

## Associated Factor of Obsessive-Compulsive Disorder and Academic Outcome

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### Abstract

Obsessive Compulsive Disorder (OCD) was defined by recurrent and intrusive thoughts, images or urges (obsessions) and repetitive behaviour or mental acts. There were several themes of OCD symptoms which were checking, symmetry, contamination, repeating, hoarding, cleaning or washing, and counting. Each symptom showed different behaviour. We use Yale-Brown Obsessive Compulsive Disorder Scale to measure the severity of obsessive compulsive disorder. Our target population was in secondary school students in Tapah which were Sekolah Menengah Kebangsaan Tapah and Sekolah Menengah Kebangsaan Buyong Adil. The aims of our project were to study the association between OCD and academic outcome. The research design was Cross-Sectional Research. This design was based on observations that take place in different groups at one time. This means that there was no experimental procedure, so no variables are manipulated by the researcher. For example, the variable of interest was age because we wanted to see if any changes were noticed in groups of different ages. We used convenience sampling to conduct the survey. We met Administrative Senior Assistant of the school to find class that was free without disturbing their learning process. Then, we went to the class and distributed the questionnaires. Our respondents were from teenagers in range between 13 to 17 years old and we did not include secondary school students. Moreover, to study the association between OCD and academic outcome, we used chi-square test for the statistical analysis. Thus, we found that there was no significant association between Academic Outcomes and Obsessive Compulsive Disorder since the p-value for Chi-Squared test was more than 0.05 (p-value: 0.092). We can conclude that the OCD does not affect the academic outcomes of the secondary students. This was because based on our research; the result showed that the respondent's academic outcomes were majority pass. OCD's impact on learning cannot be underestimated. So this study was very important in order to estimate the impact. Besides, it was important to educate and give awareness to the public about OCD. It would be meaningful when people know about this symptoms moreover for those who have OCD. It would help them to control their severity.

**Keywords:** academic, chi-squared, obsessive compulsive disorder

### 1. Introduction

Obsessive Compulsive Disorder (OCD) was defined by recurrent and intrusive thoughts, images or urges (obsessions) and repetitive behaviour or mental acts (compulsions) (Brakoulias et al., 2014). The themes of OCD symptoms typically concern checking, symmetry, contamination, repeating, hoarding, cleaning or washing, and counting. In most cases, untreated OCD runs a chronic and deteriorating course (Abramowitz et al., 2006). OCD remains poorly recognised and under-treated.

In our daily life, we would meet various human behaviours such as concern or disgust with bodily waste or secretions, fear of contracting AIDS and cancer, and worries about throwing away seemingly unimportant thing that might need in the future. However, some people didn't notice that they have Obsessive Compulsive Disorder (OCD). In United States, the lifetime prevalence of Obsessive Compulsive Disorder (OCD) is approximately 2.5% (Pigott et al., 1990). There was a case happen in U.S. which a boy keeps asking the same question every night to his parent. He asks "How do people get AIDS?" Besides that, he also frequently washing his hands which make his hand became red and chapped. Furthermore, when he was at school, he always ask to go to the toilet to wash his hand, keep them in his pocket, and stopped by the nurse's office with question about contagious ailments, particularly at AIDS. This was an example of obsessive compulsive disorder (OCD), an anxiety disorder that can interfere with normal life and cause serious social and academic difficulty in school (Bokor and Anderson, 2014a).

People who have Obsessive Compulsive-Disorder (OCD) were approximately 2%-3% (including adolescents) (Valleni-Basile et al., 1994). Because of many symptoms were kept secret, this may be an underestimate. OCD can emerge as early as preschool. OCD usually develop in children and they develop the disorder peaks at puberty and then again during early adulthood (Flament and Cohen, 2000). OCD have developed symptoms on children at one-third of adults. According to (Leininger et al., 2010), if OCD particularly left untreated, OCD also can have a significant negative effect on learning. Complex rituals also would cause attendance problems that appear to school avoidance similarly. In school, the students would avoid

and may spend time performing rituals in secret that situation or places that increase their obsessive thoughts. This would affect in missed learning time and increased social isolation.

So, a student who has OCD and appears to be intensive or agitated must get attention from the teachers and actually should be focused on distressing obsessive thoughts or trying hard to not tap a pencil a certain number of times. Thus, the compulsive behaviours on students who have OCD may result in bullying or victimizing. In conclusion, the obsessive thoughts may create agitation or social problems. The prevalence of OCD in adults in the United States was approximately 1% (Bokor and Anderson, 2014b). When there was a case where a man with OCD was washing and polishing his neighbour automobiles without their permission and he was arrested. After he explained to the officers that he had OCD, he was released. However, on his way out the police station, he started washing and polishing the police cars. Another complication of OCD was substance abuse. However, suicidal behaviours had been reported with OCD (Bokor and Anderson, 2014b). The complication of OCD was when the oddness of the compulsions happened frequently strain social relationships with friends and family members. Moreover, OCD can result in unemployment and physical injuries. For example, hand injuries because of excessive hand washing. Criminal justice issues can result from OCD (Bokor and Anderson, 2014b).

