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Research Article

The relationship between obsessive and compulsive symptoms among primary school students of the Tetova region, North Macedonia

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Abstract – The qualitative method was the research method used in this study as the most appropriate to the purpose, objectives, and research questions of the study. The purpose of this study is to analyze the presence of symptoms of obsession and compulsion in primary school students, as well as to investigate whether there are differences in these symptoms in terms of gender and school success**.**

The sample in this paper consists of (N=287) subjects, both males (N=151/ 52.6%) and (N=136/ 47.4%) females, aged between 12-16 years, students in 10 schools in the region of Tetova. Results: The results show that obsessive and compulsive symptoms are found in the investigated students at a sub-average level, which means that we do not have the presence of obsessive and compulsive symptoms as a disorder in the investigated sample. Obsessive and compulsive symptoms result in a high relationship and the obtained result has statistical significance with correlation ($r=0.758$, $p<0.01$), with the presence of obsessive thoughts we also have an increase in compulsive actions or the opposite. There are no significant statistical differences between obsessive actions according to gender. T-test data shows that there are statistically significant differences with obtained values (df=285), (F=464), (sig=0.36) in terms of compulsive symptoms according to gender, male students have reached an average of (M=6.82) with a standard deviation of (SD=4.70), while the female students have reached an average of (M=7.96). We find that there are no significant statistical differences between school success and obsessive thoughts and compulsive actions. In obsessive thoughts we have (df=3), (F=1.53), (sig=0.20) while in compulsive actions we have (df=3), (F=0.65) (sig=0.58).

Keywords – Obsessions, Compulsions, School Success, Gender.

I. Introduction

Obsessive-compulsive disorder (OCD) is characterized by obsessions and/or compulsions. Obsessions are recurrent, intrusive, unwanted thoughts, images, or urges that cause marked anxiety or distress. Compulsions are repetitive ritualistic behaviors or mental acts performed to prevent or reduce anxiety or distress (e.g. [1]). Compulsions are aimed at reducing the feelings of anxiety associated with obses-sions (e.g. [2]). The cognitive ap-proaches of obsessive-compulsive disorder consider negative appraisal of beliefs and intrusive thoughts to be the core factor in the development of this disorder (e.g. [3], [4]). Salk-ovskis's cognitive model of obsessive-compulsive disorder (responsibility model) postulates that compulsions and obsessions are caused by dysfunctional beliefs. The interpretation of intrusive thoughts in a manner reflective of inflated responsibility is thought to be the direct cause that leads to compulsions (e.g. [5]).

Obsessive-Compulsive Disorder (OCD) is a neuropsychiatric illness that often begins in childhood and has significant impact on family, academic, occupational, and social functioning. Children and youth with OCD have obsessions or unwanted and upsetting thoughts, images or ideas that get stuck in their heads. Compulsions are aimed at reducing the feelings of anxiety associated with obsessions (e.g. [1], [2]). The cognitive approaches of obsessive-compulsive disorder consider negative appraisal of beliefs and intrusive thoughts to be the core factor in the development of this disorder (e.g. [3], [4]). Salkovskis's cognitive model of obsessive-compulsive disorder (responsibility model) postulates that compulsions and obsessions are caused by dysfunctional beliefs. The interpretation of intrusive thoughts in a manner reflective of inflated responsibility is thought to be the direct cause that leads to compulsions (e.g. [5]). Reported as the tenth leading cause of disability in the world by the World Health Organization (WHO) in 1996, OCD causes disrupted development, social withdrawal, family and relationship problems, difficulties with concentration and academic performance (e.g. [4], [6], [7]). Thus, the identification of early onset OCD is vital since results from treatment outcome studies in children and adolescents are in line with those obtained for adult samples and the overall findings indicate that cognitive behavior therapy is also efficacious in the younger population ([8], [9],).

According to multiple reports, OCD has an effect of 1 to 3% on children and adolescents and is associated with significant disabilities and reduced quality of life ([10], [11]). The illness has also been shown to be associated with high levels of comorbidity and significant psychosocial dysfunction in young people including low levels of concentration at school and difficulty completing homework and doing household routines, as well as impaired social functioning.

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II. MATERIALS AND METHOD

Purpose of the Research

To analyze the presence of symptoms of obsession and compulsion in primary school students, and to investigate whether there are differences in these symptoms in terms of gender and school success**.**

Hypotheses

1. There is a significant statistical relationship between obsessive thoughts and compulsive actions in elementary school students.

