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THE IMPACT OF FAMILY STRUCTURE ON PSYCHOLOGICAL DISTRESS IN DISSOCIATIVE CONVULSIONS

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Abstract
Dissociative Convulsions (DC), also known as Psychogenic Nonepileptic Seizures (PNES), are episodes resembling epileptic seizures but without abnormal brain activity. This study investigates the relationship between family structure and psychological distress in patients with DC in the Indian context. A cross-sectional design was used to compare psychological outcomes between 72 patients from joint and nuclear families. Standardized measures, including the Dissociative Experiences Scale-II (DES-II), Cognitive Distortions Questionnaire (CD-Quest), Toronto Alexithymia Scale (TAS-20), and Difficulties in Emotion Regulation Scale (DERS-18), were administered. Statistical analyses involved independent t-tests and Pearson's correlations. Patients from joint families exhibited significantly higher psychological distress, including greater dissociative experiences, cognitive distortions, alexithymia, and emotion regulation difficulties (all p-values < 0.001). These findings highlight the critical role of family dynamics in psychological interventions for DC and underscore the need for culturally sensitive, family-focused treatment approaches.

Keywords: Dissociative Convulsions, Family Structure, Psychological Distress, Alexithymia, Emotion Regulation

Introduction

Dissociative Convulsions (DC), also known as Psychogenic Nonepileptic Seizures (PNES), are complex episodes that mimic epileptic seizures but lack associated abnormal brain activity [1]. Characterized by involuntary movements, altered consciousness, and convulsions, DC often arises as a response to psychological distress. Its multifactorial etiology—encompassing biological, psychological, and social factors—presents significant diagnostic and therapeutic challenges [2].

Family structure is a pivotal component of the social environment influencing an individual's psychological well-being [3]. In cultures like India, family systems are predominantly categorized into joint and nuclear families [4]. Joint families consist of extended family members living together

and sharing responsibilities, whereas nuclear families comprise immediate family members living independently. The dynamics within these family structures can significantly affect psychological health, potentially impacting conditions like DC.

Family systems theory suggests that the complexity of relationships and interactions within joint families may contribute to heightened stress and psychological symptoms [5]. The intricate web of expectations, obligations, and potential conflicts inherent in joint family living can exacerbate emotional strain, particularly in individuals susceptible to dissociative symptoms.

Previous research has underscored the association between family functioning and dissociative disorders [6]. Dysfunctional family environments and strained familial relationships have been linked to increased psychological distress and the manifestation of dissociative symptoms [7]. Kirmayer and Sartorius highlighted that cultural models significantly influence the expression of psychological distress, suggesting that the Indian familial context may play a crucial role in DC [8].

However, there is a paucity of research specifically examining how family structure influences psychological distress among DC patients in the Indian context, where familial relationships are integral to societal functioning [3]. Understanding these relationships is critical for developing culturally sensitive interventions that address the unique familial contexts of patients.

Aim of the Study

This study aims to investigate the influence of family structure—specifically joint versus nuclear family settings—on psychological distress among patients diagnosed with DC. By examining dissociative experiences, cognitive distortions, alexithymia, and emotion regulation difficulties, the research seeks to elucidate how family environments contribute to the psychological profiles of DC patients.

Methods

Study Design and Setting

This cross-sectional, observational study was conducted in the Psychiatry Department of Teerthanker Mahaveer University between November 2022 and February 2024. The study aimed to examine the influence of family structure on psychological distress among patients diagnosed with Dissociative Convulsions (DC) within the Indian context.

Participants

A total of 72 patients diagnosed with DC according to the International Classification of Diseases, 10th Revision (ICD-10) criteria [9], were recruited. Participants were aged between 15 and 45 years and were selected through purposive sampling during routine outpatient and inpatient visits.

Inclusion criteria required participants to be within the specified age range, have a confirmed diagnosis of DC based on ICD-10 criteria, and provide informed consent. For participants under 18 years of age, assent was obtained along with consent from their legal guardians. Exclusion criteria included the presence of neurological disorders, epilepsy, medical conditions explaining convulsive symptoms, primary psychiatric diagnoses such as schizophrenia or bipolar disorder, significant hearing or vision impairments, and a history of substance abuse.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee of Teerthanker Mahaveer University (Approval No. TMU/IEC/21/2021). All participants provided informed consent after receiving a detailed explanation of the study's purpose and procedures. Confidentiality was maintained by assigning unique codes to participants and securely storing all data.

