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RESEARCH ARTICLE

FAMILY STUDY OF OBSESSIVE- COMPULSIVE DIORDER IN IRAQ

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ABSTRACT

Background: The causes of obsessive compulsive disorder (OCD) are yet unknown. Evidence of familial aggregation is one approach for investigating the role of genetics in the etiology of this condition. **Objectives:** To determine the rate of obsessive compulsive disorder (OCD) among first degree relatives (FDRs) of both probands & control group of a sample of psychiatric outpatients with OCD & their sociodemographic characteristics. **Method:** The study sample include 50 probands & 312 of their relatives & compared with control group of 50 & 357 of their relatives, who were identified in psychiatric outpatient clinic & assessed by the use of semi-structured psychiatric interview schedule based on DSM IV criteria for diagnosis of OCD in addition, information were collected regarding sociodemographic characteristics. **Results:** The prevalence of OCD was significantly higher in probands compared with control relatives (6.1% versus 2.5) ($P < 0.05$). Females were affected more than males. Most patients were married, and of high education. **Conclusion:** The rate of OCD in FDRs is increased more than two & half fold than in the general population & this goes with that of other researches on this topic. This might suggest some genetic basis for OCD at least partially, however there may be some biological relationship.

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INTRODUCTION

Aims of the study

The aims of the study were to

- Study of extent of genetic component in pathogenesis of OCD by determining the rate of this illness among FDRs of both probands and control group.
- Study the sociodemographic characteristic of such patient.

MATERIALS AND METHODS

Fifty psychiatric outpatient were studied. They suffered from obsessive - compulsive disorder. The patients were selected from those who were referred by senior psychiatrists in IbnRushid teaching psychiatric hospital, located at city center with in patient unit with 70 beds. The senior psychiatrists were asked to refer cases of OCD diagnosed by them. The duration of the study was 6 Months between 1st Nov. 2001 to 30 April 2002.

Inclusion criteria of patient and relatives

- Consent of the patient to participate in the study was taken.
- All cases of OCD were included in the study.
- The diagnosis of OCD according to DSM IV diagnostic criteria (American psychiatric association (1994)

Exclusion criteria

- History of psychiatric illness other than OCD and any medical history known to be associated with psychiatric condition (Neurological disorder).
- Non - respondent probands and their relatives. After selection of these patients, then Focusing on their first degree relatives- (FDRs) as they formed the sample of the study.

The information's about FDRs were obtained from the following sources:

Subject and Materials

- Family history method (The best informant who was a single informant
- Judged by the subject to be the most knowledgeable about the family and

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- Asked about the psychiatric status of each member of the family).
- The proband's case notes.
- Medical records of the probands and the relatives with psychiatric history.

First degree relatives (FDRs) who were suspected to be ill were asked to Broome along for further assessment by direct interview, the diagnosis of OCD was according to DSM IV criteria. For non- respondent relatives, the probands were excluded

The control group

The arrangement were done for study of rate of OCD among FDRs of I- (50) surgical patients as control group in Baghdad teaching hospital, the surgical patients selected according to:

- Patients admitted for minor surgical procedure.
- Matched with proband group with regard to age and sex.
- Willingness to participate in the study

Exclusion criteria

- History of psychiatric illness or major medical illness.
- Any one related with probands.
- Non- respond ant patients or their relatives.

RESULTS

Characteristic of the study sample

Table 1. Sex distribution in probands and control group

Sex	Proband n=50		Control=50	
	No.	%	No.	%
Males	19	38	19	38
Females	31	62	31	62
Total	50	100	50	100

Table 2. Distribution of probands & controls according to age group

Age groups	Proband n = 50		Control =50		Total
	No.	%	No.	%	
15-19 years	2	4	2	4	4
20-24 years	23	46	23	46	46
25-29 years	22	44	22	44	44
30-34 years	3	6	3	6	6
Total	50	100	50	100	100

As presented in Table 1: Demonstrate the gender of probands and control show female in probands 31 (62%) versus 19 (38%) male (nearly as twice as male). Table 1: Sex distribution in probands and control group Age groups are presented in table 2, the majority of probands and controls fall into age group (20-24) years and they are represented by (46%). As presented in table 3, which demonstrate the marital status of probands and control groups, the married proband were much more represented in sample 16(51.61%) in female versus 8 (42.105%) male.

