

The Effect of Obsession Thoughts on Intelligences Achievement Relationship of Late Adolescents

Partha Malakar, Jayanti Basu, and Anindita Chaudhuri
 Calcutta University, Kolkata

The present study was conducted to explore whether there is any difference in intelligence-achievement relationship between low and high Obsessional thought groups among late adolescent students. The aims of the study were to determine (i) whether there is any sex difference in obsessional thoughts (ii) whether there is any sex difference in achievement scores and (iii) whether there exist any difference in intelligence-achievement relationship between low and high Obsessional thought groups. The sample consisted of 103 Bengali girls and 92 Bengali boys selected randomly from Class XI (16-18 years). Raven's Standard Progressive Matrices and Leyton Obsessional Inventory by Cooper and an information schedule were administered. The achievement level of the students was measured from the Madhyamik mark-sheet. The analyses revealed significant differences between high and low Obsessional thought groups indicating substantial loss in intelligence-achievement relationship attributable to obsessional thought. The results have been discussed in terms of future research directions and therapeutic implications.

Keywords: Obsession thoughts, Intelligence, Achievement, Late Adolescents

Literature reveals that Obsessive-compulsive symptoms in children and adolescents have characteristics common to, as well as different from the adult stage. Their biological, psychological, social and cognitive resources shift throughout childhood and adolescence (Rangaswami, 1998). Normal children often display obsessive ideas and compulsions at certain stages of development, which later fades away (Judd, 1965). Yet, like the adult OCD patient the principal problem among child OCD is also cognitive in nature (Rangaswami, 1999). Various cognitive models like 'thought action fusion model' (Rachman, 1976), cognitive behaviour model (Salkovskis, 1985; 1989), Clark and Pardon model (1993), meta cognitive model (Wells and Mathews, 1997), general working model (Wells, 1997) and developmentally based cognitive model (Rangaswamy, 1998) have been used to explain cognitive deficit associated with obsessive compulsive symptoms.

Obsessive-compulsive tendencies result in a number of functional impairment in the child. Studies have revealed that usually the greatest difficulties occur in execution of those areas, which are of greatest significance to the adolescent, that is, in academic performance, and various aspects of social interaction (Sukhodolsky et al., 2005). A study by Piacentini et al (2003) surveyed the complaints reported by 151 OCD children and adolescents and their parents. They observed that parents of clinic referred OCD children and adolescents identified the most significant problems as trouble with concentrating on schoolwork (47%), doing homework (46%), and getting ready for bed (42%). The children and adolescents themselves complained more of difficulties relating to concentrating on schoolwork (37%), doing homework (32%), and doing household chores (30%).

The present study focuses on the investigation of one particular functional deficit,

that is the loss of academic achievement among late adolescents due to obsessive-compulsive characteristics. This is particularly relevant, since late adolescence is the phase of preparing for subsequent career. Particularly, in countries like India, where grades are given much importance, poor achievement in examination may result in damage of both career and self-esteem. Academic achievement, the crux of this study has been variously defined: as level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is often represented by percentage of marks obtained by students in examinations (Kohli, 1975). There is an overwhelming evidence establishing intelligence as the most significant predictor of academic achievement, although role of non-cognitive variables is also well known (Eysenck 1960; Karnes et al 1984). The present study argues that the presence of obsessive traits in an adolescent, particularly at the time of important examinations, would impair proper utilization of one's intellectual functioning and would therefore have impact on expression of intellectual potential on academic achievement. Indeed, it has been observed that there is little significant difference in intelligence between the obsessive and normal adolescents and adults, but the potential may not be unfolded or utilized in time of need (Purcell et al, 1998).

Some studies indicate that among children, OCD is greater among boys, but in adults, it is more prominent in women. The research about gender difference in OCD prevalence and contents among adolescents remain an area of continued interest, since conclusive indications are not available. Indeed OCD among children and adolescents had been a neglected issue for decades and has started being probed by the researchers only since early nineties (Presta et al., 2003). Therefore, the present study took into consideration both girls and boys and

assessed the gender difference. The objective of the study is to determine (i) whether there is any sex difference in obsessional thoughts, (ii) whether there is any sex difference in achievement scores and (iii) whether there exist any difference in intelligence-achievement relationship between low and high Obsessional thought groups.