For adult, the lifetime prevalence rate of OCD was 2% to 3% (Grant et al., 2006). Although, many OCD patients know that their obsession rituals and fears were excessive and senseless, others were strongly believed that their obsessions serve to prevent the occurrence of disastrous consequences. In addition, obsession fears tend to be about issues related to uncertainty about personal and others safety. For example, there was one patient who has OCD had been evaluated in one clinical. The patient fears causing her husband to die in a plane crash just by thinking about it. She realized that it was unrealistic. Even though she tried to prevent such thoughts just to be on the safe side, she still cannot avoid it. Moreover, she was strongly convinced if she did not shower after using a public washroom, she would develop AIDS (Grant et al., 2006). Normally, people who have OCD are delusional that usually recognize that this behaviours and thoughts are unreasonable but feel unable and hard to control them. Symptoms tend to be worse as a result of illness or stress (Robinson et al., 2008). In many cases, fears, avoidances, and ritual effect job or academic performance, social functioning and leisure activities (Grant et al., 2006).

Based on (Snider and Swedo, 2000), they said that the cause of Obsessive Compulsive-Disorder (OCD) is unknown, but research proved that it may relate to a biochemical imbalance that disturbs the way the brain processes information and causes the brain to send false and danger information. Because of fear of being regarded as crazy or weird, children and adolescents may hide their symptoms. Compulsive ritual often begins gradually, and parents may unintentionally compensate for these behaviours. If children and adolescents have rituals that were developmentally appropriate or appear healthy (e.g., washing hands after using bathroom), parents may not be concerned by OCD symptoms. As a result, they may be not seeking treatment for their child until the behaviours become significantly disruptive (Snider and Swedo, 2000). The purpose of this study was to study the association between OCD and academic outcome.

## 2. Methodology

Our reference population were secondary school students from Tapah. The target samples were secondary school students in Tapah. We decided to choose sample from Sekolah Menengah Kebangsaan Dato' Panglima Perang Kiri and Sekolah Menengah Kebangsaan Tapah. The sample size has been calculated using 2 proportion formula and found to be 113 samples. Apart from that, we add 20% expected missing data to that sample. So, our new sample size was 135 respondents. The research design was Cross-Sectional Research. Cross-sectional research involves using different groups of people who differ in the variable of interest but share other characteristics, such as obsessive compulsive disorder (OCD). We employ convenience sampling to conduct the survey. The inclusion criterion was teenagers in range between 13 to 17 years old. It was randomly selected respondents either male or female. We use Yale-Brown Obsessive Compulsive Scale (YBOCS) to measure the severity of OCD. In Yale-Brown Obsessive Compulsive Scale (YBOCS), it divides scale based on the symptoms which were contamination obsessions, hoarding or saving obsessions, symmetry obsessions somatic obsessions, cleaning or washing obsessions, checking compulsions and repeating compulsions. For the statistical analysis, we use chi-square test for independent to study the association between OCD and demographic factors and the association between OCD and academic outcome.

## 3. Result

Based on table 1, we found that the from 135 respondents from the secondary school in Tapah, there were 93 (68.9%) respondents who do not have Obsessive Compulsive Disorder (OCD) and there were 42 (31.2%) respondents who have Obsessive Compulsive Disorder (OCD). Based on the result we obtained, we can conclude that we have more respondents who do not have OCD than respondents who have OCD.

Before we conduct Pearson's Chi-Square Analysis, all assumption that required by these test were

checked. First, we made sure that the sample was independent which is not related. Secondly, two variables was categorical variable. Lastly, the expected count less than 5 was less than 20%.

Table 1: The Descriptive Statistic showing Secondary School Students in Tapah (N=135)

Variable	n (%)
Obsessive Compulsive Disorder (OCD)	
No	93 (68.89%)
Yes	42 (31.11%)

Based on table 2, we found that there was no significant association between gender and Obsessive Compulsive Disorder since the p-value for Chi-Squared test was more than 0.05 (p-value: 0.514). All the assumption required for Pearson's Chi-Squared analysis were tested and found that the expected count less than 5 was less than 20% [Expected count: 0%]. Based on result we obtained, we can conclude that the OCD does not affect the gender between male and female. Furthermore, the respondent who have OCD have lower proportion in male (n=16) compared to the female (n=26).

