Case Report

WHEN THE BODY FEELS FOREIGN: A CASE REPORT OF BODY OWNERSHIP DISTURBANCE IN BRIEF PSYCHOTIC DISORDER

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Abstract

Background: Deficits in the sense of self are well documented in psychotic disorders, but evidence regarding disturbances in body ownership remains inconclusive. **Case Report**: This case report presents a rare and severe instance of body ownership disturbance in a young woman, marked by delusions of estrangement from her body, multiple self-harm attempts, social withdrawal, and profound functional decline. Although she received 5 mg of olanzapine for one week, followed by 10 mg for another week, cultural factors impeded her treatment adherence. **Discussion**: The case underscores the diagnostic challenges associated with such disturbances and highlights the critical role of social and cultural influences on illness perception and care-seeking behavior. It emphasizes the need for greater clinical awareness of body ownership disturbances in psychotic disorders, further research into their phenomenology, and the development of culturally sensitive interventions to enhance treatment outcomes.

Keywords: Body ownership disturbance; Sense of self; Delusions of estrangement; Psychotic disorders; Sense of agency

INTRODUCTION

Body ownership refers to the perception of a body or body part as one's own, arising from the integration of multisensory inputs.[1]. A sense of body ownership and agency is integral to the sense of self. While deficits in the sense of agency have been widely studied, disturbances in body ownership remain less understood.[2] Delusions related to body ownership are particularly uncommon and can present diagnostic challenges. This case report describes a young woman who presented with a rare and severe disturbance in body ownership, characterized by delusions of estrangement from her body and repeated self-harm attempts. Through this case, we aim to explore the phenomenology of body ownership disturbances in psychotic disorders, discuss the diagnostic challenges they pose, and highlight the impact of cultural factors on illness perception and treatment adherence.

CASE REPORT

A 26-year-old woman, educated up to the 12th grade, from a middle-class family, living in a joint family system, and recently married, presented with a 10-day history of persistent delusions that her body did not belong to her, accompanied by multiple self-harm attempts. Her symptoms began shortly after she moved into her husband's home, which was also a joint family, following their marriage. She had no significant medical history and no history of substance use. She was premorbidly well-adjusted, with no reported family history of psychiatric illness.

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The patient's family reported that she had become socially withdrawn. She would sit in front of her food without eating for extended periods or stand motionless when asked to perform tasks. Her self-care had significantly deteriorated, requiring assistance for basic activities such as bathing and dressing. She frequently and distressingly repeated that her body did not belong to her and that she could not initiate any action herself. She implored her husband and other family members to destroy her body and made multiple self-harm attempts, insisting that her body belonged to someone else. These attempts included making superficial cuts on her body and repeatedly trying to burn herself with a candle. She engaged in self-harm both when alone and in the presence of family members, with all attempts being of low lethality. The patient stated that she wanted to destroy her body because she believed it did not belong to her. She described feeling distressed and confused due to this belief. When asked about the onset of her symptoms, she was unable to recall when they began or how she initially felt. There were no symptoms suggestive of organicity, such as a history of falls, altered awareness, seizures, head injury, headache, nausea, vomiting, or urinary or fecal incontinence. Attributing her symptoms to magico-religious causes, the family first took her for religious interventions. However, concerned by the progression of symptoms, her family sought psychiatric help 10 days after symptom onset.

On the first day of admission, the patient was brought into the examination room by her family. She exhibited poor eye contact and reduced psychomotor activity, and it was difficult to establish rapport. She persistently expressed the belief that her body did not belong to her. When challenged, she persisted and voiced a desire to destroy her body. She reported being unable to perform any actions because the body was not hers. In response to questions about where her body was, she repeatedly said, "I don't know." However, she appeared convinced that her body was not hers. She reported death wishes, but there was no active suicidal ideation. While she could recognize her surroundings, she stated that she did not know her name. She recognized people around her, such as her husband and brother, but claimed this recognition was based on what others had told her. She denied being possessed by any external agency and denied that any external force could control her. However, she reported hearing third-person auditory hallucinations described as whispering, though the exact content was unclear. She appeared anxious throughout the assessment. Cognitive functions could not be tested as the patient did not attempt most of the tests. There were no signs of catatonia, and no focal neurological deficits were noted. The physical examination and blood investigations were within normal limits.

