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Associations between academic competence and obsessive-compulsive symptoms among adolescents

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Abstract

The aim of the study was to explore possible relations between academic procrastination, academic efficacy, self-efficacy, and severity of obsessive symptoms. Three cluster analyses were performed separately to classify the sample into heterogeneous subgroups due to academic self-efficacy, general self-efficacy, and academic procrastination. Regression analyses were performed in order to assess the relations of these variables with obsessive compulsive symptoms. Results have shown that obsessive-compulsive symptoms were linked to significant increase in academic procrastination, and decline in academic and general self-efficacy, but only in academically less competent subgroups. On the other hand, variations for the indicators of academic competence were regardless of severity of obsessive compulsive symptoms in participants reported high competence. Findings were discussed under empirical and theoretical considerations.
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Keywords: Obsessive-compulsive disorder, adolescence, academic competence, self-efficacy, procrastination.

1. Introduction

Obsessive-compulsive disorder (OCD) is a rather disturbing and disabling condition which is certain with the characteristics of recurrent unwanted ideas, thoughts and impulses (obsessions) and repetitive ritualized behaviours (compulsions) to neutralize obsessions and to relief anxiety (American Psychiatric Association, 2000). Some epidemiological features of the OCD make researchers give more importance to evaluate the consequences of OCD symptoms in school settings. First, obsessive intrusions are not uncommon in normal population that there is continuity between normality and psychopathology rather than taxonomy. (Salkovskis & Harrison, 1984). Second, OCD is considered to be an adult psychopathology and rare in childhood and adolescence. However, recent advances in diagnosis and treatment have let to acquaintance of that obsessive-compulsive symptoms is a severe source of distress among children and adolescents (Rapoport & Shaw, 2008). Finally, retrospective researches found

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that one-half to one-third of the adult subjects reported their onset of OCD before at the age of 18. Reported mean age at onset of OCD ranged from 20 to 25 across the cited studies (Rapoport & Shaw, 2008).

Slowness, avoidance, indecision, irrational doubts, inflated responsibility, and rituals including other people are the general features of children and adolescents prone to obsessive compulsive disorder (Hannah, 1995). Early onset OCD was reported to be related to poor psychosocial functioning (Ye, Rice, & Storch, 2008; Piacentini, Bergman, Keller, & McCracken, 2003). Students experiencing obsessive compulsive symptoms may show a decline in their academic success (McGough, Speier, & Cantwell, 1993; Findley & Galliher, 2007; Tella, Tella, & Adeniyi, 2009). Students prone to obsessive compulsive symptomatology have main difficulties in completing academic tasks (Piacentini, Bergman, Keller, & McCracken, 2003). Secreting the symptoms is an additional problem in diagnosis and intervening to pathology among children and adolescents suffering OCD (Clarizio, 1991). Although early onset of the disorder is prevalent among OCD and brings out serious difficulties in functionality possible relations between obsessive compulsive symptoms and academic competence have received insufficient attention. In this study academic self-efficacy, general self-efficacy, and academic procrastination were used as indicators of academic competence. The aim was to investigate the associations between academic competence and obsessive compulsive symptoms among secondary school students.

2. Material and Method

2.1. Sample

Data were collected from 142 males (%49.82) and 143 females (%50.18) with a total of 285 students. Minimum age was 13 and maximum was 18 years old. Mean age of the sample was 15.02 years with a standard deviation of 0.93. Majority of students (%67.02) were from middle class families; %24.36 were from upper class families and %8.42 reported financial strains in their families.

2.2. Instruments

2.2.1. Academic Self-Efficacy Scale (ASES): The ASES was developed by Jerusalem and Schwarzer (1981) to assess pupils' perceived beliefs about completion of an academic task successfully. The scale has seven items rated on a four-point Likert scale. Composite scores are used and high scoring indicates high academic self efficacy. The adaptation study of the Turkish version was performed by Yılmaz, Gürçay, & Ekici (2007).

