

**ORIGINAL RESEARCH**

# Exploring the Interplay of Symptom Dimensions and Clinical Factors in Obsessive-Compulsive Disorder: A Cross-Sectional Study at a Psychiatric Treatment Center

Eswaran Sobana<sup>1</sup>, Raja Dinesh Kumar<sup>2</sup>, Srinivasan Lakshmanan<sup>3</sup>, Murugesan Sathishkumar<sup>1\*</sup>

<sup>1</sup>Assistant Professor, Department of Psychiatry, Government Vellore Medical College and Hospital, Vellore, Tamil Nadu, India.

<sup>2</sup>Assistant Professor, Department of Psychiatry, Government Thiruvannamalai Medical College and Hospital, Thiruvannamalai, Tamil Nadu, India.

<sup>3</sup>Senior Resident, Department of Psychiatry, Government Vellore Medical College and Hospital, Vellore, Tamil Nadu, India

**Corresponding Author**

Dr. Murugesan Sathishkumar

Assistant Professor, Department of Psychiatry, Government Vellore Medical College and Hospital, Vellore, Tamil Nadu, India

Received: 05January, 2024

Accepted: 10February, 2024

**ABSTRACT**

**Background:** Obsessive-compulsive disorder (OCD) is a debilitating mental health condition characterized by intrusive thoughts and repetitive behaviors. Understanding the sociodemographic profile and clinical characteristics of individuals with OCD is essential for optimizing treatment outcomes and improving quality of life. **Methods:** A cross-sectional study was conducted among 50 individuals with OCD, assessing sociodemographic variables, symptom dimensions, and quality of life using WHO Quality of Life-BREF (WHOQOL-BREF) questionnaire. **Result:** The study encompassed 50 individuals with OCD, exhibiting diverse sociodemographic profiles. Contamination/washing emerged as the predominant symptom dimension, followed by aggression and mixed dimensions. Significant impairments were noted across multiple domains of quality of life. The Physical domain had a mean score of 49.04, Psychological domain 46.90, Social domain 47.98, and Environmental domain 53.34. These findings underscore the substantial burden of OCD and highlight the necessity for tailored interventions to enhance overall well-being. **Conclusion:** This study underscores the multifaceted nature of OCD and emphasizes the importance of personalized interventions to address individualized needs and promote optimal functioning and well-being.

**Key words:** Obsessive-Compulsive Disorder, Sociodemographic Profile, Symptom Dimensions, Quality of Life, Cross-Sectional Study, Mental Health.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**INTRODUCTION**

Obsessive-compulsive disorder (OCD) is a complex and debilitating mental health condition characterized by the presence of intrusive thoughts, images, or impulses (obsessions) and repetitive behaviors or mental acts performed in response to these obsessions (compulsions)<sup>[1]</sup>. Individuals with OCD often experience significant distress and impairment in their daily functioning, as these symptoms can consume a considerable amount of time and energy, interfere with relationships, and work, and undermine their

overall quality of life. Despite being recognized as one of the leading causes of disability worldwide, OCD remains a challenging condition to treat effectively due to its heterogeneous symptom presentation and the diverse range of factors that contribute to its onset and maintenance<sup>[2]</sup>.

The symptomatology of OCD is highly diverse, encompassing a wide array of obsessions and compulsions that can vary in content, intensity, and severity from one individual to another<sup>[3]</sup>. While some individuals may experience predominantly

contamination fears and washing compulsions, others may be plagued by intrusive thoughts of harming themselves or others, accompanied by checking rituals or mental compulsions aimed at neutralizing these distressing thoughts<sup>[4]</sup>. Furthermore, the severity and impact of OCD symptoms can fluctuate over time, with periods of exacerbation and remission influenced by various factors, including stress, life events, and changes in treatment<sup>[5]</sup>.

Given the heterogeneous nature of OCD, understanding the factors that contribute to its onset, course, and severity is essential for developing more targeted and effective interventions. Socio-demographic factors such as age, gender, education, socioeconomic status, and cultural background have been shown to influence the expression and course of OCD symptoms<sup>[6]</sup>. For example, research indicates that OCD often begins in adolescence or early adulthood and is more prevalent among females than males. Additionally, individuals from lower socioeconomic backgrounds may face barriers to accessing mental health services, leading to delays in diagnosis and treatment initiation<sup>[7]</sup>.

