağ İ, Gülüm İV (2013) Yetişkin bağlanma örüntüleri ile psikopatoloji belirtileri arasındaki ilişkide bilişsel özelliklerin aracı rolü: Bilişsel esneklik. *Türk Psikiyatri Derg* 24, (Baskıda).
- Erol N, Savaşır I (1988) Maudsley obsesif kompulsif soru listesinin Türkçe uyarlaması. 26. Ulusal Psikiyatri ve Nörolojik Bilimler Kongresi, Ankara.
- Fraley RC, Shaver PR (2000) Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Rev Gen Psychol* 4: 132-54.
- Gülüm İV, Dağ İ (2013) Bir ölçek çalışmasında Tekrarlayıcı Düşünme Ölçeğini seçici olarak atlamak bir başa çıkma stratejisi olabilir mi? *Bilişsel Davranışçı Psikoterapi ve Araştırmalar Dergisi* 2: 89-97.
- Gülüm İV, Dağ İ (2012) Tekrarlayıcı Düşünme Ölçeği ve Bilişsel Esneklik Envanteri'nin Türkçeye uyarlanması, geçerliliği ve güvenirliği, *Anadolu Psikiyatri Dergisi* 13: 216 -23.
- Hall RJ, Snell AF, Singer Foust M (1999) Item parceling strategies in SEM: Investigating the subtle effects of unmodelled secondary constructs. *Organizational Research Methods* 2: 233-56.
- Heimberg RG, Horner KJ, Juster HR (1999) Psychometric properties of the Liebowitz Social Anxiety Scale. *Psychol Med* 29: 199-212.
- Hisli N (1988) Beck Depresyon Envanteri'nin geçerliği üzerine bir çalışma. *Psikoloji Dergisi* 6: 118-26.
- Hisli N (1989) Beck Depresyon Envanteri'nin üniversite öğrencileri için geçerliği, güvenirliği. *Psikoloji Dergisi* 7: 3-13.
- Hooper D, Coughlan J, Mullen M (2008) Structural equation modelling: Guidelines for determining model fit. *EJBRM* 6: 53-60.
- Inozu M, Yorulmaz O, Terzi S (2012) Locus of control in obsessive-compulsive (OC) and depression symptoms: the moderating effect of externality on obsessive-related control beliefs in OC symptoms. *Behav Change* 29:148-63.
- Liu Q, Nagata T, Shono M et al (2009) The effects of adult attachment and life stress on daily depression: A sample of Japanese university students. *J Clin Psychol* 65: 639-52.
- Matsuoka N, Uji M, Hiramura H et al (2006) Adolescents' attachment style and early experiences: a gender difference. *Arch Women Ment Hlth* 9: 23-9.
- McEvoy PM, Mahoney AEJ, Moulds ML (2010) Are worry, rumination, and post-event processing one and the same? Development of the repetitive thinking questionnaire. *J Anxiety Disord* 24: 509-19.
- Moulds ML, Kandris E, Starr S et al (2007) The relationship between rumination, avoidance and depression in a non-clinical sample. *Behav Res Ther* 45: 251-61.
- Myhr G, Sookman D, Pinard G (2004) Attachment security and parental bonding in adults with obsessive-compulsive disorder: a comparison with depressed out-patients and healthy controls. *Acta Psychiatr Scand* 109: 447-56.

- Nolen-Hoeksema S (1991) Responses to depression and their effects on the duration of depressive episodes. *J Abnorm Psychol* 100: 569-82.
- Nolen-Hoeksema S (2000) The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *J Abnorm Psychol* 109: 504-11.
- Rotter JB (1966) Generalized expectancies for internal vs. external control of reinforcement. *Psychol Monogr* 80: 1-28.
- Rotter JB (1975) Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *J Consult Clin Psychol* 43: 56-7.
- Sabuncuoğlu O, Berkem M (2006) Relationship between attachment style and depressive symptoms in postpartum women: findings from Turkey. *Türk Psikiyatri Derg* 17: 252-8.
- Sanavio E, Vidotto G (1985) The components of the Maudsley Obsessional Compulsive Questionnaire. *Behav Res Ther* 26: 659-62.
- Selçuk E, Günaydın G, Sümer N et al (2005) Yetişkin bağlanma boyutları için yeni bir ölçüm: Yakın ilişkilerde yaşantılar envanteri-II'nin Türk örnekleminde psikometrik değerlendirilmesi. *Türk Psikoloji Yazıları* 8: 1-11.
- Sherman AC, Higgs GE, Williams RL (1997) Gender differences in the locus of control construct. *Psychol Health* 12: 239-48.
- Schmitt DP, Alcalay L, Allensworth M et al (2003) Are men universally more dismissing than women? Gender differences in romantic attachment across 62 cultural regions. *Pers Relat* 10: 307-31.
- Soykan Ç, Özgüven HD, Gençöz T (2003) Liebowitz Social Anxiety Scale: The Turkish Version. *Psychol Rep* 93: 1059-69.
- Sümer N, Ünal S, Selçuk E et al (2009) Bağlanma ve psikopatoloji: Bağlanma boyutlarının depresyon, panik bozukluk ve obsesif-kompulsif bozuklukla ilişkisi. *Türk Psikoloji Dergisi* 24: 38-45.
- Şimşek ÖF (2007) Yapısal Eşitlik Modellemesine Giriş: Temel İlkeler ve Lisrel Uygulamaları. Ankara, Ekinoks, s.29.
- Thompson RJ, Mata J, Jaeggi SM et al (2010) Maladaptive coping, adaptive coping, and depression symptoms: Variations across age and depressive state. *Behav Res Ther* 48: 459-66.
- Yook K, Keun Hyang K, Suh SY et al (2010) Intolerance of uncertainty, worry, and rumination in major depressive disorder and generalized anxiety disorder. *J Anxiety Disord* 24: 623-8.