2.2.2. General Self-Efficacy Scale (GSES): The GSES developed by Jerusalem and Schwarzer (1981) is designed to assess optimistic self appraisals to cope with a variety of difficult situations in life. The scale has ten items rated on a four-point Likert type scale. Composite scores are obtained and high scoring indicates high self-efficacy. Boysan (2006) translated the instrument into Turkish and reported that the Turkish form has good validity and reliability.

2.2.3. Aitken Procrastination Inventory (API): The API is a self-report inventory developed by Aitken,(1982) in order to measure proneness to academic procrastination. It contains 19 items that use a five-point scale ranging from 1 (False) to True (5). Composite scores are used that high scores identify students who are chronic procrastinators. Turkish translation of the measure was done by Balkıs (2006).

2.2.4. *Padua Inventory (PI-41):* The PI is a self-report measure developed by Sanavio (1988) in order to evaluate severity of obsessive compulsive symptoms in clinical and nonclinical sample. The measure has several versions that 41-item form was used in the study (van Oppen, 1992). The items are rated on a five point Likert type scale. Participants' scores are assessed under five symptom clusters: Impulses, Washing, Checking, Rumination, and Precision. Turkish form of the instrument has high validity and reliability (Beşiroğlu, Ağargün, Boysan, Eryoncu, Güleç, & Selvi, 2005).

2.3. Procedure

Data were collected from pupils in a secondary school in Kayseri. After brief information about the study was given, volunteers were directed for taking their parents' informed consents. Then, a package of psychological tests administered to participants in the school.

2.4. Statistical Analysis

The cluster analysis was used in order to obtain homogenous subgroups due to participants' academic self-efficacy, general self efficacy, and academic procrastination scores. The k-means cluster analyses provided two homogenous subsets, including low and high scored participants, for each of these three variables separately. In each low and high scoring subgroup obtained for response variables, standardized beta coefficients were calculated in which academic self-efficacy, general self efficacy, and academic procrastination were independent variables. Descriptive statistics were given as well.

3. Results

In the first stage, by using k-means cluster analysis, participants were clustered into homogenous subgroups on account of academic self-efficacy, general self efficacy, and academic procrastination scores which are likely to be dependent variables in regression analyses. In low and high scored groups due to dependent variables, standard regression analyses were used in order to assess impacts of obsessive compulsive symptoms on academic self efficacy, general self efficacy, and academic procrastination. Three regression analyses were performed for each subgroup obtained with k-means cluster analyses due to dependent variables. Six regression analyses were performed and in the analyses self efficacy, general self efficacy, and academic procrastination were dependent variables for each subgroup in turn. Descriptive statistics for subgroups and standardized beta coefficients are given in Table 1.

Table 1. Regression analyses (N=285)

	Academic Self-Efficacy Scale		General Self-Efficacy Scale		Aitken Procrastination Inventory	
	Low (n= 205)	High (n= 80)	Low (n=138)	High (n=147)	Low (n=136)	High (n=149)
Percentage	%71.93	%28.07	%48.42	%51.58	%47.72	%52.28
Mean (SD)	10.76 (2.03)	15.51 (1.42)	16.23 (6.08)	20.12 (2.81)	36.61 (4.06)	45.16 (3.81)
	β	β	β	β	β	B
Impulses PI-41	-0.092	0.163	-0.090	-0.028	-0.063	-0.011
Washing PI-41	0.264**	-0.021	0.121**	-0.075	0.101	0.015
Checking PI-41	0.060	0.250	0.416**	0.117	0.132	-0.182
Rumination PI-41	-0.310**	-0.377*	-0.415**	-0.264*	0.193	0.250*
Precision PI-41	0.025	0.196	0.231*	0.217	-0.057	0.088
R square	0.14	0.11	0.33	0.6	0.7	0.7

*:p<.05, **:p<.01; β = Standardized beta coefficient

By using k-means cluster analysis, 205 participants classified (%71.93) in low scoring cluster and 80 participants (%28.07) classified in high scoring group on account of subjects' academic self efficacy scores. Cluster analysis for general self efficacy sorted %48.42 of the sample and for academic procrastination sorted %47.72 of the sample in low scoring subgroup.