Method

Sample:

103 girls and 92 boys studying in Class XI of four different schools of South Kolkata participated in the study. Their age ranged from 16-18 years. All of them were from Bengali Hindu middle class families and living with their parents in Kolkata. All of them had passed Madhyamik examination (school leaving examination) in the previous year.

Tools:

Raven's Standard Progression Matrices (SPM) was used to assess their intelligence level. (Raven et al., 2000).

The Leyton Obsessional Inventory was used to assess their obsessional tendency (Cooper, 1970). This is a 69 item scale applicable on non-clinical population for assessing obsessive tendency.

The achievement level was measured from the mark sheet of Madhyamik examination (secondary examination). The marks of language group, science group, arts group, additional subject and total marks were considered. The full marks in language group and science group is 300, and in Social science group is 200. Besides, an additional subject is also taken up which is of 100 marks.

Results

The means and standard deviations of all the variables of obsessional thought and achievement in different subject domains in Madhyamik examination were recorded for males and females separately in Table 1. The significance of difference between the sexes was estimated by 't' test.

Table 1 : Mean, SD and t values for all variables with 92 boys and 103 girls

Variables	Male		Female		t- value
	Mean	SD	Mean	SD	
Obsessional thought scores	23.50	5.83	23.10	5.57	-0.49
Intelligence	42.10	10.56	43.32	7.97	0.92
Language Group Marks	167.31	22.93	171.10	24.24	1.12
Science Group Marks	166.29	35.59	172.83	41.19	1.18
Social Science Group Marks	111.42	18.40	117.32	20.28	2.12*
Additional Subject Marks	75.18	9.93	68.34	11.35	-4.46**
Total marks	488.45	69.81	497.81	79.41	0.87

**p <.01, *p <.05,

Results indicated that there was no gender difference in obsessional thought. The girls were somewhat better than boys in social science group and boys better than girls in additional subject. Since there was no significant difference in total marks between the sexes, it was decided to treat the total group as a whole for subsequent analyses.

To determine whether intelligence – achievement relation differs across high and low obsessive thought groups, the sample was split according to the median value of obsessional thought scores. The means and standard deviations of scores in intelligence,

language group, science group, Social science group, additional and total marks were determined for these two groups. Then ‘t’ tests were done to determine whether there was any significant difference between adolescents with high and low obsession in the results of the Madhyamik examination in various subjects. The results are presented in Table 2. Subsequently the Pearson product moment correlation was computed between intelligence and achievement for low and high obsessional thought groups and t test for significance of difference between correlations was computed. The results are presented in Table 3.

Table 2: Mean, SD and t value of high and low obsessive thought groups

Variables	Groups	N	M	SD	t values
Intelligence	Low obsession	90	43.36	8.06	0.80
	High obsession	105	42.29	10.20	
Language Group Marks	Low obsession	90	173.12	25.59	2.10*
	High obsession	105	166.05	21.43	
Science Group Marks	Low obsession	90	178.32	41.51	2.92**
	High obsession	105	162.38	34.63	
Social Science Group Marks	Low obsession	90	120.40	20.45	4.02**
	High obsession	105	109.51	17.41	
Additional Subject Marks	Low obsession	90	70.42	12.58	-1.33
	High obsession	105	72.55	9.85	
Marks(total)	Low obsession	90	508.73	83.84	2.69**
	High obsession	105	480.24	64.01	

** p< 0.01 * p< 0.05

Table-3 Pearson Product Moment Correlations between intelligence and achievement for low and high obsessional thought groups and t values

Variables of Achievements	Obsessional Thought Group		t values
	Low Obsessional	High Obsessional	
Language Group Marks	0.47***	0.10	2.92***
Science Group Marks	0.44***	0.20**	1.85*
Social Science Group Marks	0.25***	0.19*	0.57
Additional Subject Marks	0.02	-0.01	1.32
Total marks	0.42***	0.20***	1.78*

*** p<0.01 (2-tailed). ** p< 0.05 (2-tailed). *p< 0.10 (2-tailed).

Results indicated that there was no significant difference between the low and high obsessional thought groups in terms of intellectual ability. But significant differences existed between the high and low Obsessional thought groups in the marks of language group, science group, arts group and total marks. The low Obsessional thought group performed significantly better than the high Obsessional thought group.

