



## RESEARCH ARTICLE

### INTERSECTING PATHOLOGIES: A CASE REPORT OF SOCIAL DEVELOPMENTAL IMPAIRMENT IN OLFACTORY REFERENCE SYNDROME

<sup>1</sup>Dr. Parinda Parikh, <sup>2</sup>Alisha Arul Alphonse, <sup>3</sup>Jeremy Kays, <sup>4</sup>Shaurya Kumar Singh, <sup>5</sup>Himani J Suthar, <sup>6</sup>Mahiya Buddhavarapu and, <sup>7</sup>Avigder Mendlowitz, MSW, <sup>8</sup>Dr. Mina Oza

<sup>1</sup>Department of Psychiatry, Weill Cornell Medical School, White Plains, New York, USA; <sup>2</sup>St. George's University, Grenada, West Indies; <sup>3</sup>Windsor University School of Medicine, St.Kitts, West Indies; <sup>4</sup>Pravara Institute of Medical Sciences, Loni, Maharashtra, India; <sup>5</sup>GMERS Medical College and Civil Hospital, Gandhinagar, India; <sup>6</sup>University of Pittsburgh, Pennsylvania, USA; <sup>7</sup>Long Island University, Brooklyn, NY, USA, <sup>8</sup>2<sup>nd</sup> ARC Associates, White Plains, NY, USA

#### ARTICLE INFO

##### Article History

Received 20<sup>th</sup> February, 2025  
Received in revised form  
27<sup>th</sup> March, 2025  
Accepted 26<sup>th</sup> April, 2025  
Published online 30<sup>th</sup> May, 2025

##### Keywords:

Olfactory Reference Syndrome, Adolescent Development, Social Anxiety, Delusional Disorder, Interpersonal Dysfunction.

\*Corresponding author:  
Dr. Parinda Parikh

#### ABSTRACT

**Background:** Olfactory Reference Syndrome (ORS), also known as Olfactory Reference Disorder, is a distressing psychiatric condition marked by the persistent, often delusional belief that one emits a foul body odor, despite no detectable smell by others. ORS typically begins in adolescence or early adulthood and affects both sexes, with some studies indicating a slight male predominance. It is frequently comorbid with other psychiatric disorders, including major depressive disorder (69%), social anxiety disorder (48%), and obsessive-compulsive disorder (27%). Suicidal ideation and behavior are also common, emphasizing the condition's clinical severity. A hallmark of ORS is its profound impact on social functioning. Individuals often misinterpret neutral social cues—such as someone touching their nose or stepping back—as confirmation of their feared odor, leading to shame, paranoia, and significant social withdrawal. This can result in avoidance of public spaces and, as in the present case, disengagement from school and other social settings. Case report: “Bart” is a 17-year-old male with a three-year history of progressively worsening social functioning, marked by a persistent preoccupation with emitting a foul body odor, despite no objective evidence—consistent with Olfactory Reference Syndrome (ORS). His symptoms began at age 14 and were accompanied by auditory hallucinations, paranoid ideation, and heightened sensitivity to social cues, leading to significant emotional distress, shame, and eventual withdrawal from school. Over time, he developed intense social avoidance, rigid thinking patterns, and behaviors consistent with the obsessive-compulsive spectrum, such as compulsive grooming and concerns about others' modesty. Despite ongoing cognitive challenges, including impaired concentration and memory, Bart remains cognitively intact and continues to pursue independent learning, reflecting a degree of resilience and ongoing engagement with his personal development. Conclusion: This case highlights the complex clinical presentation and significant functional impairment associated with Olfactory Reference Syndrome in adolescence. Early recognition and a comprehensive, multidisciplinary approach are essential to address the condition's psychiatric comorbidities, reduce social isolation, and support adaptive functioning and educational engagement.

Copyright©2025, Parinda Parikh et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. Parinda Parikh, Alisha Arul Alphonse, Jeremy Kays, Shaurya Kumar Singh et al. 2025. “Intersecting Pathologies: A Case Report of Social Developmental Impairment in Olfactory Reference Syndrome”. *International Journal of Recent Advances in Multidisciplinary Research*, 12, (05), 11311-11313.

## INTRODUCTION

Olfactory Reference Syndrome (ORS), sometimes called Olfactory Reference Disorder, is a distressing psychiatric condition characterized by a persistent and often delusional belief that one emits an unpleasant body odor, despite the absence of any detectable smell by others.(1,3) This preoccupation results in significant social, occupational, and personal impairment. It is often accompanied by repetitive behaviors aimed at masking the perceived odor, such as

frequent showering, use of perfumes or deodorants, changing clothes excessively, and social avoidance.(4) Initially considered a somatic delusional disorder, it has since been proposed to fall within the obsessive-compulsive spectrum or as a variant of body dysmorphic disorder (BDD) .(7) The DSM-5 includes ORS under “Other Specified Obsessive-Compulsive and Related Disorders,” although no specific diagnostic criteria are provided.(3) This ambiguity in classification reflects the heterogeneity in symptom

