

Prevalence of Prenatal Obsessive Compulsive Symptoms in Pregnant Women

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ABSTRACT

OBJECTIVE: To explore the prevalence of prenatal obsessive compulsive symptoms in pregnant women, visiting various hospitals for obstetric checkups.

METHODOLOGY: A Mixed Methods Design with qualitative and quantitative research approach was used. To develop Prenatal Obsession Compulsion Scale (POCS) in qualitative phase, 119 initial codes were generated through thematic analysis of literature review and transcriptions of in-depth semi structured interviews with psychiatrists, clinical psychologists and diagnosed pregnant women selected from hospitals of Lahore and Gujrat. In quantitative phase, these 119 items were reduced to 100 in content validation, carried out by experts. The preliminary 100-items of POCS finalized by expert content validity were administered to 300 pregnant women, selected by purposive sampling technique. Finalized, 40-items version of POCS, selected via exploratory and confirmatory factor analysis was administered on purposively sampled 352 pregnant women from private and government hospitals in January, 2019 till May, 2019.

RESULTS: In sample of 352 pregnant women, 33.5% were between age range 18 to 25 years. 89.5% were educated, 71.9% lived as house wives and 57.4% had joint family system. 40.9% had monthly income from 61,000 to 90,000 rupees. 58.2% had unplanned pregnancy and 32.1% had experienced first time pregnancy. Two hundreds and three pregnant women (57.7%), exhibited mild (n=59, 29.1%), moderate (n=73, 36.0%), severe (n=64, 31.5%), and extreme levels (n=7, 3.40%) of obsessive compulsive symptoms. The remaining 149 (42.3%) showed either subclinical or no symptoms of obsessions and compulsions.

CONCLUSION: High prevalence of prenatal obsessive compulsive symptoms in pregnant women was found out empirically.

KEYWORDS: Pregnant Women, Prenatal obsessive compulsive disorder, Prevalence.

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INTRODUCTION

Mental alterations are experienced differently at each trimester of pregnancy. However, usually physical changes are engrossed and psychiatric changes are overlooked unless a mental disorder develops. Obsessive Compulsive Disorder (OCD) in prenatal period or anxiety is likely underestimated during pregnancy since many of the signs can be incorrectly assigned to being pregnant¹. During prenatal period several psychosocial and hormonal changes take place that integrate this evolutionary process between pregnancy and postnatal period². Several pregnant women may accommodate to mental, social and physical changes which appear due to pregnancy. Mental and physical health is influenced negatively if the pregnant woman unable to accommodate these changes and may suffer from mild, moderate or severe mental disturbances³. These mental problems also influence mood, affect and potential to work efficiently.

Normal obsessional thoughts vary from clinical obtrusive thoughts by virtue of time they take and

disability and impairment they cause⁴. OCD is a condition in which the prevailing characteristic is presence of recurrent obtrusive thoughts or compulsive acts. Obtrusive thoughts are impulses, images or ideas that come to the client's mind in a stereotyped form, which has to be resisted unsuccessfully and it cause disturbance in client's life. These thoughts lead to significant disabilities in functioning related to recreation, work, relationships and school; and are invariably distressing. These are, however, known as the person's own thoughts, even though they are non-voluntary and often inconsistent. Compulsive rituals or acts are stereotyped behaviors that are performed again and again. They are not inherently pleasurable nor do they result in the accomplishment of inherently useful tasks. A person often sees them as obstructing some objectively unlikely event, often involving damage to others or him/ herself. Often these behaviors are acknowledged by individuals as ineffective and pointless and they attempt to resist them but remain unsuccessful. In long-standing cases, resistance may be lower⁵.

In perinatal and more specifically prenatal OCD, the compulsions and obtrusive thoughts are very precise in content and concentrate on the fetus. The concentration of obsession thoughts and compulsions are related to the health of unborn, environment and wellbeing. Obtrusive thoughts may be related to fetus getting hurt, lost or polluted; and compulsions may involve checking, seeking-reassurance and mental rituals⁶. Pregnant women suffering from prenatal OCD may use excessive avoidance like avoiding bathing or hang out. When women suffer from prenatal OCD, it may result in marked deficit in maternal well-being. These signs of prenatal OCD develop intense distress and disability not only one's personal, occupational and social life, but may also impact the potential of mother to take care for her baby, disturbing the mother-infant bonding process⁷.