2. There are significant statistical differences between obsessive thoughts and compulsive actions according to gender and school success.

Research instruments

This instrument was used to assess the severity of OCD was Yale Brown questioniare. The scale includes 44 items, 24 for obsessions and 20 for compulsions. Each item can be rated from 0 (none) to 4 (extreme) in relation to time, impairment, frequency, control, and discomfort. The scale is widely used worldwide and in this study has good psychometric properties, with good internal consistency (Cronbach's alpha ranging from 0.88 to 0.850).

Study Sample

In this research (table 1), the sample of the study was (N=287) subjects, both males (N=151/ 52.6%) and (N=136/ 47.4%) females, aged between 12-16 years, students in 10 schools in the region of Tetova. According to school success, students with poor success are (N=3); good (N=64), very good (N=86) and students who have achieved excellent success are (N=134).

Table 1. Demographic data

		Frequency	Percentage
Gender	**Male**	**151**	**52.6**
	Female	**136**	**47.4**
Student success	**Weak**	**3**	**1.0**
	Good	**64**	**22.3**
	Very good	**86**	**30.0**
	Excellent	**134**	**46.7**

III. RESULTS

Table number 2 presents the descriptive data on the main variables of the presence of obsessive and compulsive symptoms in primary school students in the region of Tetova.

Obsessive symptoms according to statistical description have reached average (M=9.08), with standard deviation (SD= 5.49) with minimum (min=0) and maximum (max=24) value, while compulsive symptoms result with average (M= 7.36), from the minimum value (min=0) and the maximum value (max=20), and standard deviation of (SD=4.59). The results show that obsessive and compulsive symptoms are found in the investigated students at a sub-average level, which means that we do not have the presence of OCD as a disorder in the investigated sample.

Table no. 2. Descriptive data of obsession and compulsion

		Obsessive symptoms	Compulsive symptoms
N	Valid cases	287	287
	No answer	0	0
Arithmetic mean		9.0836	7.3659
Standard error		.32463	.27096
Mediana		8.0000	7.0000
Mode		7.00	4.00
Standard Deviation		5.49952	4.59042
Minimum		.00	.00
Maximum		24.00	20.00

Based on the results presented in table 3 for the relationship between obsessive and compulsive symptoms, we note that the relationship between them results with a positive coefficient. Obsessive and compulsive symptoms result in a high relationship and the obtained result has statistical significance with correlation ($r=0.758$, $p<0.01$), with the presence of obsessive thoughts we also have an increase in compulsive actions or the opposite.

Table no. 3. Correlational analysis of obsessive and compulsive symptoms in primary school students.

		Obsessive symptoms	Compulsive symptoms
Obsession	Pearson Correlation	1	.758**
	Sig. (2-tailed)		.000
	N	287	287
Compulsion	Pearson Correlation	.758**	1
	Sig. (2-tailed)	.000	
	N	287	287

**. Correlation is significant at the 0.01 level (2-tailed).

In order to find the differences of obsessive symptoms in elementary school students according to gender, the comparative analysis of the T-test was used. In Table 4, the descriptive data of averages of obsessive symptoms in students, it can be seen that male students have an average (M=8.68 SD=5.58) and female students have an average (M=9.52 SD=5.38). This small difference between the groups is statistically insignificant, since in table number 5 we see that the obtained result df=285, (t= -1.305), (p>0.05) shows that there are no statistically significant differences in obsessive symptoms as far as It belongs to the gender of primary school students. To see the differences in compulsive symptoms in terms of the gender of the students through the descriptive table, we see that the male students have reached an average of (M=6.82) with a standard deviation of (SD=4.70), while the female students have reached an average of (M=7.96) and standard deviation (SD=4.40). T-test data in table 5 shows that there are statistically significant differences with obtained values (df=285), (F=464), (sig=0.36).