In regression analyses in which academic self efficiency was dependent variable, obsessive washing compulsions were linked to higher academic self-efficacy in low scoring subgroup (β = 0.264, *p<.01*); whereas ruminative thinking was linked to significant decrease in academic self-efficacy in both low and high scoring groups (β = -

0.310, *p<.01;* β = -0.377; *p<.05;* respectively). Washing, checking and precision symptoms were linked to significant increase in self-efficacy in low scoring subgroup (β = 0.121, *p<.01;* β = 0.416, *p<.01;* β = 0.231, *p<.05;* respectively). Ruminative thinking was linked to negative outcomes in terms of self-efficacy among participants classified in both low and high scoring groups when general self efficiency was response variable (β = -0.415, *p<.01;* β = -0.264; *p<.05;* respectively). Procrastination was significantly associated with rumination among high procrastinators (β = 0.250, *p<.01*); however, there was no significant connection between procrastination and obsessive symptoms in low procrastinator group.

4. Discussion

Prevalence of obsessive compulsive symptoms among normal population is a well-known phenomenon that continuities and discontinuities between normal and pathological obsessions are suggested to be related to cognitive factors (Salkovskis & Harrison, 1984; Obsessive Compulsive Cognitions Working Group, 1997). On the other hand, OCD is thought to be a adulthood pathology while one third of the adult subjects reported early onset of the disorder (Rapoport & Shaw, 2008). In this study the aim was to evaluate associations of academic self-efficacy, general self efficacy, and academic procrastination with obsessive compulsive symptoms.

In the analyses cluster analyses were performed to obtain homogenous subgroups due to subjects' academic self-efficacy, general self-efficacy, and academic procrastination. Results indicated that majority of the group reported low academic self-efficacy scores (%71.93). Nearly half of the students scored low general self-efficacy and high proneness to procrastination.

It is found in the analyses that washing compulsions were positive correlates of both academic and self-efficacy in low scored groups. Checking and precision symptoms were also positively associated with self-efficacy in inferior group as well. However, the connections between washing, checking, precision symptoms and academic competence in high competent groups were not significant. Findings can be interpreted in a way that obsessive compulsive symptoms, particularly washing, checking and precision, may play role in compensating of poor academic and self-efficacy in hazardous groups. There are very few studies examining the relations between obsessive compulsive symptoms and academic competence. In previous studies, obsessive compulsive disorder was found to be related to executive functioning difficulties that obsessive compulsive symptoms were suggested to be a compensation mechanism in cognitive functioning deficits (Aycicegi-Dinn, Dinn, & Caldwell-Harris, 2009). Our sample was not a group certain with their cognitive deficits but some obsessive features seems to be strivings of equilibrium for less competent individuals. However, ruminative thinking was nearly constant determinant of declines in academic and general self efficacy and of increase in academic procrastination in all subgroups. Results were compatible with the previous findings that rumination is a serious risk factor for poor psychological outcomes (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Lyubomirsky, Kasri, & Zehm, 2003).

The research gives evidence that obsessive-compulsive symptoms may cause impairment in academic functioning of students, particularly in those who have poor perceived academic and self-efficacy. Nonetheless, rumination seems to be a general risk factor in impairment of functioning in children and adolescents. Since, yet, many aspects of the issue have remained elusive that further studies are needed to address composite relations between obsessive compulsive symptoms and academic competence more systematically.

References

Aitken, M. (1982). *A personality profile of the college student procrastinator*. Unpublished doctoral dissertation, University of Pittsburgh, Pittsburgh.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical Manual of Mental Disorders*, Text Revision (DSM-IV-TR)(4th ed.). Washington: American Psychiatric Association.