presentation and underlying psychopathology. The pathogenesis of ORS involves multiple modalities, including psychological, psychosocial, and cultural influences, which are theorized. It has been postulated that life events, stressors, and societal taboos regarding body odor contribute.(10) The pathogenesis of ORS remains unclear, but emerging research points to a multifactorial model involving cognitive, emotional, and neurobiological components. Neuroimaging and neuropsychological studies suggest deficits in olfactory processing, self-monitoring, and emotion regulation, including frontotemporal and limbic regions.(2,5) Sofko *et al.* (2020) observed that individuals with ORS may have abnormalities in olfactory discrimination and memory, although not in basic olfactory identification, suggesting subtle olfactory system dysfunction.(5) Other studies, including Chernyak *et al.* (2021), have emphasized the importance of cognitive biases, particularly heightened self-focused attention and threat sensitivity, as maintaining factors in ORS.(6) Regarding prevalence, ORS appears to be relatively rare in the general population but is widely considered underrecognized and underdiagnosed in clinical settings. In a systematic review by Begum and McKenna (2011), ORS was found to occur most frequently in adolescents and young adults, often with onset during the teenage years.(4) The condition affects both men and women, though some studies report a slight male predominance. Phillips and Menard (2011) reported that ORS often presents with comorbid psychiatric diagnoses, including major depressive disorder (69%), social anxiety disorder (48%), and obsessive-compulsive disorder (27%).(8) Additionally, individuals with ORS frequently experience suicidal ideation and behavior, underscoring the condition's severity.(4,8)

Despite the significant distress and impairment associated with ORS, individuals may delay seeking psychiatric help due to embarrassment, lack of insight, or the conviction that their symptoms are physical rather than psychological.(9) McNiven *et al.* (2019) highlighted how ORS is often first presented in dermatological, dental, or general medical settings due to complaints of halitosis or body odor, which complicates timely diagnosis and intervention.(9) Treatment of ORS is similarly complex, with no standardized protocols established. Current evidence supports the use of selective serotonin reuptake inhibitors (SSRIs), cognitive-behavioral therapy (CBT), and in some cases, antipsychotic augmentation for more delusional presentations.(3) However, treatments are individualized due to the condition's variable symptomatology and limited controlled trials. The following report presents a case of ORS with unique clinical features, adding to the limited but growing body of literature on this debilitating disorder.

## CASE REPORT

"Bart" is a 17-year-old adolescent male with a history of progressively worsening social functioning and preoccupation with body odor. His symptoms first emerged around age 14, when he began expressing distress that he emitted a foul smell, stating, "I have an odor, and it's killing my social life." Despite the absence of any objective evidence of malodor. He also described hearing voices and was paranoid that people were "laughing and making funny looks" at him. These concerns eventually culminated in his withdrawal from school two years before the initial psychiatric evaluation.

During this period, he began to exhibit signs of intense social avoidance, shame, emotional dysregulation, and agitation. At the time of his initial presentation in 2020, Bart was prescribed Olanzapine 15 mg for psychosis as well as Clonazepam 0.5 mg twice daily for anxiety symptoms. In 2021, his treatment was transitioned to Clozapine, titrated to a total daily dose of 600 mg, in conjunction with continued Clonazepam. Following this adjustment, he reported increased willingness to engage in limited social contexts, although his preoccupations remained. Mental status examination during this period revealed an anxious mood with congruent affect, poor eye contact, and limited spontaneous speech. His thought processes were linear and goal-directed and was not considered a danger to himself or others. However, his insight remained poor, and he continued to endorse auditory hallucinations and distorted beliefs about body odor. Clozapine was ultimately discontinued due to significant weight gain and poor adherence. In 2024, a trial of Paliperidone Palmitate 234 mg was also unsuccessful, as it led to worsening anxiety and agitation, likely related to a similar side effect profile.

As of 2025, Bart remains cognitively intact but continues to experience impaired concentration, poor memory, lethargy, and persistent avoidance behaviors. He demonstrates rigid thinking patterns and moderate anxiety, aligning with characteristics of the obsessive-compulsive spectrum. These are evidenced by repetitive behaviors such as frequently changing his clothes and expressing concern over his sisters' perceived lack of modesty in dress. Despite these ongoing challenges, he remains engaged in independent learning and participates in academic enrichment programs to further his education. His current treatment regimen includes Iloperidone 2 mg and Risperidone 90 mg to manage persistent psychotic symptoms, alongside Fluvoxamine Maleate 150 mg, Clomipramine 25 mg, and Clonazepam 1 mg to address obsessive-compulsive and anxiety-related symptoms. Overall, while Bart continues to face significant psychiatric and functional challenges, his cognitive stability and commitment to self-directed education reflect a degree of resilience and ongoing therapeutic engagement.

