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RELATIONSHIP BETWEEN SOCIO-DEMOGRAPHIC VARIABLES AND OBSESSIVE COMPULSIVE DISORDER

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This study tried to explore the relationship between different socio-demographic variables and obsessive compulsive disorder (OCD) in Bangladeshi patients. The sample of the study consisted of 158 diagnosed cases of OCD from 31 districts of Bangladesh. A semi-structured interview schedule and an indigenously developed Dhaka University Obsessive Compulsive Scale (2005) were used as research tool. Result revealed significant difference in scale score among different levels of marital status, family size and reported family history of OCD symptoms. One way ANOVA indicated significant difference in scale score among different levels of monthly family income groups. No significant difference was found in scale score for gender, duration of OCD and educational level. Family history of OCD symptoms was reported in 28.2% of cases and among them 57.14% reported OCD symptoms in their mothers. Impairment in functioning due to OCD was also assessed; 52% of the patients reported serious problem in family functioning and 47.3% of the patients reported serious problem in social functioning due to OCD.

Obsessive compulsive disorder (OCD) is a global problem and occurs with considerable frequency in both developed and developing countries (Al-Issa & Oudji, 1998). A study on seven international epidemiological surveys found lifetime prevalence rates of OCD remarkably consistent among the different countries. Weissman et al. (1994) reported that most of the prevalence rates fell within the range of 1.9% (Korea) to 2.5% (Puerto Rico).

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OCD afflicts males nearly as often as females. Statistics from for over 1500 clients in various studies indicates that the proportions of males to females is nearly identical 1.0 to 1.1 (White, Steketee, & Julian, 1992), though the ratio varied widely across studies from a high of 1.0 to 0.4 (Lo, 1967; Gojer, Khanna, & Channabasavanna, 1987) to a low of 1.0 to 1.8 (Rasmussen & Tsuang, 1986).

The development of OCD is usually gradual and most often begins in adolescence or early adulthood. Most studies have found the majority of cases of OCD have their onset before the age of 25 and male subjects typically have an earlier age of onset than female subjects (Nestadt, Bienvenu, Cai, Samuels, & Eaton, 1998; Burke, Burke, Regier, & Rae, 1990; White,

Steketee, & Julian, 1992; Rasmussen & Eisen, 1989).

Obsessive compulsive disorder may be the most disabling form of anxiety disorder. In fact the 'Global burden of disease' study found that in a comparison among 107 different forms of disease and injury, obsessive compulsive disorder is the 10th leading cause of disability worldwide (Lopez & Murray, 1998). Obsessive compulsive disorder is very much distressing to a person because of the helplessness feeling that results from not being able to stop the thoughts or the adherence to compulsive behaviors. Obsessive compulsive disorder affects almost all the areas of functioning of an individual. It impacts negatively on the academic, occupational, social and family function of the cases. OCD not only hampers the individual's own functioning and well-being but also the people around, especially the family members of the individual.

The study of Bobes, Gonzalez, Bascaran, Arango, Saiz, and Bousono, (2001) revealed that OCD patients along with patients suffering from schizophrenia had the lowest health-related quality of life across the eight groups that were analyzed, especially in area of mental health. The greatest impairment was found in the areas of social functioning and emotional and mental health.

A Canadian telephone survey study of OCD symptoms and diagnoses done on 2661 adults in urban and rural areas (Stein, Bruun, Josephson, & Hollander, 1991) found that in the entire sample, 1% to 2% were significantly impaired or distressed by obsessive-compulsive symptoms. It was also reported that among those who were diagnosed as having OCD within the past month, impairment and distress were experienced from obsessions by 26% and from compulsions by 22% of patients. A considerable range of severity of impairment is evident from minimal interference with daily functioning to extreme disability (Myers et al., 1984; Rasmussen & Tsuang, 1984).

Steketee (1997) reported that OCD produces moderate to severe social and occupational disability especially in severe and co-morbid cases. Kringlen (1965) found that 45% of clients with OCD lived with little contact with friends and relatives because of their symptoms. OCD symptoms may interfere with an individual's capacity to form successful marital relationships which is evident from the low marriage rates ranging from 32% to 61% for males and from 58% to 75% for females (Ingram, 1961; Khanna, Kaliaperumal, & Channabasavanna, 1986; Kringlen, 1965; Lo, 1967). In the study done by Freund and Steketee (1989) 73% OCD sufferers were found to be dissatisfied with their sex lives and some degree of sexual dysfunction was found in 39% of the patients suffering from OCD. Both European and American studies have indicated that approximately half of married OCD sufferers reported experiencing marital distress (Emmelkamp, deHaan, & Hoogduin, 1990; Kringlen, 1965).