Aycicegi-Dinn, A., Dinn, W. M., & Caldwell-Harris, C. L. (2009). Obsessive-compulsive personality traits: compensatory response to executive function deficit? *International Journal of Neuroscience, 119* (4), 600-608.

Balkıs, M. (2006). *The relationships between student teachers' procrastination behaviors and thinking styles and decision making style.* Unpublished doctoral dissertation, Dokuz Eylül University, İzmir.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*, 1206-1222.

Beşiroğlu, L., Ağargün, M., Boysan, M., Eryonucu, B., Güleç, M., & Selvi, Y. (2005). The assessment of obsessive-compulsive symptoms: The reliability and validity of the Padua Inventory in a Turkish population. *Türk Psikiyatri Dergisi, 16* (3), 179-189.

Boysan, M. (2006). *Multi-sample structural equation models*. Unpublished master thesis, Yüzüncü Yıl University, Van.

Clarizio, H. F. (1991). Obsessive-compulsive disorder: The secretive syndrome. *Psychology in the Schools, 28*, 106-115.

Findley, M. B., & Galliher, R. V. (2007). Associations Between Obsessive-Compulsive Symptoms and Academic Self-Concept. *Psi Chi Journal of Undergraduate Research, 12* (1), 3-8.

Hannah, G. L. (1995). Demographical and clinical features of OCD in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 19-27.

Jerusalem, M.; & Schwarzer, R. (1981). Fragebogen zur Erfassung von "Selbstwirksamkeit. *Skalen zur Befindlichkeit und Persoenlichkeit* In R. Schwarzer (Hrsg.). (Forschungsbericht No. 5). Berlin: Freie Universitaet, Institut fuer Psychologie.

Lyubomirsky, S., Kasri, F., & Zehm, K. (2003). Dysphoric Rumination Impairs Concentration on Academic Tasks. *Cognitive Therapy and Research, 27*, 3, 309–330.

McGough, J. J., Speier, P. L., & Cantwell, D. P. (1993). Obsessive-compulsive disorder in children and adolescents. *School Psychology Review, 22*, 243-251.

Obsessive Compulsive Cognitions Working Group. (1997). Cognitive assessment of obsessive–compulsive disorder. *Behaviour Research and Therapy, 35*, 667-681.

Piacentini, J., Bergman, L., Keller, M., & McCracken, J. (2003). Functional Impairment in Children and Adolescents with Obsessive-Compulsive Disorder. *Journal of Child And Adolescent Psychopharmacology, 13* (1), 61–69.

Rapoport, J. L., & Shaw, P. (2008). Obsessive-compulsive disorder. In: Rutter M., Taylor E., Bishop D., et al., eds. *Rutter's child and adolescent psychiatry (5th edition)* (pp.698-718) Oxford: Blackwell Publishing.

Salkovskis, P. M., & Harrison, J. (1984). Abnormal and normal obsessions: A replication. *Behaviour Research and Therapy, 22*, 549–552.

Sanavio, E. (1988). Obsessions and compulsions: The Padua Inventory. *Behaviour Research and Therapy, 26*, 167-177.

Tella, A., Tella, A., & Adeniyi, O. (2009). Locus of control, interest in schooling, self-efficacy and academic achievement. *Cypriot Journal of Educational Sciences, 4*, 168-182.

Van Oppen, P. (1992) Obsessions and compulsions: dimensional structure, reliability, convergent and divergent validity of the Padua Inventory. *Behaviour Research and Therapy, 30*, 631-637.

Ye, H. J., Rice, K. G., & Storch, E. A. (2008). Perfectionism and peer relations among children with obsessive-compulsive disorder. *Child Psychiatry of Human Development, 39*, 415 – 426.

Yımaz, M., Gürçay, D., & Ekici, G. (2007). Adaptation of the academic self-efficacy scale to Turkish. *H.U. Journal of Education, 33*, 253-259.