In addition to socio-demographic factors, various disorder-related variables, such as age of onset, duration of illness, and presence of specific symptom dimensions, have been found to impact the clinical presentation and course of OCD<sup>[8]</sup>. For instance, individuals with early-onset OCD may have a more severe and treatment-resistant form of the disorder compared to those with later onset. Similarly, specific symptom dimensions, such as symmetry/ordering and hoarding, have been associated with greater functional impairment and poorer treatment outcomes<sup>[8]</sup>.

Understanding the relationship between symptom dimensions and psychiatric comorbidity is another crucial aspect of OCD research. OCD frequently co-occurs with other psychiatric disorders, including major depressive disorder, generalized anxiety disorder, and various personality disorders<sup>[9]</sup>. The presence of comorbid conditions can complicate the clinical picture, exacerbate symptom severity, and impede treatment response. Therefore, identifying common patterns of comorbidity and elucidating their underlying mechanisms is essential for informing integrated treatment approaches and improving clinical outcomes for individuals with OCD<sup>[10]</sup>.

Moreover, insight into illness and suicidality are important considerations in the assessment and management of OCD. Insight refers to the individual's awareness and understanding of their symptoms as being pathological or irrational<sup>[11]</sup>. Poor insight, characterized by a lack of recognition of the excessive or unreasonable nature of one's obsessions and compulsions, is associated with greater symptom severity, treatment resistance, and functional impairment. Suicidal ideation and behavior are also prevalent among individuals with OCD, with studies indicating that up to one-third of patients may experience suicidal thoughts at some point during the

course of their illness. Therefore, assessing and addressing suicidality is an integral part of comprehensive OCD treatment<sup>[12]</sup>.

In light of the complex and multifaceted nature of OCD, the present study aims to investigate the relationship between symptom dimensions and a range of pertinent variables in individuals diagnosed with the disorder. Specifically, the study seeks to examine the associations between symptom dimensions and socio-demographic factors, symptom severity scores, psychiatric comorbidities, insight, suicidality, and quality of life. By elucidating these relationships, the study aims to contribute to a deeper understanding of the underlying mechanisms of OCD and inform the development of more personalized and effective interventions tailored to the individual needs of patients.

## MATERIALS AND METHODS

**Study Setting:** The study was conducted at the Institute of Mental Health in Kilpauk, Chennai, a renowned psychiatric treatment center serving patients from Tamil Nadu, Pondicherry, and Andhra Pradesh for over 221 years. The study employed a cross-sectional design to investigate the relationship between symptom dimensions and various factors in individuals diagnosed with obsessive-compulsive disorder (OCD). Data collection took place over a 6-month period, from March 2022 to August 2022.

**Study Participants:** The study included patients attending the outpatient department of the Institute of Mental Health who met the following inclusion criteria: diagnosis of obsessive-compulsive disorder according to ICD-10 criteria, and willingness to provide written consent to participate in the study. The exclusion criteria were presence of neurological or other medical conditions, and refusal to provide written consent for participation.

**Sample Size:** A total of 50 cases were included in the study, selected through non-probability convenient sampling from the outpatient department of the Institute of Mental Health. Convenient sampling was employed to select participants who met the inclusion criteria and were readily available for recruitment from the outpatient department.

**Study Tools:** Data collection instruments used in the study included:

1. Semi-Structured Interview Schedule: Developed specifically for this study, the schedule gathered socio-demographic details and disease-related characteristics such as age of onset, duration of illness, and family history.
2. Schedule for Clinical Assessment in Neuropsychiatry (SCAN): Utilized for diagnosing OCD based on ICD-10 criteria, SCAN is a reliable and validated semi-structured clinical interview schedule.
3. WHO Quality of Life-BREF (WHOQOL-BREF): A globally recognized instrument, WHOQOL-BREF measured participants' quality

of life across physical, psychological, social, and environmental domains.

**Study Methodology:** After obtaining ethical committee approval, patients meeting the inclusion criteria were recruited from the outpatient department. Informed consent was obtained from all participants before data collection. Symptom dimensions and severity of OCD symptoms were assessed using the Y-BOCS, while socio-demographic and disease-related information was collected through semi-structured interviews. Additional assessments for psychiatric comorbidities, insight, suicidality, and quality of life were conducted using the respective tools mentioned above.