A systematic re-examination was carried of the literature related to prenatal care in group form for highly risked pregnant women⁸. Maternal intrusive and unwanted thoughts of infant-related mishap, and OCD in prenatal and postpartum period were examined. 763 respondents were recruited from hospitals during pregnancy. Data were collected by administering online questionnaire and conducting interview over telephone. Results concluded that unwanted thoughts of infant-related mishap were not predictor of harming behavior towards infant but a significant predictor of perinatal OCD⁹. Certain imbalances in neurotransmitters such as serotonin, dopamine and glutamate are found to be responsible for the onset of OCD¹⁰, 12.94% pregnant women were found to be suffering from some form of metal disorder¹¹. Although a lot of researches have explored perinatal depression, but have neglected domain of perinatal anxiety¹².

The present study has explored the frequency of cases having obsessive compulsive symptoms during prenatal period of pregnancy. Current study adds to the body of knowledge regarding investigation of women suffering with obsessive compulsive symptoms during pregnancy, in Pakistan. Although these symptoms have been explored in general population, literature indicates that segment of antenatal care and mental health ignored examination of these symptoms in women who are pregnant. It is essential to devise a referral system for psychiatric assessment, consultation and treatment in case of clinically significant OCD signs among pregnant women.

METHODOLOGY

A Mixed Methods Design with qualitative and quantitative research approach was used in two phases. Phase I comprised of qualitative approach of research. Here, to develop Prenatal Obsession Compulsion Scale (POCS), 119 initial codes were generated through thematic analysis of literature

review and transcriptions of in-depth semi structured interviews with psychiatrists, clinical psychologists and diagnosed pregnant women. In quantitative Phase II, these 119 items were presented to the experts (Psychiatrists and Clinical Psychologists) for content validation. The 100-items of POCS finalized by expert content validity were administered to 300 pregnant women. They were selected by purposive sampling technique from different hospitals of Gujrat because of non-availability of sampling frame for the target population. Then, exploratory and confirmatory factor analysis along with Cronbach alpha coefficient was carried out on 100 items of POCS.

A 40-items version of POCS was finalized and administered on purposively selected 352 pregnant women who came to visit government or private hospitals/clinics of Gujrat, Kharian, Sara-i-Alamgir, Dinga, and Lalamusa for regular prenatal checkup. The Cronbach alpha coefficient of finalized POCS on the present sample was 0.97. Data was collected from 352 participants with mean age in years 29.18±6.74 in January, 2019 till May, 2019. Inclusion criteria focused on pregnant women who have at least visited twice either the government or private hospitals/clinics and were in reproductive age range (15 to 45 years). Exclusion criteria focused on pregnant women who came for postnatal checkup in hospital once or those had any psychological disturbance other than OCD/anxiety. Further, unwilling participants were also excluded from the study or else they were less than 15 years or above 46 years of age. An equal ratio of sample (n= 176) was selected from both government and private hospitals of district Gujrat.

After taking written informed consent, the questionnaire along with demographic sheet were completed by the respondents in their respective hospitals/clinics while waiting for their appointments. Data were collected individually from respondents and in the case of illiterate subjects; items were verbally presented to them. They were informed to understand each item carefully and respond with honesty.

This study has been approved by Advanced Studies and Research Board, University of Gujrat, Gujrat. Formal permission of data collection was taken from authority of concerned hospitals/clinics or health professionals. All the necessary ethical considerations such as confidentiality, informed consent and voluntary participation pertaining to study were taken into account while data collection. For instance, before commencing with data collection; the significance, nature and aim of the research were informed to prospective respondents. It was briefed to subjects that their participation in the research is voluntary and withdrawal from the research was non-conditional and could be done at any stage of research. Furthermore, subjects were urged to direct their questions to examiner in the event they experience difficulty with any part of the questionnaire.

Data for main study were calculated, analyzed and interpreted by using IBM SPSS-21. Descriptive statistics was used to analyze the frequencies and percentages of demographic variables and level of obsessive compulsive symptoms in pregnant women. Cronbach Alpha Coefficient was calculated to investigate reliability of POCS. Pearson product moment correlation with significance level below 0.01 was used to find the relationship among study variables.