As presented in table 4, which demonstrate the Educational level. Show most of probands were high education university included 18 (58.06%) in females versus 4 (21.05%) in male

whereas no formal includes 1 (3.23%) in females versus 2 (10.53%) in male. Demonstrate residency in both probands and control show most of probands were from urban30 (96.78%) in females versus 17 (89.48%) in male. Demonstrate the sex distribution in both propands& control first degree relatives (FDRs) show female in proband first degree relatives (FDRs) 143 (45.83%) versus 169 (54.17%) in male. Demonstrate the types & No. of relatives of proband& control show siblings 174 (55.77%), patients 15(36.85%), offspring's 23 (7.38%). Demonstrate rates of OCD in parents of both probands& control show 5 (4.16%) of proband parents had OCD compared with only 3 (3.06%) among control, this difference is statistically not significant. Demonstrates that 14 (7.44%) of the proband siblings had OCD compared with only 5 (2.56%) among the control, this difference is statistically significant (i.e, the OCD in proband siblings is more than of the control). Demonstrate that no OCD in offspring's proband compared with only 1 (1.36%) among the control this difference is statistically No difference. Demonstrate the rate of OCD among first degree relatives (FDRs) of probands and controls. It was 19 (6.1%) for first degree relatives (FDRs of probands and 9 (2.52) of control. This difference is statistically significant.

DISCUSSION

The purpose of this study is to estimate the rates of OCD in first degree relatives (FDRs) of both groups (probands and controls), in a comparison way, and to provide a profile about the extension of this illness in those relatives. To test our results, we should compare these results with those of other studies. Black, *et al* 1992, found that 2.5 % in relatives of OCD probands compared with 2.3% in relatives of controls, which showed that there is no evidence that OCD was familial⁽³⁴⁾. Nicollini, *et al* 1993, In his study found that 4.9 % of proband relatives compared with 1.8 % in relatives of control. Their inference goes with genetic basis as aetiological factors to OCD which is close to this study. Pauls, *et al* 1995, found that OCD was significantly more common among relatives of probands 10.3% compared with control subject 1.9% which is higher than their study results.

Nestadt, *et al* 2000. In this study found that OCD was significantly more common among relatives of cases compared with those of controls, at 11.7 % versus 2.7 % respectively (6). In my study we found that the rate of OCD in 312FDR.s of 50 probands was 19 (6.1 %) and in 357 FDRs of 50 controls was 9(2.5%) which were nearly similar to the results of other researches mentioned above giving an idea that the risk for OCD was more than two and half times greater in FDRs of probands than that of the control group; which confirms previous studies on this topic and to our knowledge, there was no national study on the genetics of OCD in our country done before. These studies of OCD probands and their relatives cumulatively provide strong evidence that some forms of OCD are familial. Although these findings are consistent with genetic aetiology of OCD. Family studies by themselves can not demonstrate that genetic factors are necessary for manifestation of the illness. Twin studies are important adjunct that can provide additional evidence that genetic factors are important, so thatTfie genetic factors to some extent could be blamed, but it is not surprising that the results of genetic studies were widely accepted as providing a firm foundation for that there was biological basis of OCD.

Table 3. No. & percentage of proband and control according to marital status

Marital status	Proband n =50					Control n= 50						
	Females n= 31		Males n= 19		Total n= 50	Females n= 31		Males n= 19		Total n= 50		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Single	9	29.03	8	42.105	17	34	6	19.35	5	26.32	11	22
Married	16	51.61	8	42.105	24	48	11	35.48	11	57.91	22	44
Widow- divorced	1	3.23	0	0	1	2	5	16.13	1	5.25	6	12
Total	31	100	19	100	50	100	31	100	19	100	50	100

Table 4. No. & percentage of proband& control according to education

Education	Proband n =50						Control n= 50					
	Females n= 31		Males n= 19		Total n= 50		Females n= 31		Male n= 19		Total n= 50	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
University	18	58.06	4	21.05	22	44	5	16.13	3	15.79	8	16
Secondary, school	10	32.26	10	52.63	20	40	9	29.13	5	26.31	14	28
Primary and intermediate school	2	6.45	3	15.79	5	10	7	22.61	3	15.79	10	20
No formal	1	3.23	2	10.53	3	6	10	32.13	8	42.11	18	36
Total	31	100	19	100	50	100	31	100	19	100	50	100