The objective of the present study

was to find out the relationship between different socio-demographic variables with OCD in Bangladeshi patients. The variables that were explored included age, gender, marital status, education, duration of illness, family size, monthly family income, family history, impairment of family functioning and impairment of social functioning. Very little is known about the relationship of these socio-demogra-phic variables with obsessive compulsive disorder in Bangladesh. The findings of this research will help the mental health professionals to attain a clearer understanding of the patients with OCD in Bangladesh.

Method

Sample

A total of 158 diagnosed cases of obsessive compulsive disorder were selected as sample for this study. The patients who did not have OCD as the primary diagnosis were excluded. The sample comprised of 87 men and 71 women of age ranging from 17 to 61 years. Most of the participants were literate (97.5%). The data were collected from out-patient department of three government hospitals and three private clinics with psychiatric treatment facilities using incidental sampling technique. Although most of the participants were from Dhaka district, the entire sample was comprised of participants from 31 districts of Bangladesh.

Instrument

Dhaka University Obsessive Compulsive Scale (DUOCS; Mozumder & Begum, 2005) was used for assessing the severity of OCD. DUOCS has proved to be a valid and reliable measure for obsessive compulsive disorder. It is a 20 items scale in 5 point Likert format. Internal consistency reliability was measured by split-half (r = .89, p < .01) and Cronbach alpha (.94). Test-retest reliability was calculated with 14-21 days gap (r = .91, p < .01). Criterion related validity (r = .74, p < .01) of the scale was computed using Maudsley Obsessive Compulsive Inventory (Hodgson & Rachman, 1977) as the criterion measure. Construct validity evidence came from convergent validation (significant correlation of scale score with impairment of functioning) and discriminant validation from (significant difference between clinical and non-clinical groups (F = 33.29, p < .01). Screening norms were developed using sensitivity and specificity calculations. The ideal cut-off score for screening OCD was found to be 17 with sensitivity of 87% and specificity of 90%. Diagnostic performance of the scale was assessed using ROC curve (area =.92, p < .01).

Along with the scale, a structured questionnaire was also used to collect the necessary socio-demographic data.

Procedure

Data were collected by seven trained research assistants who were graduate

students of Psychology. Verbal consent about participation in the research was taken from the patients after they were diagnosed and provided treatment by the psychiatrist. They were asked whether they want to participate or not mentioning that they had the right to withdraw from the research any time they wish during the interview. They were also assured that the interview contents will not be used for any purpose other than the research.

Results

t-test and *F*-test were computed to assess the relationship between severity of OCD and different socio-demographic variables. The findings are presented in Table 1 and 2.

Table 1 reveals no significant difference in OCD scores of men and women in reference to gender. Significant differences indicated in OCD scores between married and unmarried (t = 2.87, p < .01); between patients from small and large family t (156) = 3.11, p < .01 and between patients having and patients not having family history t (156) = 2.14, p < .05.

Table 2 shows significant difference in OCD score among different levels of monthly family income (F = 3.00, p < .05) and age (F = 2.63, p < .05). No significant difference is revealed in different levels of the vari-

Table 1

Comparison among Different Levels of Gender, Marital Status, Family Size and Family History in Terms of DUOCS Scores

Variables	*n*	*M*	*SD*	*t*
Gender				
Men	87	36.21	18.63	0.59
Women	71	37.90	17.19	
Marital Status				
Unmarried	87	33.56	16.93	2.87**
Married	69	41.70	18.37	
Family Size				
Small (Up to 5)	96	33.49	17.45	3.11**
Large (above 5)	62	42.35	17.54	
Family History				
Yes	43	41.65	16.77	2.14*
No	107	34.76	18.29	

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

Note: DUOCS = Dhaka University Obsessive-Compulsive Scale

ables 'duration of illness' and 'education' but in both the cases, there are indication of trends. The trend suggests that longer duration of illness is associated with higher OCD scores and higher education level is associated with lower OCD scores.