The difference was also observed in intelligence-achievement relationship between groups with high and low obsessional thoughts in the variables language group, science group and total marks. Intelligence-achievement relationship was high in low obsessional thought group in comparison to high obsessional group.

Discussion

The fact that no gender difference was found in case of obsessional thought is in line with that of Castle et al. (1995). The findings of the study further reveal that, as expected, both low obsessional and high obsessional thought groups have significant positive correlation of intelligence with the variables of achievement. However, the two groups differed in overall achievement, the low obsessional thought group having higher achievement in comparison to the high obsessional thought group. The low

obsessional thought group is also found not only higher in absolute achievement, but also higher in intelligence-achievement relationship than high obsessional thought group. It is probably due to the fact that students with high obsession are busy with thinking intrusive trifle things, and cannot easily switch over from one topic to another as obsessional thoughts forcibly engulf their consciousness.

The general findings of the study corroborate earlier findings (Mather & Cartwright, 2004; Mrdjenovich, & Bischof, 2003). Poor achievement of high obsessional thought group may be attributed to their intrusive thoughts, which are key sources of cognitive disturbance. People with high obsessional thought pay more attention to the dysfunctional beliefs (Clark and Purdon, 1993), which, coupled with the schemas concerned with the need to control them produces distress. Obsessional thoughts are known to impair cognitive performance on domains like visuo-spatial memory, verbal fluency (Roh et al., 2005), spatial working memory, spatial recognition (Purcell et al., 1998), and executive functions (Andres-Perpina et al., 2002). These faculties are required for achievement in different subjects in differing amount, and therefore may serve as moderators between obsessional thought and poor performance.

Conclusion and implications

It can be concluded from the study that obsessional thought impairs the function of intelligence to lead an adolescent to the academic achievement one deserves. Therefore, future research needs to be directed at further probing of specific cognitive elements that may be disturbed, as well as toward pragmatic intervention. Studies reveal that obsessional symptoms express themselves as problems in thinking and decision-making, and therefore, cognitive restructuring seems to be the most acceptable mode of intervention (Shafran, 2001). However, obsessive compulsive disorder is a spectrum disorder, and there are various ranges of difficulty. It also needs to be remembered that often failure to achieve is connected with punitive measures at school and home in our country and a permanent loss of self-esteem may result. The parents and teachers need to be educated about the early recognition of the problem and a need-based referral system for pharmacotherapy and cognitive-behavioural therapy needs to be developed (Storch et al., 2007).

References

- Andres-Perpina, S; Lazaro-Garcia, L; Canalda-Salhi, G & Boget-Lucia, T (2002). Neuropsychological aspects of obsessive-compulsive disorder. *Rev Neurol*, 35, 959-963.
- Castlem D. J., Deale, A. & Marks, M. (1995) Gender differences in obsessive compulsive disorder. *Aust NZ Journal of Psychiatry*, 29, 114-117.
- Clark, D.M & Purdon, C (1993). New perspective of cognitive therapy of obsessions. *Australian Psychologist*, 28, 161-167.
- Cooper, J. (1970). Leyton obsessional Inventory. *Psychological Medicine*, 1, 48-64.
- Eysenck, H.J. (1960). *Structure of Human Personality* London, Routledge & Kegan Paul.
- Judd, L.L (1965) Obsessive compulsive neuroses in children. *Archives of General Psychiatry* 12, 136-143.
- Karnes, F.A., Whorton, J.E., & Curries, B.B. (1984). Correlations between WISC-R IQs and wide range Achievement Test grade equivalents for Intellectually Gifted Students. *Psychological of Reports*, 54, 69-70.
- Kohli, T.K. (1975). *Characteristic Behavioural and Environmental correlates of Academic Achievement of Over and Under Achievers of different levels of intelligence*. Punjab University, unpublished Ph. D. Thesis.
- Mather, A. & Cartwright – Hatton S. (2004) Cognitive predictors of obsessive-compulsive symptoms in Adolescents. *Journal of clinical child and Adolescent Psychology*, 33, 743-749.
- Mrdjenovich, A.J. & Bischof, G.A. (2004). Obsessive - Compulsive Complaints and academic performance. *College Student Journal*, 37, 145-155.
- Piacentini, J., Bergman R L, Keller M, McCracken J, (2003) Functional impairment in children and adolescents with obsessive-compulsive disorder, *Journal of child and adolescent psychopharmacology*, 13, 61-69.
- Purcell, R; Maruff, P; Kyrios, M & Pantelis, C (1998). Cognitive deficits in obsessive-compulsive disorder on tests of frontal-striatal function. *Biological Psychiatry*, 43, 348-357.
- Rachman, S.J (1976) Obsessive-compulsive checking. *Behaviour Research and Therapy*, 14, 269-277
- Rangaswami, K (1998). Developmentally based cognitive model of obsessive compulsive disorder in children and adolescence. *Indian Journal of Clinical Psychology*: 25, 188-193
- Rangaswami, K (1999). Cognitive disturbances in obsessive compulsive disorders: A Review. *Indian Journal of Clinical Psychology*: 26, 148-155.
- Raven, J.C, Court, J.H & Raven, J (1992). Manual for Standard Progressive Matrices. Oxford Psychologists Press: Oxford
- Roh, K.S; Shin, M.S, Kim, M.S; Ha, T.H, Shin, Y.W, Lee, K.J & Kwon, J.S (2005). Persistent cognitive dysfunction in patients with obsessive compulsive disorder: A naturalistic study. *Psychiatry Clinical Neuroscience*, 59, 539-45