**Ethical Issues:** Ethical approval for the study was obtained from the Ethics Committee of Madras Medical College under Dr.MGR Medical University. Participants were provided with detailed information about the study's purpose, procedures, and potential risks and benefits before obtaining their written consent. Confidentiality of participant information was ensured throughout the study, and all data were anonymized to protect participants' privacy.

**Statistical Analysis:** Data collected from the study were analyzed using SPSS 20 software. Descriptive statistics were used to summarize participant characteristics, symptom dimensions, and other relevant variables. Inferential statistics, such as correlation analysis and regression modeling, were employed to explore relationships between symptom dimensions and various factors, including socio-

demographic variables, symptom severity scores, psychiatric comorbidities, insight, suicidality, and quality of life. Statistical significance was set at  $p < 0.05$ .

## RESULT

The sociodemographic characteristics of the study population, as summarized in Table 1, reveal a diverse representation across various variables. Gender distribution indicates a slightly higher proportion of females (54%) compared to males (46%). Age distribution spans different age groups, with the largest segment falling within the 21-30 years range (40%), followed by 31-40 years (34%), 41-50 years (12%), 51-60 years (4%), and >60 years (2%). Educational status varies among participants, with the majority (44%) having primary education, while others include graduates (24%), secondary education (20%), illiterates (8%), and individuals with postgraduate qualifications (4%). Occupation-wise, the study population encompasses a range of roles, with the highest percentage being unemployed individuals (48%), followed by semi-skilled workers (36%), skilled workers and students (each at 8%). Marital status distribution shows that most participants are married (58%), while 32% are unmarried and 10% are separated. Regarding religion, the majority identify as Hindu (84%), followed by Muslims (10%) and Christians (6%).

**Table 1: Sociodemographic characteristics of the study population**

S.No	Sociodemographic variable	Number	Percentage	
1	Gender	Male	23	46.0
		Female	27	54.0
2	Age group	<20 years	4	8.0
		21-30 years	20	40.0
		31-40 years	17	34.0
		41-50 years	6	12.0
		51-60 years	2	4.0
		>60 years	1	2.0
3	Educational status	Illiterate	4	8.0
		Primary	22	44.0
		Secondary	10	20.0
		Graduate	12	24.0
		Postgraduate	2	4.0
4	Occupation	Skilled	4	8.0
		Semi-skilled	18	36.0
		Student	4	8.0
		Unemployed	24	48.0
5	Marital status	Married	29	58.0
		Separated	5	10.0
		Unmarried	16	32.0
6	Religion	Christian	3	6.0
		Hindu	42	84.0
		Muslim	5	10.0

Approximately 32% of the participants had a family history of OCD, indicating a potential genetic predisposition. The mean age of onset was 26.62 years, with approximately 52% of individuals developing OCD between the ages of 21 and 30 years, highlighting this period as a common onset age range.

The mean duration of OCD was 6.3 years, with 60% of participants experiencing the disorder for 1 to 5 years. Additionally, 26% had OCD for 6 to 10 years, indicating a substantial proportion of individuals with longer-standing OCD. The most prevalent symptom dimension was contamination/washing, affecting 26% of participants, followed by aggression and mixed dimensions, each affecting 22% of individuals. Sexual and checking/doubting dimensions were also observed in 20% and 10% of subjects, respectively.

**WHO BREF quality of life scale:** study population (n=50) demonstrated mean scores and standard deviations across four domains: Physical, Psychological, Social, and Environmental.

- **Physical Domain:** The mean score for the Physical domain was 49.04, with a standard deviation of 11.80. Scores ranged from a minimum of 25.00 to a maximum of 69.00, reflecting the variability in perceived physical well-being among participants.
- **Psychological Domain:** Participants reported a mean score of 46.90 in the psychological domain, with a standard deviation of 12.77. Scores ranged from 16.00 to 63.00, indicating variations in psychological aspects of quality of life, such as mood, self-esteem, and mental health.
- **Social Domain:** The mean score for the social domain was 47.98, with a standard deviation of 11.70. Scores ranged from 25.00 to 69.00, highlighting differences in social relationships, social support, and social activities experienced by participants.