## DISCUSSION

The few studies conducted involving Olfactory Reference Disorder have frequently considered the comorbidities accompanying ORD, with an emphasis on Obsessive Compulsive Disorder (13). The current studies available consider the social aspect of the disorder from the limited scope of social anxiety; this case study differs in that it focuses primarily on the social impact of ORD from the standpoint of social impairment. The impact of ORD on a patient's social development can vary drastically with far-reaching consequences. The social impairment associated with ORD is both pervasive and debilitating. Individuals frequently misinterpret benign or unrelated actions by others—such as someone rubbing their nose, opening a window, or maintaining physical distance—as confirmation of their perceived odor. These misinterpretations fuel social anxiety, paranoia, and an overwhelming sense of shame, which may prompt the person to avoid close contact, sit away from peers, or minimize participation in classroom activities. Over time, this avoidance can escalate to chronic absenteeism or complete school refusal, particularly in adolescents who are already

navigating the challenges of social identity and peer acceptance (12). In severe cases, ORD can lead to academic decline and dropping out of school altogether. The compulsive behaviors associated with the disorder—such as frequent showering, clothing changes, or use of scented products—may interfere with daily routines, causing students to arrive late or miss classes entirely. Moreover, the intense preoccupation with body odor can make it nearly impossible for affected individuals to concentrate on academic tasks, engage in collaborative learning, or form supportive peer relationships (12). As a result, their educational progress may stall, further exacerbating feelings of failure and social exclusion. Compounding this issue is the fact that ORD is often misdiagnosed or misunderstood by educators and mental health professionals, leading to delayed treatment or inappropriate interventions (12). Many individuals with ORD suffer in silence, fearing ridicule or disbelief if they disclose their symptoms. The stigma surrounding body odor, real or imagined, only adds to their isolation and impedes help-seeking behavior (11).

## CONCLUSION

Given these far-reaching implications, early identification and intervention are crucial. Psychoeducation, cognitive-behavioral therapy, and support from school counselors and mental health professionals can help individuals challenge their distorted beliefs, reduce social avoidance, and re-engage with educational settings (10). A better understanding of ORS among educators and clinicians is essential to create supportive environments that mitigate the social and academic consequences of this deeply impairing disorder.

## REFERENCES

1. Lochner C, Stein DJ. Olfactory reference syndrome: diagnostic criteria and differential diagnosis. *J Postgrad Med.* 2003;49(4):328–31.
2. Skimming KA, Miller CWT. Transdiagnostic approach to olfactory reference syndrome: neurobiological considerations. *Harv Rev Psychiatry.* 2019;27(3):193–202.
3. Feusner JD, Phillips KA, Stein DJ. Olfactory reference syndrome: issues for DSM-V. *Depress Anxiety.* 2010;27(6):592–9.

4. Begum M, McKenna PJ. Olfactory reference syndrome: a systematic review of the world literature. *Psychol Med.* 2011;41(3):453–61.
5. Sofko C, Tremont G, Tan JE, Westervelt H, Ahern DC, Menard W, *et al.* Olfactory and neuropsychological functioning in olfactory reference syndrome. *Psychosomatics.* 2020;61(4):363–71.
6. Chernyak Y, Chapleau KM, Tanious SF, Dattilo NC, Diaz DR, Landsberger SA. Olfactory reference syndrome: a case report and screening tool. *J Clin Psychol Med Settings.* 2021;28(2):344–8.
7. Ferreira JA, Dallaqua RP, Fontenelle LF, Torres AR. Olfactory reference syndrome: a still open nosological and treatment debate. *Gen Hosp Psychiatry.* 2014;36(5):571.e1–2.
8. Phillips KA, Menard W. Olfactory reference syndrome: demographic and clinical features of imagined body odor. *Compr Psychiatry.* 2011;52(2):142–9.
9. McNiven V, Mamane S, Zai G, So J. The nose knows... or does it? Olfactory reference syndrome in patients presenting for assessment of unusual body odor. *J Nerv Ment Dis.* 2019;207(3):189–93.
10. Phillips KA, Gunderson C, Gruber U, *et al.* Delusions of body malodour: the olfactory reference syndrome. In: Brewer W, Castle D, Pantelis C, editors. *Olfaction and the brain.* Cambridge: Cambridge University Press; 2006.
11. Prazeres AM, Fontenelle LF, Mendlowicz MV, de Mathis MA, Ferrão YA, Costa de Brito NF, *et al.* Olfactory reference syndrome as a subtype of body dysmorphic disorder. *J Clin Psychiatry.* 2010;71(1):3–4. doi:10.4088/JCP.09105040
12. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders.* 5th ed. Arlington (VA): American Psychiatric Publishing; 2013.
13. Reuter J, Grochowski A, Steil R. Associations between olfactory reference disorder and social phobia: results of an internet-based study. *Front Psychol.* 2024;15:1248496. doi:10.3389/fpsyg.2024.1248496.

\*\*\*\*\*