Table 5. No. & percentage of proband& control according to residency

Education	Proband n =50						Control n= 50					
	Females n= 31		Males n= 19		Total n= 50		Females n= 31		Male n= 19		Total n= 50	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
University	18	58.06	4	21.05	22	44	5	16.13	3	15.79	8	16
Secondary, school	10	32.26	10	52.63	20	40	9	29.13	5	26.31	14	28
Primary and intermediate school	2	6.45	3	15.79	5	10	7	22.61	3	15.79	10	20
No formal	1	3.23	2	10.53	3	6	10	32.13	8	42.11	18	36
Total	31	100	19	100	50	100	31	100	19	100	50	100

Table 6. Sex distribution in proband& control FDRs

Sex	Proband FDRs n = 312				Control FDRs n=357				Total
	No.	%	No.	%	No.	%	No.	%	
Males	169	54.17	165	46.21					334
Females	143	45.83	192	53.79					335
Total	312	100	357	100					669

Table 7. Types of relatives of proband and control

Relatives	Proband n = 312		Control n=357		Total
	No.	%	No.	%	
Parents	115	36.85	95	26.61	210
Siblings	174	55.77	190	53.23	364
Offsprings	23	7.38	72	20.16	95
Total	312	100	357	100	669

Table 8. Rates of OCD in parents of both proband & control

Parents	Proband		Control		Total
	No.	%	No.	%	
Positive	5	4.16	3	3.06	8
Negative	110	95.84	92	96.94	202
Total	115	100	95	100	210

 $X^2 = 0.20$ $p > 0.05$

OR = 1.3

Table 9. Rate of OCD in siblings of both proband& control

Siblings	Proband		Control		Total
	No.	%	No.	%	
Positive	14	7.44	5	2.56	19
Negative	160	92.56	185	97.44	345
Total	174	100	190	100	364

 $X^2 = 5.38$ $p < 0.05$

OR = 3.2

Table 10. Rate of OCD in offsprings of both proband & control

Off springs	Proband		Control		Total
	No.	%	No.	%	
Positive	0	0	1	1.36	1
Negative	23	100	71	98.64	94
Total	23	100	72	100	95

$X^2 = 0.32$ $p > 0.05$ OR = zero

Table 11. Rates of OCD of proband & control FDRs.

All relatives	Proband N=312		Control N=357		Total
	No.	%	No.	%	
Positive	19	6.1	9	2.52	28
Negative	293	93.9	348	97.48	641
Total	312	100	357	100	669

$X^2 = 5.28$

$p < 0.05$

OR = 2.5

Table 12. Shows a summary of many researches on the rates of OCD in first degree relatives (FDRs).

Source, year	Diagnostic Criteria	Rate of OCD In proband relatives	Rate of OCD In Control relatives
Black <i>et al.</i> , 1992	DSM- III	2.5 %	2.3 %
Nicolini, <i>et al</i> 1993	DSM IIIR	4.9 %	1.8%
Paul <i>et al.</i> , 1995	DSM III R	10.3 %	1.9 %
Nestadt <i>et al.</i> , 2000	DSM IV	11.7%	2.7 %
My study	DSM IV	6.1%	2.52%

Limitation

- We faced many limitations and difficulties in our work; the sample size was relatively small in our opinion which may not allow very precise estimate of the rate of OCD among FDRs, and a large sample might be required in future in multicenters study to draw a firm conclusion from such research.
- Other difficulties, were unwillingness of some relatives to come along for an interview and assessment, and that were more in the control group, which may be due to the transport-difficulties, so we had to discard some of the patients as well as their relatives in the control group from the study.

Conclusion

The obsessive compulsive disorder (OCD), like many psychiatric disorder tends to run in families and has genetic basis. The rate of OCD in FDRs is more than two and half fold than in the FDRs of the control, and this goes with that of other researches on this topic. This suggests some genetic basis for OCD at least partially or there may be some biological relationship.

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