

Correlation of Obsessive Compulsive Disorder with Birth Order - One

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ABSTRACT

OBJECTIVE: The study sought to explore, whether Obsessive Compulsive Disorder has any relation with birth order-one.

METHOD: This a retrospective study from record of twelve hundred and eight patients who attended psychiatric department of Isra University Hospital Hyderabad, out of which 138 were OCD; who were compared with the rest of the population. These were also studied with reference to gender, catchment area and family type.

RESULTS: Cases with obsessive compulsive disorder were clustered in birth order-one. Total 44% of OCD patients were found out to be birth order-one as compared to 19.40% of the rest of the psychiatric population.

CONCLUSION: Current study supports the hypothesis that in our sample birth order-one is correlated with Obsessive Compulsive Disorder.

KEY WORDS: Obsessive Compulsive Disorder. Birth order-one. Psychiatric, Retrospective.

INTRODUCTION

In 1930s, Alfred Adler proposed the effects of Birth Order on human personality characteristics¹. This led to an increased motivation of scientists towards Birth-Order studies. Different modalities of personality and human behaviors became the focus of research. This included intelligence^{2,3,4}, achievements⁵, mental ability⁶, sexual orientation^{7,8}, etc. This debate on birth order characteristics later on involved psychiatric illnesses such as obsessive-compulsive disorder^{9,10,11}, schizophrenia^{12,13,14}, gender identity disorder¹⁵ and somatization disorder¹⁶. Khanna et al conducted birth order studies in obsessive compulsive disorder⁹, which was later on re-examined and disproved any relation of birth order with the disease, by Polland. C. A. et al¹⁷. Snowdon J (1979), found out the significance of birth order one in OCD among males¹⁰. The significance of birth order one in some of the above studies in Obsessive Compulsive Disorder; such as the one by Khanna et al⁹ and Rasim et al¹¹, is interesting. In addition, in our society parents may easily adopt harsh and punitive measures in an attempt to improve the child's behavior and personality; specifically by in-experienced and young parents; thereby inducing anxiety in them. This anxiety may be the precursor of Obsessive Compulsive Disorder, particularly when harsh toilet training is done in the second stage of development¹⁸. Keeping in view of the above facts and ideas, present study is aimed at finding correlation between obsessive-compulsive disorder and first-borns, and it's break-up in terms of gender, catchment area and other demographic variables.

METHODOLOGY

This is a retrospective study. The record of patients who had attended psychiatric department (OPD and inpatient) at Isra University Hospital from January 2002 to February 2004. Isra University Hospital is located at the junction of Hyderabad city and rest of the interior of Sindh province; connecting many cities, small towns and rural areas. Thus Isra University Hospital caters to the health needs of all types of catchment areas. Patients in the study therefore represent all types of population. A proforma on which demographic characteristics, diagnosis and birth order was recorded, was developed. Diagnosis had already been done on the basis of ICD-10, using present state examination. This fact eliminated experimental bias, as researchers had no preset mind regarding hypothesis. Each patient with, the diagnosis of OCD, irrespective to the age, gender, social class, or family type; was included in the study. History of polygamy in parents; dual diagnosis; suspicion of organicity contributing to the psychopathology; only child and twin births were excluded from the history. In order to facilitate the researches on the data, every patient or their accompanied legal guardians had already been asked for the consent to use this data in future researches without breaching confidentiality. In addition approval from the ethical committee of Isra University was also granted before started working on the data. Data thus obtained was then subjected to analysis on SPSS 13th version.

RESULTS

Table I compares the birth order one with other birth orders among cases of Obsessive Compulsive Disorder and the rest of psychiatric illnesses. It is evident that cases of Obsessive compulsive disorder are clustered and aggregated among birth order one than the rest of birth orders. Out of total 1208 cases, 138 (11.42%) were cases of OCD. On the other hand total number of birth order-one in the whole sample is 304; which means that birth order one is not over-represented. Of these 304 birth order one sample 59 (19.40%) are OCD. comparing the total birth order one with other birth orders among sample of OCDs, 44% are birth order one is statistically higher than birth order two (30%), and birth order three (21.73%). This difference is statistically significant both when birth orders are compared and also when compared with other psychiatric illnesses. **Table II** compares the above finding among male and female genders. Birth order one are more prone to develop the illness, irrespective of their gender. Of 104 males with OCD 41 (39.42%) are birth order one, which is significantly higher than the birth order two (29 cases 21.64%), and last birth order (28 cases 20.89%). Similarly, of 34 females with OCD; 18 (52.94%) are birth order one, significantly greater than birth order two and last birth order. This is confirmed even if the whole sample is controlled on the basis of gender distribution. **Table III** breaks up the data in terms of family types of the cases. Among 138 cases of Obsessive Compulsive Disorder seventy-two came from joint family system and sixty-six from nuclear families. Of the seventy-two cases from joint families; twenty-five (34.72%) were birth order one; and forty-seven (31.94%) were birth order two and twenty (27.77%) were youngest in their families. Of sixty-six from nuclear families, thirty-four (51.51%) were birth order one, seventeen (25.75%) were birth order two, and ten (15.51%) were youngest. This difference between joint and nuclear families is statistically significant with a P-value of 0.04. Thus it shows that not only birth one are prone to develop obsessive compulsive disorder irrespective of the family type, but this is more so (statistically significant) among nuclear families than joint families. **Table IV** shows a break-up of cases in catchment area wise. Of 138 cases, eighty belonged to urban, and fifty-eight from rural areas. Their distribution among birth order