**Environmental Domain:** Participants had a mean score of 53.34 in the Environmental domain, with a standard deviation of 9.66. Scores ranged from 31.00 to 75.00, suggesting variations in the quality of the physical environment, access to health care, financial resources, and opportunities for recreation and leisure.

**Table 2: Distribution of the study population according to symptom dimensions of OCD and physical dimension of quality-of-life score**

Dimension	Mean	Standard deviation	95% Confidence Interval for Mean		P value
			Lower Bound	Upper Bound	
Contamination/Washing	40.08	11.079	33.38	46.77	0.001
Sexual	56.30	6.019	51.99	60.61	
Checking/Doubt	50.40	12.502	34.88	65.92	
Aggression	56.45	10.113	49.66	63.25	
Mixed	45.00	10.060	38.24	51.76	
Total	49.04	11.801	45.69	52.39	

**Table 3: Distribution of the study population according to symptom dimensions of OCD and psychological dimension of quality-of-life score.**

Dimension	Mean	Standard deviation	95% Confidence Interval for Mean		P value
			Lower Bound	Upper Bound	
Contamination/Washing	52.00	11.143	45.27	58.73	0.035
Sexual	41.30	12.499	32.36	50.24	
Checking/Doubt	52.40	5.367	45.74	59.06	
Aggression	51.00	14.560	41.22	60.78	
Mixed	39.36	11.147	31.88	46.85	
Total	46.90	12.767	43.27	50.53	

**Table 4: Distribution of the study population according to symptom dimensions of OCD and social dimension of quality-of-life score**

Dimension	Mean	Standard deviation	95% Confidence Interval for Mean		P value
			Lower Bound	Upper Bound	
Contamination/Washing	51.46	7.195	47.11	55.81	0.131
Sexual	42.50	13.542	32.81	52.19	
Checking/Doubt	51.00	11.180	37.12	64.88	
Aggression	52.27	15.166	42.08	62.46	
Mixed	43.18	8.244	37.64	48.72	
Total	47.98	11.703	44.65	51.31	

**Table 5: Distribution of the study population according to symptom dimensions of OCD and environmental dimension of quality-of-life score.**

Dimension	Mean	Standard deviation	95% Confidence Interval for Mean		P value
			Lower Bound	Upper Bound	
Contamination/Washing	54.85	7.267	50.45	59.24	0.106
Sexual	50.60	11.539	42.35	58.85	
Checking/Doubt	54.00	12.186	38.87	69.13	
Aggression	58.73	6.635	54.27	63.18	
Mixed	48.36	10.023	41.63	55.10	
Total	53.34	9.657	50.60	56.08	

Table 2 illustrates the relationship between symptom dimensions of OCD and the physical dimension of quality of life. Significant variations are observed across different symptom dimensions, with contamination/washing exhibiting the lowest mean score (40.08) and aggression showing the highest mean score (56.45). Table 3 explores the association between OCD symptom dimensions and the psychological dimension of quality of life. Here, contamination/washing again demonstrates a notable impact, with a higher mean score (52.00) compared to other symptom dimensions. Conversely, sexual symptoms exhibit a lower mean score (41.30) in this domain. Table 4 examines the link between OCD symptom dimensions and the social dimension of quality of life. While no significant differences are observed among the symptom dimensions, contamination/washing again displays the highest mean score (51.46). Table 5 delves into the relationship between OCD symptom dimensions and the environmental dimension of quality of life. Aggression emerges as the symptom dimension with the highest mean score (58.73), while contamination/washing maintains a relatively high mean score (54.85).

## DISCUSSION

Obsessive-compulsive disorder (OCD) is a complex mental health condition characterized by intrusive thoughts (obsessions) and repetitive behaviors or mental acts (compulsions) aimed at reducing distress or preventing feared outcomes (American Psychiatric Association, 2013)<sup>[13]</sup>. The present study aimed to explore the sociodemographic characteristics, clinical features, and quality of life among individuals diagnosed with OCD. The discussion will elaborate on the findings, their implications, and future directions for research and clinical practice.