Table 2: The Association between OCD and Gender (n=135)

Variable	Obsessive Compulsive Disorder (n (%))		Chi-Square (df)	P-value*
	Yes	No		
Gender	16(28.07%)	41(71.93%)	0.426 (1)	0.514
Female	26(33.33%)	52(66.67%)		

\*Pearson's Chi-Square test, significant at p<0.05

Based on table 3, we found that there was no significant association between Family History and Obsessive Compulsive Disorder since the p-value for Chi-Squared test was more than 0.05 (p-value: 0.462). All the assumption required for Pearson's Chi-Squared analysis were tested and found that the expected count less than 5 was less than 20% [Expected count: 0%]. Based on result we obtained, we can conclude that the OCD does not affect the respondents who have family history or not. Furthermore, the respondent who have OCD have higher proportion in respondents who have family history (n=28) compared to the respondents who do not have family history (n=14).

Table 3: The Association between OCD and Family History (n=135)

Variable	Obsessive Compulsive Disorder (n (%))		Chi-Square (df)	P-value*
	Yes	No		
Family History			0.541 (1)	0.462
Yes	28 (34.15%)	54 (65.85%)		
No	14 (28%)	36 (72%)		

\*Pearson's Chi-Square test, significant at p<0.05

Based on table 4, we found that there was no significant association between Academic Outcomes and Obsessive Compulsive Disorder since the p-value for Chi-Squared test was more than 0.05 (p-value: 0.092). All the assumption required for Pearson's Chi-Squared analysis were tested and found that the expected count less than 5 was less than 20% [Expected count: 0%]. Based on result we obtained, we can conclude that the OCD does not affect the academic outcomes of the secondary students. Furthermore, the respondent who have OCD have lower proportion which was fail in academic outcomes (n=3) compared to the pass in academic outcomes (n=39).

Table 4: The Association between OCD and Academic Outcomes (n=135)

Variable	Obsessive Compulsive Disorder (n (%))		Chi-Square (df)	P-value*
	Yes	No		
Academic Outcomes			2.843 (1)	0.092
Pass	39 (33.91%)	76 (66.09%)		
Fail	3 (15%)	17 (85%)		

\*Pearson's Chi-Square test, significant at p<0.05

#### 4. Discussion

This was the study to investigate Association between Obsessive Compulsive Disorder (OCD) and Academic Outcome in Tapah, Perak. Based on previous research (Gillan, Pappmeyer, Morein-Zamir, & ET AL, 2011), Obsessive Compulsive Disorder (OCD) was affect the academic or knowledge outcome of the respondent. Selective deficits on knowledge of the respondents were showed in resulting outcomes. However, our research had got a result differing from the previous study. It showed that the academic or knowledge outcome of the respondent in Tapah did not affected by Obsessive Compulsive Disorder (OCD). In the other word, academic

outcome did not have any association of Obsessive Compulsive Disorder (OCD). This was because based on our research; the result showed that the respondent's academic outcomes are majority pass. Thus, their knowledge outcome did not affected by OCD.

In addition, our research was to measure the prevalence of OCD in secondary school in Tapah. The result showing there were 93 respondents who do not have Obsessive Compulsive Disorder (OCD) and 42 respondents who have Obsessive Compulsive Disorder (OCD). We can conclude that we have more respondents who do not have OCD than respondents who have OCD because based on the research (Clerkin, Teachman, Smith, & Buhlmann, 2014) stated that it was difficult to get accurate result because the nature of their shame when talking about their bodies, appearance concern and mental health. Moreover, the respondents were fear of being regarded as crazy or weird, they may hide their symptoms (Snider & Swedo, 2000). By this statement, we can also prove that why the respondents did not give the accurate information about mental health of their family history. In other word, the Obsessive Compulsive Disorder (OCD) did not affect the family history.

Since we use convenience sampling to conduct our research, our research result showed that OCD was not affect the gender of the respondents because there was a higher number of female respondents compare to male respondents. So the tendency to have OCD was more too female respondents. Our result was differing from the previous research because it was reported that male has higher percentages to have OCD than females(Lensi et al., 1996).

## 5. Conclusion

In Obsessive Compulsive Disorder (OCD) there were obsession and compulsion. The obsession means the thoughts, impulses, or images were not simply excessive worries about real-life problems while the compulsion means the repetitive behaviours or mental acts that the person feels driven to perform in respond to an obsession, or according to rule that must be applied rigidly. From our survey, we found that the number of respondents who have OCD were less compared to the number of respondents who do not have OCD (N=135). We also found that there was no association of OCD and social demographic factors which were gender and family history among the secondary school students. At the same time, we got the result that there was an association of OCD and social demographic factor which was age. Lastly, after the survey, we found that there was no relationship between OCD and academic outcome. To get the exact result, we recommend to do further research about this disease. Besides that, the government and Non-Government Organization (NGO) also should take the initiative to inform and bring forward about this disease to the community. Apart from that, researcher also need to concern on this problem seriously, so more research should be done. Last but not least, the public also should take responsibility and give good cooperation to party involved.

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