RESULTS

The demographic characteristics of participants indicated that maximum respondents fell in age group of 18 to 30 years (f= 221 with 62.8%). Majority of women were educated and house wife (f= 253 with 71.9%) and only a limited number of women was working (f= 99 with 28.1%). A great no. of respondents' monthly income was from 61,000 to 90,000. Majority of women had unplanned pregnancy (f= 205 with 58.2%). Most of women who visited hospitals for antenatal care (ANC) had first pregnancy experience (f= 113 with 32.1%). Only a limited number of women had miscarriage history (f= 73 with 20.7%) and most of them experienced only one fetal loss (f= 61 with 17.3%). There were some women who gave birth to dead child in previous pregnancy (f= 31 with 8.80%) and few were hospitalized (f= 129 with 36.6%) during current pregnancy. Majority of women attended ANC for 2–3 times (f= 102 with 29%) or 4–5 times (f= 97 with 27.6%) during current pregnancy. Ratio of women attained ANC either from government (f= 176 with 50%) or private hospitals (f= 176 with 50%) was equal. A great no. of women lived in joint family system (f= 202 with 57.4%) and rural residential area (f= 193 with 54.8). Majority of women did not have previous history of OCD (f= 257 with 73%) and only a limited no. of women suffered it (f= 95 with 27%) (Table I).

Variables	Categories	f	%
Age (in years)	18 – 25 years	118	33.5
	26 – 30 years	103	29.3
	31 – 35 years	51	14.5
	36 – 43 years	80	22.7
Education	Illiterate	37	10.5
	Primary	46	13.1
	Secondary	88	25.0
	Intermediate	78	22.2
	Graduation	90	25.6
Employment Status	Post-graduation	13	3.70
	House wife	253	71.9
	Working woman	99	28.1

Husband	Alive	346	98.3
	Late	6	1.70
Family Monthly Income (rupees)	10000 – 30000	55	15.6
	31000 – 60000	70	19.9
	61000 – 90000	144	40.9
	91000 – 150000	83	23.6
Pregnancy Planning	Yes	147	41.8
	No	205	58.2
Pregnancy Experience	First	113	32.1
	Second	97	27.6
	Third	89	25.3
	Fourth or more	53	15.1
Miscarriage History	Yes	73	20.7
	No	279	79.3
No. of Miscarriages	None	279	79.3
	One	61	17.3
	Two	9	2.60
	Three or more	3	0.90
History of Dead Child	Yes	31	8.80
	No	321	91.2
Hospitalization History during Current Pregnancy	Yes	129	36.6
	No	223	63.4
No. of Antenatal Visits	2 – 3	102	29.0
	4 – 5	97	27.6
	6 – 7	90	25.6
	8 – 10	48	13.6
	More than 10	15	4.30
Nature of Hospital/ Clinic	Government	176	50.0
	Private	176	50.0
Family System	Nuclear	202	57.4
	Joint	150	42.6
No. of Family Members	2 – 4	111	31.5
	5 – 6	91	25.9
	7 – 9	84	23.9
	10 – 15	66	18.8
Residential Area	Rural	193	54.8
	Urban	159	45.2
Previous History of OCD	Yes	95	27.0
	No	257	73.0

TABLE I: DEMOGRAPHIC CHARACTERISTICS OF PREGANANT WOMEN
POCS is found to be a reliable instrument ($\alpha=0.97$) for

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the usage of identifying obsessive compulsive symptoms in pregnant women. The Pearson Product Moment Correlation Coefficients among obsessions, compulsions, and impairments in functioning and also with POCS were found to be significant ($p < 0.01$) (Table II).

Total 57.7% women experienced mild to extremely

TABLE II: PSYCHOMETRIC PROPERTIES OF POCS

Variable	K	α	M	SD	r					Skewness
					2	3	4	Potential	Actual	
1. POCS	40	0.97	55.49	38.26	.96**	.95**	.60**	0-160	3-144	0.40
2. Obsessions	22	0.96	31.14	22.62		.87**	.46**	0-88	0-79	0.37
3. Compulsions	13	0.95	17.85	13.75			.49**	0-52	0-48	0.54
4. Impairment in Functioning	5	0.92	6.50	5.39	-	-	-	0-20	0-20	0.51

** $p < 0.01$

severe level symptoms of prenatal obsessions and compulsions during pregnancy (Table III).