Correlation was also computed to see the relationship of OCD with different socio-demographic variables. The result is presented in Table 3.

Significant correlations were found between scale score and age ($p < .05$) and family size ($p < .01$) of the participant. Significant negative correlation was found between scores and monthly family income ($p < .05$) but no significant correlation was found between scores and duration of illness. Presence of family history of OCD symptoms among participants is depicted in the Table 4.

Table 2

Comparison among Different Levels of Monthly Family Income, Duration of Illness, Age and Education for DUOCS Scores

Variable	*n*	*M (SD)*	*SS*	*MS*	*(df) F*
Monthly family income					
Up to 5000	11	51.09 (13.00)	2781.64	927.21	(3, 151) 3.00*
6000 to 10000	32	38.50 (18.20)			
11000 to 20000	67	35.51 (17.03)			
Above 20000	45	34.09 (18.75)			
Duration of illness					
Up to 3 months	19	28.53 (18.85)	1804.89	601.63	(3, 144) 2.01
4 months to 12 months	31	34.81 (13.42)			
13 months to 36 months	40	37.33 (17.93)			
37 months and above	58	39.38 (18.12)			
Age					
Up to 17	28	29.79 (16.52)	2470.23	823.41	(3, 154) 2.63*
18 to 33	91	37.92 (18.43)			
34 to 49	34	41.41 (16.78)			
50 and above	5	29.60 (15.42)			
Education					
Illiterate	4	58.50 (17.29)	2243.77	560.94	(4, 152) 1.80
Class I-V	9	38.11 (18.56)			
Class VI-SSC	39	39.08 (17.20)			
HSC-Graduate	87	35.68 (17.28)			
Post-Graduate and above	18	35.06 (19.99)			

*$p < .05$.

Table 3

Intercorrelation of DUOCS Scores with Age, Family Size, Family Income and Duration of Illness

Variable	*r*
Age	.17*
Family size	.27**
Monthly family income	-.16*
Duration of illness	.03

*$p < .05$. **$p < .01$.

Table 4

Family History of OCD Symptoms among the Patients

OCD symptoms in the family	*n*	*%*	*% Family History*
a. Absence of Family history	107	71.8	-
b. Presence of Family history	42	28.2	100.00
Mother	24	-	57.14
Siblings	6	-	14.29
Father	4	-	9.52
Other blood relatives	8	-	19.05

Table 5

Impact of OCD in Family and Social Functioning

	Levels of problem			
Areas of functioning	Not at all *f (%)*	A Little *f (%)*	Consid. amount *f (%)*	Serious *f (%)*
Family Functioning	10 (6.7)	24 (16.0)	38 (25.3)	78(52.0)
Social Functioning	19 (12.7)	21 (14.0)	39 (26.0)	71 (47.3)

Presence of OCD symptoms in family have been reported in 28.2% of cases while 71.8% reported no such history. Relation between the case and the person who have such symptom of OCD in the family was also explored where the mother is reported by most (57.14%) of the patients having family history.

Impact of OCD in family and social functioning is presented in the Table 5. It is revealed that OCD caused serious problems in family functioning and social functioning among 52% and 47.3% of patients respectively.

Discussion

The aim of the study was to see the relationship of socio-demographic variables with obsessive compulsive disorder in Bangladesh. For this purpose 87 men and 71 women diagnosed cases of OCD were taken as sample of the study.

Gender difference in OCD severity was assessed using *t*-test. No difference in OCD score was found between male and female cases. In many researches OCD have been repeatedly reported to affect male and female in equal number (Black, 1974; Karno, Golding, Sorenson, & Burnam, 1988; White, Steketee & Julian, 1992). As there is no difference in prevalence of OCD between the males and females, it is less likely that there will be any difference in severity of OCD between the two groups.

Significant difference in DUOCS score was found between married and unmarried cases. Unmarried cases were found to have smaller mean score than married cases. An inverse relationship between marriage and severity OCD has also been reported by Yaryura-Tobuas and Neziroglu (1983). The study of Mohammadi et al., (2004) also revealed significant relationship between marital status and OCD. It has been found from clinical series that OCD patients are less likely to get married and if they get married, they have substantial maladjustment (Hanfer & Miller, 1990). This maladjustment in marital life can add stress in the person with OCD, which may in turn increase severity of OCD symptoms.