one and other birth orders is almost similar. Of 80 cases from urban areas 33 (41.25%) were birth order one compared to 20 (25%) of birth order two and 21 (26.25%) of last birth order. Of 58 cases from rural areas, 26 (44.82%) were birth order one compared to 20 (34.48%) with birth order two and 9 (15.15%) with last birth order. There seems to be no difference among both catchment area populations when compared with regard to clustering of cases among birth order one.

**TABLE I:
COMPARISON OF BIRTH ORDER AMONG
PSYCHIATRIC POPULATION & OCD**

Birth Order	Diagnosis		Total
	OCD	Other Disorders	
First	59	245	304
Second	40	353	393
Last	30	356	386
Others	9	116	125
Total	138	1070	1208

**TABLE II:
GENDER-WISE BREAK-UP OF SAMPLE**

Sex	Diagnosis		Total
	OCD	Other Disorders	
Male Birth Order			
First	41	121	162
Second	29	146	175
Last	28	143	171
Others	6	51	57
Total	104	461	565
Female Birth Order			
First	18	124	142
Second	11	207	218
Last	2	213	215
Others	3	65	68
Total	34	609	643

**TABLE III:
FAMILY TYPE V/S BIRTH ORDER**

Type of family	Diagnosis		Total
	OCD	Other Disorders	
Joint Birth Order			
First	25	143	168
Second	23	196	219
Last	20	189	209
Others	4	66	70
Total	72	594	666
Nuclear Birth Order			
First	34	102	136
Second	17	157	174
Last	10	167	177
Others	5	50	55
Total	66	476	542

**TABLE IV:
BIRTH ORDER V/S CATCHMENT AREA**

Catchments area	Diagnosis		Total
	OCD	Other Disorders	
Urban Birth Order			
First	33	130	163
Second	20	163	183
Last	21	148	169
Others	6	48	54
Total	80	489	569
Rural Birth Order			
First	26	115	141
Second	20	190	210
Last	9	208	217
Others	3	68	71
Total	58	581	639

DISCUSSION

Results in the study are strikingly in favor of a correlation of the disease with birth order one. In this study male patients with Obsessive Compulsive Disorder out-numbered female patients. Looking at the results, when we see the ratio of OCD patients with birth order one as opposed to the patients of OCD with other birth orders; a strong correlation is found between the disease and birth order-one. Our findings support the findings in some of the earlier studies by Kayton and Borge¹⁹; and Khanna⁹. But in contrast to the findings by Pollard C.A et al¹⁷ and by Rana MH et al²⁰. In the study of Kayton and Borge a sample of 41 cases of Obsessive Compulsive Disorder had 72% of birth order one cases. Our sample size has the benefit of being larger that is of 138 cases, 39% of which are birth order-one. This although supports the findings in Kayton's study but not to such extent. The pattern and distributions remains the same if we analyze the sample gender-wise and catchment area-wise. Looking at the data, it appears that clustering of OCD cases among birth order one is more pronounced in nuclear families as compared to joint families. This difference between joint and nuclear families is statistically significant. Where is the missing link? Is joint family system is a protective factor? This is yet to be answered. As Kayton and Borge pointed out the minimal contact with the siblings; in-experienced parenting; and excessive expectations; leading to premature ego development; as factors behind this. This phenomenon has also been discussed by Rana²⁰. This is partly answered in our study that joint family system seems to have protective effect by avoiding from in-experienced parenting and increasing the chances to sibling contact. Further studies, to explore this assumption and other un-answered question, are required.

CONCLUSION

Current study supports the hypothesis that Birth Order-One has a correlation with Obsessive Compulsive Disorder.

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