The differential diagnoses of brief psychotic disorder and major depressive disorder — current episode severe with psychotic features (as per DSM 5) − were considered. The latter diagnosis was initially favored as the patient had repeated self-harm attempts and the delusion resembled a nihilistic delusion. The diagnosis was later revised to brief psychotic disorder after ruling out low mood, anhedonia, and other features of depression through serial mental status examinations. The PANSS score was 99, with 19 on the Positive Scale, 25 on the Negative Scale, and 55 on the General Psychopathology Scale. The patient was started on Tab. Olanzapine 5 mg. The family received psychoeducation about the illness and the importance of treatment adherence. During inpatient care, the patient was kept under close observation with supervised medication. Ward staff and family members were instructed to maintain strict vigilance against self-harm. After a five-day inpatient stay, the patient was discharged at the caregivers' request and placed under outpatient follow-up. During outpatient follow-up, the dose of olanzapine was up-titrated to 10 mg, and psychoeducation was continued. However, after a week of follow-up,

the patient was lost to follow-up. On telephonic enquiry, it was found that she had resumed magico-religious treatment and had stopped the medications due to the patient and family attributing the illness to magico-religious reasons.

Written informed consent for the publication of this case report was obtained from the patient's husband. As the patient had impaired capacity at the time of admission and during outpatient follow-up and was later lost to follow-up, consent could not be obtained from the patient.

DISCUSSION

The sense of self comprises the sense of body ownership (SoO) and the sense of agency (SoA).1 SoO is the feeling of ownership over one's body parts, thoughts, and feelings, whereas SoA refers to the feeling of control over one's actions.[1] Body ownership has been studied empirically with proprioceptive and body transfer illusions, such as the rubber hand illusion, in schizophrenia and schizotypy.[3,4] Using the mirror box illusion, Rossetti et al. found that individuals with schizophrenia may have a disrupted integration of sensory signals crucial for maintaining a coherent sense of body ownership and agency. This disruption could contribute to the perceptual and cognitive deficits often observed in this population.[5]

Though deficits in the sense of agency in psychotic disorders have been well-documented, opinions regarding the sense of body ownership have been mixed.[6] Some studies suggest that patients with schizophrenia experience disturbances in their sense of body ownership, showing higher susceptibility to the rubber hand illusion (RHI) compared to controls.[2,7] This increased susceptibility may be due to weaker stored body representations and greater reliance on external stimuli.[7] Additionally, the intensity of RHI in schizophrenia patients has been associated with delusions and immature defense mechanisms.[7] However, other research challenges this view, finding no evidence for abnormal body ownership in schizophrenia patients using the full-body illusion paradigm.[8] A systematic review of body transfer illusions in schizophrenia-spectrum populations found a higher sense of body ownership in this group.[9] The review suggested a potential dissociation between implicit and explicit aspects of body ownership, with the vividness of the sense of ownership significantly correlating with core psychotic symptoms.[5,9] Thus, the relationship between body ownership and agency in schizophrenia remains unclear and requires further investigation.[2] Studies on individuals at increased familial risk for schizophrenia have not found significant differences in body ownership experiences compared to controls.[10]

This case reports a rare and severe form of body ownership disturbance in a psychotic disorder and the diagnostic challenges it posed. Though the body is important in the meaning-making process in depression, there is currently no evidence of stark disturbance to body ownership in depression.[11] However, nihilistic delusions can closely mimic body ownership disturbances, as in the case described. The patient's phenomenology diverged from nihilistic delusions by its specificity to bodily estrangement rather than beliefs about nonexistence or death.

The disturbance in body ownership may be due to several factors, including defects in multisensory integration, aberrant efferent signals, longer temporal windows, variable predictive mechanisms, and impaired self-agency.[2] According to the body-self model, the functions of the body self—such as perceiving, interpreting, and regulating body experiences—are disrupted in individuals with schizophrenia. This disruption can exacerbate positive symptoms, suggesting a reciprocal relationship where disturbances in body ownership contribute to the severity of these symptoms.[12] In this case, however, the progression of symptoms could not be monitored as the patient was lost to follow-up. Disturbances in body ownership may also have important therapeutic implications. Treatments that promote multisensory integration, such as

yoga, may be beneficial for these patients.[3] Virtual reality has also been explored as a potential therapeutic approach.[13.] Additionally, Baum et al., in a systematic review, highlighted that body transfer illusions may have both psychoeducational and therapeutic applications in schizophrenia by demonstrating the modifiability of bodily boundaries.[9]

This case is also interesting in terms of the cultural aspect of body ownership. Coming from a culture with a strong religious background, the patient and caregivers interpreted her body ownership disturbances through a mystical lens. Collectivist cultures, which emphasize interdependence and community, may view the self as inherently relational. In such contexts, bodily self-disturbances might be more likely to be externalized (e.g., attributed to external forces such as spirits or curses). This explanatory model may impact treatment-seeking behavior and treatment adherence, as seen in this case. Markus and Kitayama's work has noted that people from collectivist cultures experience self differently, and it can have an impact on their emotions, behaviour, and cognition.[15] A phenomenological analysis of psychotic experiences conducted in Sri Lanka noted that intersubjective and cultural processes shape self-experiences.[16] Phenomenological insight into self-disturbances has been found to bridge the gap between the patient and the clinician. However, this can be challenging due to the disruption of the core self, changes in the experiential world, and the disruption of meaning.[16] Social and cultural factors can pose additional challenges, as demonstrated by this case.