- Presta, S., Marazziti, D., Dell'Osso, L., Pfanner, C., Pfanner, P., Marcheschi, M., Masi, G., Muratori, F., Mucci, M., Millipiedi, S. & Cassano, G. B. (2003) Obsessive-Compulsive Disorder in Childhood and Adolescence. *Psychopathology*; 36:55-64
- Salkovskis, P.M (1985) Obsessional-compulsive problems: A cognitive behavioural analysis *Behaviour Research Therapy*, 23, 571-583.
- Salkovskis, P.M (1989) Cognitive-behavioural factors and the persistence of intrusive thoughts in Obsessional problems. *Behaviour Research Therapy*, 27, 677-682.
- Shafran, R. (2001) Obsessive-compulsive disorder in children and adolescents. *Child Psychology and Psychiatry Review*, 6, 50-58.
- Storch, E. A., Geffken, G. R. & Murphy, T. K. (Eds.) (2007) *Handbook of Child and Adolescent Obsessive-Compulsive Disorder*. NY. Routledge.
- Sukhodolsky, D. G., do Rosario-Campos, M.C., Scahill, L., Katsovich, L., Pauls, D. L., Peterson, B. S., King, R. A., Lombroso, P. J., Findley, D. B., and Leckman, J. F. (2005) Adaptive, Emotional, and Family Functioning of Children With Obsessive-Compulsive Disorder and Comorbid Attention Deficit Hyperactivity Disorder. *American Journal of Psychiatry*, 162, 1125-1132.
- Wells, A (1997). *Cognitive therapy of anxiety disorders: A practical manual and conceptual guide*. New York: John Wiley and sons.
- Wells, A & Mathews, G (1997). Modelling cognition in emotional disorders: The SREF Model. *Behavioural Research and Therapy*, 35, 473-475.

Received: March 18, 2009

Revision received: April 21, 2009

Accepted: May 23, 2009

Partha Malakar, Research Scholar, Department of Applied Psychology, Calcutta University, Kolkata - 700 009.

Jayanti Basu, PhD, Department of Applied Psychology, Calcutta University, Kolkata - 700 009. Email: basumjt@gmail.com.

Anindita Chaudhuri, Department of Applied Psychology, Calcutta University, Kolkata - 700 009.

NACIACP-2010

36th National Annual Conference of the Indian Association of Clinical Psychologists
February, 1-3, 2010 at NIMHANS, Bangalore, India

Theme:

Clinical Psychology for a Changing World: Practices, Training and Research

Communications to be sent to:

Dr. L.N. Suman

Organizing Secretary NACIACP-2010

naciacp10@rediffmail.com

<http://www.nimhans.kar.nic.in>