The sociodemographic profile of individuals with OCD in our study reflects several noteworthy patterns. Firstly, the higher proportion of females (54%) compared to males (46%) aligns with existing epidemiological data suggesting a higher prevalence of OCD among females (Ruscio et al.,<sup>[14]</sup>). Possible explanations for this gender difference include variations in help-seeking behaviors, hormonal influences, and societal factors influencing the manifestation and reporting of symptoms (Zohar et al.,<sup>[15]</sup>). Secondly, the age distribution indicates a peak onset in early adulthood, with the majority of individuals experiencing OCD symptoms between the ages of 21 and 40 years. This finding is consistent with previous research highlighting the early adulthood period as a vulnerable period for the onset of OCD (Krebs et al.,<sup>[16]</sup>). The prevalence of OCD among individuals with primary education (44%) and unemployment (48%) underscores the potential impact of socioeconomic factors on the development and course of the disorder. Furthermore, the presence of a family history of OCD in approximately 32% of participants suggests a genetic predisposition,

corroborating existing evidence implicating genetic factors in the etiology of OCD (Pauls et al.,<sup>[17]</sup>).

The clinical features of OCD observed in our study population provide valuable insights into the phenomenology and course of the disorder. The mean age of onset (26.62 years) and duration of illness (6.3 years) underscore the chronic and often debilitating nature of OCD, which typically begins in adolescence or early adulthood and persists over the lifespan if left untreated (Ruscio et al.,<sup>[14]</sup>). The predominance of contamination/washing symptoms (26%) highlights the significant role of cleanliness and hygiene concerns in the presentation of OCD, consistent with previous literature documenting contamination fears as one of the most common symptom dimensions (Fineberg et al.,<sup>[18]</sup>). Additionally, the presence of aggression (22%) and mixed symptom dimensions (22%) underscores the heterogeneity of OCD presentations, with individuals experiencing a diverse array of obsessions and compulsions that can vary in severity and content (Abramowitz et al.,<sup>[19]</sup>). The distribution of symptom dimensions across different domains of quality of life further emphasizes the multifaceted impact of OCD on various aspects of functioning and well-being.

The assessment of quality of life using the WHO BREF scale revealed significant impairments across physical, psychological, social, and environmental domains among individuals with OCD. In the physical domain, participants reported lower scores indicative of reduced physical well-being, potentially influenced by factors such as sleep disturbances, fatigue, and somatic symptoms commonly associated with OCD (Solem et al.,<sup>[20]</sup>). The psychological domain exhibited deficits in mood, self-esteem, and overall mental health, reflecting the profound impact of OCD

symptoms on emotional functioning and cognitive processes (Solem et al., 2009). Social relationships and social support were also compromised, as evidenced by lower scores in the social domain, highlighting the interpersonal difficulties and social isolation commonly experienced by individuals with OCD (Franklin et al.,<sup>[21]</sup>). Finally, the environmental domain captured challenges related to access to healthcare, financial resources, and opportunities for leisure and recreation, indicating broader societal implications of OCD beyond individual functioning (Subramaniam et al.,<sup>[22]</sup>).

The findings of this study have several implications for clinical practice and intervention. Firstly, the identification of sociodemographic risk factors, such as female gender, early onset, and familial predisposition, can inform targeted screening and early intervention efforts aimed at identifying at-risk individuals and facilitating timely access to treatment services. Secondly, the recognition of specific symptom dimensions, such as contamination/washing and aggression, underscores the importance of tailoring treatment approaches to address individualized symptom profiles and associated functional impairments (Solem et al.,<sup>[20]</sup>). Thirdly, the assessment of quality of life domains highlights the need for comprehensive and holistic treatment approaches that address not only symptom reduction but also the promotion of adaptive coping strategies, social integration, and overall well-being (Franklin et al.,<sup>[21]</sup>).

Despite its contributions, this study is not without limitations. Firstly, the cross-sectional design precludes causal inferences regarding the observed associations between sociodemographic variables, clinical features, and quality of life outcomes. Longitudinal studies are needed to elucidate the temporal relationships between these factors and their impact on the course and prognosis of OCD. Secondly, the reliance on self-report measures for the assessment of OCD symptoms and quality of life may introduce response biases and underreporting, particularly among individuals with comorbid conditions or cognitive impairments. Future research should incorporate multi-method assessment approaches, including clinician-administered interviews and objective measures of functioning. Lastly, the study sample comprised individuals from a single geographic region, limiting the generalizability of findings to broader populations. Future studies should aim to recruit more diverse samples from varied cultural and ethnic backgrounds to enhance the external validity of findings and inform culturally sensitive interventions.