Literature related to suicide and self-harm in body ownership disorders is sparse. Colle et al.[14] observed that in borderline personality disorder, self-harm may serve as a coping mechanism to restore or increase the sense of agency. In their study, most self-harm attempts were of low lethality. Hence, self-harm may have served a similar function, in addition to being an expression of distress.

This case underscores the need for further research into the phenomenology and clinical significance of body ownership disturbances in psychotic disorders. It also highlights the role of cultural factors in shaping explanatory models and treatment-seeking behavior, particularly in disorders that affect the sense of self. This highlights the importance of adopting culturally sensitive approaches to psychiatric care, ensuring that interventions are tailored to the patient's sociocultural context and beliefs.

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REFERENCES

1. Braun N, Debener S, Spychala N, Bongartz E, Sörös P, Müller HHO, et al. The Senses of Agency and Ownership: A Review. Front Psychol. 2018 Apr 16; 9:535.
2. Klaver M, Dijkerman HC. Bodily Experience in Schizophrenia: Factors Underlying a Disturbed Sense of Body Ownership. Front Hum Neurosci 2016; 10: 305.
3. Thakkar KN, Nichols HS, McIntosh LG, Park S. Disturbances in body ownership in schizophrenia: evidence from the rubber hand illusion and case study of a spontaneous out-of-body experience. PLoS One. 2011;6(10):e27089.
4. Germine L, Benson TL, Cohen F, Hooker CI. Psychosis-proneness and the rubber hand illusion of body ownership. Psychiatry Res. 2013 May 15;207(1-2):45-52.
5. Rossetti I, Repossi M, Florio V, Demartini B, Conca A, Gambini O, Maravita A. Sense of body ownership and body agency in schizophrenia. Sci Rep. 2022 Nov 12;12(1):19369.
6. Moe AM, Docherty NM. Schizophrenia and the sense of self. Schizophr Bull. 2014 Jan;40(1):161-8.
7. Mirucka B. The sense of body ownership in schizophrenia: research in the rubber hand illusion paradigm. Psychiatr Pol 2016; 50: 731–740.

8. Shaqiri A, Roinishvili M, Kaliuzhna M, Favrod O, Chkonia E, Herzog MH, Blanke O, Salomon R. Rethinking Body Ownership in Schizophrenia: Experimental and Meta-analytical Approaches Show no Evidence for Deficits. Schizophr Bull. 2018 Apr 6; 44(3):643-652. .
9. Baum K, Hackmann J, Pakos J, Kannen K, Wiebe A, Selaskowski B, et al. Body transfer illusions in the schizophrenia spectrum: a systematic review. Schizophrenia (Heidelb). 2022 Nov 23;8(1):103.
10. Prikken M, van der Weiden A, Baalbergen H, Hillegers MH, Kahn RS, Aarts H, et al. Multisensory integration underlying body-ownership experiences in schizophrenia and offspring of patients: a study using the rubber hand illusion paradigm. J Psychiatry Neurosci. 2019 May 1;44(3):177-184.
11. Orphanidou M, Kadianaki I, O'Connor C. Depression as an Embodied Experience: Identifying the Central Role of the Body in Meaning-Making and Identity Processes. Qual Health Res 2023; 33: 509–520.
12. Sakson-Obada O, Chudzikiewicz P, Pankowski D, Jarema M. Body image and body experience disturbances in schizophrenia: An attempt to introduce the concept of body Self as a conceptual framework. Curr Psychol. 2018; 37(1): 390–400.
13. Yizhar O, Giron J, Wenger M, Chetrit D, Ostrin G, Friedman D, et al. Body Ownership of Anatomically Implausible Hands in Virtual Reality. Front Hum Neurosci. 2021 Nov 3; 15:713931. .
14. Colle L, Hilviu D, Rossi R, Garbarini F, Fossataro C. Self-Harming and Sense of Agency in Patients with Borderline Personality Disorder. Front Psychiatry. 2020 May 29; 11:449.
15. Markus HR, Kitayama S. Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review, 1991, 98, 224–253.
16. de Vries R, Heering HD, Postmes L, Goedhart S, Sno HN, de Haan L. Self-disturbance in schizophrenia: a phenomenological approach to better understand our patients. Prim Care Companion CNS Disord. 2013;15(1): PCC.12m01382.