Table 4. Descriptive data regarding obsession and compulsion by gender

	Gender	Number of subjects	Mean	Standard deviation	Standard error of the mean
Compulsion	Male	151	6.8278	4.70002	.38248
	Female	136	7.9632	4.40607	.37782
Obsessions	Male	151	8.6821	5.58614	.45459
	Female	136	9.5294	5.38715	.46194

Table no. 5. T-test for comparing averages by gender

		Levin's test for equality of variances		T-test for equality of means				
		F	Sig.	T	df	Sig. (2-tailed)	Difference of means	Standard error of the differences
Obsessions	Equal variances assumed	.398	.528	-1.305	285	.193	-.84729	.64934
	Equal variances not assumed			-1.307	283.659	.192	-.84729	.64811
Compulsions	Equal variances assumed	.464	.496	-2.105	285	.036	-1.13542	.53944
	Equal variances not assumed			-2.112	284.535	.036	-1.13542	.53762

Table 6 shows the averages achieved by the subjects of obsessive and compulsive symptoms according to school success. The data show that students with poor success have reached the highest averages of obsession (M=11) and compulsion (M=8.33), students with good and very good success have reached values close to obsessive symptoms and in compulsive ones, while students with excellent success achieved a slightly lower level of obsessive symptoms (M=8.4) and compulsions (M=7.2). According to the comparative analysis of Anova (Table 7) we see that there are no statistically significant differences as the obtained sig are greater than 0.05. In obsessive thoughts we have (df=3), (F=1.53), (sig=0.20) while in compulsive actions we have (df=3), (F=0.65) (sig=0.58). We find that there are no significant statistical differences between school success and obsessive thoughts and compulsive actions.

Table 6. Descriptive data regarding obsession and compulsion according to school success

Descriptives					
		Number of subjects	Mean	Standard deviation	Standard error
Obsessions	Weak	3	11.0000	3.46410	2.00000
	Good	64	9.2656	6.14182	.76773
	Very good	86	9.9419	5.57590	.60127
	Excellent	134	8.4030	5.10656	.44114
	Total	287	9.0836	5.49952	.32463
Compulsions	Weak	3	8.3333	1.52753	.88192
	Good	64	6.8438	5.21055	.65132
	Very good	86	7.8488	4.25791	.45914
	Excellent	134	7.2836	4.52995	.39133
	Total	287	7.3659	4.59042	.27096

Table 7. Anova for differences in school success according to obsessive and compulsive symptoms

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Obsessions	Between Groups	138.561	3	46.187	1.536	.205
	Within Groups	8511.432	283	30.076		
	Total	8649.993	286			
Compulsions	Between Groups	41.222	3	13.741	.650	.584
	Within Groups	5985.363	283	21.150		
	Total	6026.585	286			

IV. DISCUSSION

At the beginning, it is important to emphasize that the purpose of this study was to see the presence of symptoms of obsession and compulsion in primary school students of the Tetovo region, but without diagnostic criteria according to DSM-V (the newest manual used for diagnostic issues) but through a measuring instrument which identifies only the possible present symptoms of obsession and compulsion. Based on the data Childhood OCD appears to occur in 1% to 3% of children and adolescents, a rate similar to that of adults (**e.g [12]**) The modal age of onset in the pediatric population

is 10 years. Because children often are secretive about their symptoms, childhood OCD frequently goes unrecognized for a long period of time (e.g [13]) The results showed that the students of the 10 primary schools of the Tetova region in this study reported below average values of symptoms of obsession and compulsion, respectively the averages obtained for both variables are categorized at a weak level of the presence of OCD. But on the other hand, our findings show that obsessive and compulsive symptoms result with a high correlation and the obtained result has strong statistical support. The relationship between obsessions and compulsions can vary among individuals. Some people may experience obsessions without engaging in visible compulsions, while others may have compulsions without a clear obsession (e.g [14]).

The study also analyzed gender differences in OCD. Females in other studies were more likely to report obsessions associated with contamination belief or aggressive concerns, while males usually reported blasphemous thoughts. We found supportive results in our study (e.g [7]).

The obtained result shows that there are statistical differences between the compulsive actions and the gender of the subjects, and the female gender has more pronounced compulsive actions compared to the male gender, our result supports other similar research in terms of gender, which prove that it was mainly related to the male gender, (e.g [15]) found that among students, females present more - compulsive symptoms than males.

The results showed that compulsions are not related to academic performance in this sample of university students. It seems that their obsessions are not very demanding. They may not require frequent checking and attending to details that may hinder academic functioning and performance (e.g [14]). However, the severity of compulsions is not assessed in this study neither the clinical diagnosis. The results may not be the same if a clinical or a subclinical population is used. This result contradicts the findings which showed that obsession/ obsessive-compulsive disorder was associated with poor academic achievement.

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