This study provides valuable insights into the sociodemographic characteristics, clinical features, and quality of life among individuals with OCD. The findings underscore the complex and multifaceted nature of the disorder, highlighting the need for comprehensive and personalized treatment approaches

that address individualized needs and promote optimal functioning and well-being.

## CONCLUSION

This study provides valuable insights into the sociodemographic characteristics, clinical features, and quality of life among individuals with obsessive-compulsive disorder (OCD). The findings highlight the diverse manifestations of OCD across different age groups, genders, and socioeconomic backgrounds. The prevalence of contamination/washing symptoms and the significant impairments in quality of life underscore the multifaceted nature of the disorder and the need for comprehensive treatment approaches.

## REFERENCES

- Stein DJ, Costa DLC, Lochner C, Miguel EC, Reddy YCJ, Shavitt RG, van den Heuvel OA, Simpson HB. Obsessive-compulsive disorder. *Nat Rev Dis Primers*. 2019 Aug 1;5(1):52. doi: 10.1038/s41572-019-0102-3.
- Say Öcal D, Özdel K, Şafak Y, Kekilli Karnaz Y, Kısa C. A comparison of symptom dimensions for obsessive compulsive disorder and obsessive compulsive-related disorders. *PLoS One*. 2019 Jul 5;14(7):e0218955. doi: 10.1371/journal.pone.0218955.
- Devi S, Rao NP, Badamath S, Chandrashekar CR, Janardhan Reddy YC. Prevalence and clinical correlates of obsessive-compulsive disorder in schizophrenia. *Compr Psychiatry*. 2015 Jan;56:141-8. doi: 10.1016/j.comppsych.2014.09.015.
- Scotti-Muzzi E, Saide OL. Schizoid-obsessive spectrum disorders: an update. *CNS Spectr*. 2017 Jun;22(3):258-272. doi: 10.1017/S1092852916000390.
- Korff S, Harvey BH. Animal models of obsessive-compulsive disorder: rationale to understanding psychobiology and pharmacology. *Psychiatr Clin North Am*. 2006 Jun;29(2):371-90. doi: 10.1016/j.psc.2006.02.007.
- Nicolini H, Salin-Pascual R, Cabrera B, Lanzagorta N. Influence of Culture in Obsessive-compulsive Disorder and Its Treatment. *Curr Psychiatry Rev*. 2017 Dec;13(4):285-292. doi: 10.2174/2211556007666180115105935.
- Stroupbauer ER, Morris OJ, Soileau KJ, Wiese AD, Quast T, Goodman WK, Sheth SA, Wojcik KD, Guzik AG, Storch EA. Economic Analyses of Obsessive-Compulsive Disorder Interventions: A Systematic Review. *Pharmacoeconomics*. 2023 May;41(5):499-527. doi: 10.1007/s40273-023-01250-1.
- Skapinakis P, Caldwell D, Hollingworth W, Bryden P, Fineberg N, Salkovskis P, Welton N, Baxter H, Kessler D, Churchill R, Lewis G. A systematic review of the clinical effectiveness and cost-effectiveness of pharmacological and psychological interventions for the management of obsessive-compulsive disorder in children/adolescents and adults. *Health Technol Assess*. 2016 Jun;20(43):1-392. doi: 10.3310/hta20430.
- Sharma E, Sharma LP, Balachander S, Lin B, Manohar H, Khanna P, Lu C, Garg K, Thomas TL, Au ACL, Selles RR, Højgaard DRMA, Skarphedinsson G, Stewart SE. Comorbidities in Obsessive-Compulsive Disorder Across the Lifespan: A Systematic Review and Meta-Analysis. *Front Psychiatry*. 2021 Nov 11;12:703701. doi: 10.3389/fpsy.2021.703701.
- Pozza A, Starcevic V, Ferretti F, Pedani C, Crispino R, Governi G, Luchi S, Gallorini A, Lochner C, Coluccia A. Obsessive-Compulsive Personality Disorder Co-occurring in Individuals with Obsessive-Compulsive Disorder: A Systematic Review and Meta-analysis. *Harv Rev*