Significant positive correlations were found between DUOCS score and family size, which indicates that cases with larger family tend to have higher score on OCD. This was also revealed from the *t*-test between small and large family in terms of DUOCS scores.

Significant difference was found between family size and DUOCS score. Cases from large family were found to have higher score than cases from small family. Significant positive correlation was also found between DUOCS score and family size.

Moreover, a significant relationship between family history and DUOCS score was found in the present study. Cases with family history were found to have higher mean score than cases with no family history (Table 1). In a recent study Ferrão, de Aguiar, Minuzzi, Grillo, Lopes, & Rosa (2004) used Yale Brown Obses-

sive Compulsive Scale to assess severity of OCD symptom among cases with and without family history and also found more intense symptoms among cases with family history of OCD.

It is often reported that OCD have some biological basis (Malloy, 1987; Wise & Rapoport, 1989). The possibility of biological causation may be one reason why many researchers found and reported presence of family history in cases of OCD (Nicolini, Weissbecker, Mejia, & Sanchez de Carmona, 1993; Pauls, Alsobrook, Goodman, Rasmussen, & Leckman, 1995; Ferrão et al., 2004; Leonard, Lenane, Swedo, Rettew, Gershon, & Rapoport, 1992). The results of the current study also revealed presence of family history. Here 28.2% of cases reported a family history of OCD symptoms (Table 4). Again when the relation between the case and the family member who was reported to have OCD symptoms was assessed, it was found that more than half of the cases (57.14%) reported history of OCD symptoms in their mother and only 19.05% reported history of such symptoms in other blood relatives excluding mother, father and siblings (Table 4).

A negative but significant correlation was found between monthly family income and score on DUOCS. Higher family income was found to be associated with lower score on OCD. When one way analysis of variance was computed with four levels of income, significant difference was found between income level groups in terms of DUOCS score. This also revealed that lower income level groups had higher mean score on DUOCS.

Non-significant relationship was found between duration of illness and DUOCS score. One way analysis of variance revealed no significant difference between four levels of illness duration.

Significant positive correlation was found between DUOCS score and age (Table 3) which indicates that cases with higher age tend to have higher score on OCD. There were also significant difference between four age groups in terms of DUOCS score (Table 2). But the study of Guerrero, et al. (2003) contradicts with the current findings; they reported no significant association between age and OCD among adolescents. It should be noted that the findings of Guerrero, et al. (2003) may not be comparable with the current study, because the sample of their study was only adolescents which is comprised of a small range of ages (13-19); obviously we can not expect any significant difference in the same age group.

When DUOCS scores between groups of patients with different education levels were compared, it revealed no significant difference between the groups. We have noted that Lopez and Murray (1998) found OCD (among 107 forms of disease and injury) as the 10th leading cause of disability worldwide. OCD have serious impact on an individual's level of functioning. The findings of the current study also present the same impression about OCD. When patients

were asked about the extent to which OCD have caused problem in their family and social functioning, 52% of the cases reported serious problems in family functioning and 47.3% of the cases reported serious problem in social functioning. Only 6.7% of the case reported no problem in family functioning and 12.7% reported no problem in social functioning. The finding also suggests that impairment of family functioning is more prevalent than impairment in social functioning. The findings of the current research are also consistent with the findings reported by Emmelkamp, deHaan, & Hoogduin (1990); and Kringlen (1965).

Conclusion

This study revealed significant relationship of OCD with marital status, family size, family history, monthly family income and age of the patients. However three other variables namely gender, duration of illness and education of the patients failed to prove any significant relationship with OCD scores. Around one third of the patients reported having family history of OCD symptoms, where more than half of them reported presence of such symptoms in their mothers. This clearly indicates the need for assessing family history by the therapists for understanding development and maintenance (through reinforcement from a family member) of OCD in the patients. When impairment in functioning was assessed, 3rd to 4th of the patients reported considerable amount of serious impairments in family and social functioning indicating OCD as a debilitating condition.

This study is thought to aid the mental health professionals in understanding OCD patients. But this study only indicates association of OCD with some socio-demographic variables, the design of the research does not permit to conclude any causal relationship. Future researches are needed to explore and establish the causal linkage between different variables and OCD. Researches are also needed to find out the relationship of psychological factors with OCD.

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