TABLE III: FREQUENCIES OF PRENATAL

Score Ranges of POCS	POCS Categories	f	%
0 – 20	Normal	119	33.8
21 – 40	Sub-clinical	30	8.50
41 – 65	Mild	59	16.8
66 – 95	Moderate	73	20.7
96 – 130	Severe	64	18.2
131 – 160	Extremely severe	7	2.00

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DISCUSSION

Our findings have indicated that the frequencies of prenatal obsessive compulsive symptoms were found to be present in 57.7% women during pregnancy. The prevalence of prenatal obsessive compulsive symptoms in pregnant women implied alarming situation of deterioration in maternal mental health conditions in Pakistan. On one hand in comparison to America, the prevalence in Pakistan is considered to be high for obsessive compulsive symptoms in pregnant women. The onset of OCD signs related to pregnancy was found to be thirty-nine percent in America¹³. Another study explored 461 postpartum women out of which 25.7% of women diagnosed with perinatal OCD in America¹⁴. However, on the other hand, prevalence in Pakistan is low as compared to South Africa and Canada, 206 pregnant women seeking antenatal care from different clinics and hospitals were selected.

Outcomes revealed that 81% of the pregnant women

could be classified as obsessive-compulsive disorder in South Africa¹⁵. The intrusions related to accidental or intentional harm occurs in eighty percent of the general population and even more commonly in new parents as found in Canada¹⁶.

In Pakistan 34% adults between age 18 to 46 years were found to be suffering from obsessive compulsive disorder in subclinical category along with co-morbid

perceived stress¹⁷. The prevalence rate of OCD was found to be higher among pregnant women as compared to that calculated in general population¹⁸. Hence, OCD during prenatal period is one of the mental disturbances which have greater risk of exhibition during pregnancy with prevalence of 1.04 relative risk ratios in comparison to general population¹⁹. The prevalence of obsessive compulsive symptoms in pregnant women is high as compared to general population and has been found to be the neglected area with reference to empirical investigation in Pakistan.

OCD symptoms may initiate or accelerate during pregnancy or in postpartum period. A telephonic interview with 57 women experiencing OCD symptoms, suggested that pregnancy was related to onset of OCD signs among 13% women and in 17% exacerbation of severity in symptoms during pregnancy was observed. An acceleration in OCD symptoms during pregnancy indicated that the course of this disorder may be affected by the alterations in gonadal hormones²⁰. A research carried out on 434 participants in their third trimester of pregnancy found that the rate of prevalence of obsessive compulsive disorder was three and point five percent in them²¹.

Obsessional thoughts pertaining to harming the baby were found in 41% of perinatal women²². Literature identified that up to fifty percent of pregnant women experiencing OCD recalled the onset or exacerbation of their signs during perinatal period^{20,23} because it is one of the most vulnerable time for women²⁴ due to hormonal exaggerations and imbalances. Therefore, the prevalence rate of OCD was found to be higher among pregnant women as compared to that calculated in general population. Hence, treatment decisions by psychiatrists should be accustomed keeping in view the bio-psycho-social aspects of individual pregnant women²⁵. In addition, usually

pregnant women are found to be unaware of adequate information pertaining to the antenatal care²⁶ particularly in aspect of mental health. Therefore, gynecologists should probe and update them about psychiatric disorders who come for antenatal checkups in their hospitals.

CONCLUSION

Prevalence of prenatal obsessive compulsive symptoms is 57.7% as found in 352 pregnant women visiting various hospitals and clinics. The finding has indicated high prevalence of obsessive compulsive symptoms in pregnant women as compared to the general population in Pakistan. Prenatal obsessions and compulsions badly affect the developing mother-infant bond so the findings of the present study suggests that the criteria of psychiatric assessment should be added in antenatal care practices and assessment of OCD should be a part of the screening procedure in obstetrical and primary care during pregnancy.

RECOMMENDATION

Health professionals who provide antenatal care to pregnant women must assess not only for physical examination but also screen them for presence of any psychiatric disorder. For pregnant women with clinically significant obsessive compulsive signs, a referral for psychiatric consultation must be made by the health care provider. There is an immense need to conduct seminars in community centers to develop awareness among pregnant women and their families about risks of neurotic problems and to identify early signs emerging during pregnancy. Preventive and effective handling strategies must be inculcated in public to take proper care of maternal wellbeing.

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AUTHOR CONTRIBUTIONS

Kiran T: Concept, writing, data collection, data analysis

Shafiq S: Supervised research, drafting of manuscript

Anjum R: Critically evaluation of manuscript

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