- Psychiatry. 2021 Mar-Apr 01;29(2):95-107. doi: 10.1097/HRP.0000000000000287.
11. de Avila RCS, do Nascimento LG, Porto RLM, Fontenelle L, Filho ECM, Brakoulias V, Ferrão YA. Level of Insight in Patients With Obsessive-Compulsive Disorder: An Exploratory Comparative Study Between Patients With "Good Insight" and "Poor Insight". *Front Psychiatry*. 2019 Jul 3;10:413. doi: 10.3389/fpsy.2019.00413.
  12. Torres AR, Shavitt RG, Torresan RC, Ferrão YA, Miguel EC, Fontenelle LF. Clinical features of pure obsessive-compulsive disorder. *Compr Psychiatry*. 2013 Oct;54(7):1042-52. doi: 10.1016/j.comppsy.2013.04.013.
  13. Regier DA, Kuhl EA, Kupfer DJ. The DSM-5: Classification and criteria changes. *World Psychiatry*. 2013 Jun;12(2):92-8. doi: 10.1002/wps.20050.
  14. Ruscio AM, Stein DJ, Chiu WT, Kessler RC. The epidemiology of obsessive-compulsive disorder in the National Comorbidity Survey Replication. *Mol Psychiatry*. 2010 Jan;15(1):53-63. doi: 10.1038/mp.2008.94.
  15. Zohar J, Nutt DJ, Kupfer DJ, Moller HJ, Yamawaki S, Spedding M, Stahl SM. A proposal for an updated neuropsychopharmacological nomenclature. *Eur Neuropsychopharmacol*. 2014 Jul;24(7):1005-14. doi: 10.1016/j.euroneuro.2013.08.004.
  16. Krebs G, Heyman I. Obsessive-compulsive disorder in children and adolescents. *Arch Dis Child*. 2015 May;100(5):495-9. doi: 10.1136/archdischild-2014-306934.
  17. Pauls DL, Abramovitch A, Rauch SL, Geller DA. Obsessive-compulsive disorder: an integrative genetic and neurobiological perspective. *Nat Rev Neurosci*. 2014 Jun;15(6):410-24. doi: 10.1038/nrn3746.
  18. Fineberg NA, Hollander E, Pallanti S, Walitza S, Grünblatt E, Dell'Osso BM, Albert U, Geller DA, Brakoulias V, Janardhan Reddy YC, Arumugham SS, Shavitt RG, Drummond L, Grancini B, De Carlo V, Cinosi E, Chamberlain SR, Ioannidis K, Rodriguez CI, Garg K, Castle D, Van Ameringen M, Stein DJ, Carmi L, Zohar J, Menchon JM. Clinical advances in obsessive-compulsive disorder: a position statement by the International College of Obsessive-Compulsive Spectrum Disorders. *Int Clin Psychopharmacol*. 2020 Jul;35(4):173-193. doi: 10.1097/YIC.0000000000000314.
  19. Abramowitz JS, Taylor S, McKay D. Obsessive-compulsive disorder. *Lancet*. 2009 Aug 8;374(9688):491-9. doi: 10.1016/S0140-6736(09)60240-3.
  20. Solem S, Håland AT, Vogel PA, Hansen B, Wells A. Change in metacognitions predicts outcome in obsessive-compulsive disorder patients undergoing treatment with exposure and response prevention. *Behav Res Ther*. 2009 Apr;47(4):301-7. doi: 10.1016/j.brat.2009.01.003.
  21. Franklin ME, Foa EB. Treatment of obsessive compulsive disorder. *Annu Rev Clin Psychol*. 2011;7:229-43. doi: 10.1146/annurev-clinpsy-032210-104533.
  22. Subramaniam M, Soh P, Vaingankar JA, Picco L, Chong SA. Quality of life in obsessive-compulsive disorder: impact of the disorder and of treatment. *CNS Drugs*. 2013 May;27(5):367-83. doi: 10.1007/s40263-013-0056-z.