Data Collection Procedures

Data were collected in a private setting within the Psychiatry Department to ensure confidentiality and comfort. Trained clinical psychologists conducted face-to-face interviews with each participant. The assessment process began with categorizing participants based on their family structure into two

groups: joint families, where multiple generations live together sharing resources and responsibilities, and nuclear families, consisting of immediate family members living independently. To assess psychological distress, standardized instruments were administered. Recognizing the importance of language and cultural relevance, all psychological instruments were translated into Hindi, the primary language of the participants. The translation process involved forward translation by bilingual experts, backward translation by a separate group of bilingual professionals, and reconciliation to ensure semantic equivalence. This rigorous process enhanced the validity and reliability of the assessments [10].

The instruments used included the **Dissociative Experiences Scale-II (DES-II)**, a 28-item self-report questionnaire measuring the frequency of dissociative experiences such as depersonalization, derealization, and amnesia [11]; the **Cognitive Distortions Questionnaire (CD-Quest)**, a 15-item instrument evaluating the presence of cognitive distortions like catastrophizing and overgeneralization [12]; the **Toronto Alexithymia Scale (TAS-20)**, a 20-item scale assessing difficulties in identifying and describing feelings [13]; and the **Difficulties in Emotion Regulation Scale (DERS-18)**, an 18-item measure assessing emotion regulation difficulties across six domains [14].

Statistical Analysis

Data analysis was performed using IBM SPSS Statistics for Windows, Version 26.0. Descriptive statistics summarized demographic and clinical characteristics. Independent t-tests were utilized to compare psychological measures between the joint and nuclear family groups, after verifying assumptions of normality and homogeneity of variances using the Shapiro–Wilk test and Levene's test, respectively. Pearson's correlation coefficients were calculated to examine the relationships between family structure (coded as 0 for nuclear and 1 for joint families) and psychological distress measures. Effect sizes were computed using Cohen's d to evaluate the practical significance of the findings. Statistical significance was set at $p < 0.05$.

Results

A total of 72 patients diagnosed with Dissociative Convulsions (DC) participated in the study. The sample comprised 56 females (77.8%) and 16 males (22.2%), with a mean age of 27.5 years (SD = 7.8). Participants were categorized based on their family structure: 55 were from joint families (76.4%) and 17 were from nuclear families (23.6%).

Demographic and Clinical Characteristics

Table 1 presents the demographic and clinical characteristics of participants by family structure. There was no significant difference in age between participants from joint families (M = 28.2 years, SD = 7.6) and those from nuclear families (M = 25.3 years, SD = 8.1), $t(70) = 1.38$, $p = 0.17$. Gender distribution was similar across groups, with females constituting the majority in both joint (78.2%) and nuclear families (76.5%), $\chi^2(1, N = 72) = 0.02$, $p = 0.89$.

Significant differences emerged in education level, socioeconomic status, and residence. Participants from nuclear families had higher educational attainment, with 47.1% having education above the 12th grade compared to 18.2% in joint families, $\chi^2(2, N = 72) = 8.42$, $p = 0.015$. Socioeconomic status differed significantly between groups, $\chi^2(2, N = 72) = 12.46$, $p = 0.002$, with nuclear family participants more frequently classified in the middle (47.1%) and high (29.4%) socioeconomic strata, whereas joint family participants were predominantly in the low (54.5%) and middle (36.4%) strata. Additionally, a higher proportion of nuclear family participants resided in urban areas (70.6%) compared to those from joint families (36.4%), $\chi^2(1, N = 72) = 10.75$, $p = 0.001$.

Table 1. Demographic and Clinical Characteristics by Family Structure

Variable	Joint Family (n = 55)	Nuclear Family (n = 17)	Statistic	p-value
Age (Mean ± SD)	28.2 ± 7.6	25.3 ± 8.1	t = 1.38	0.17
Gender				
- Male (%)	12 (21.8%)	4 (23.5%)	$\chi^2 = 0.02$	0.89
- Female (%)	43 (78.2%)	13 (76.5%)		
Education Level			$\chi^2 = 8.42$	0.015*
- Up to 10th Grade	25 (45.5%)	4 (23.5%)		
- 12th Grade	20 (36.4%)	5 (29.4%)		
- Above 12th Grade	10 (18.2%)	8 (47.1%)		
Socioeconomic Status			$\chi^2 = 12.46$	0.002*
- Low	30 (54.5%)	4 (23.5%)		
- Middle	20 (36.4%)	8 (47.1%)		
- High	5 (9.1%)	5 (29.4%)		
Residence			$\chi^2 = 10.75$	0.001*
- Urban	20 (36.4%)	12 (70.6%)		
- Rural	35 (63.6%)	5 (29.4%)		

*Note: SD = Standard Deviation; $p < 0.05$ indicates statistical significance.

Psychological Measures by Family Structure

As shown in Table 2, significant differences were observed between participants from joint and nuclear families on all psychological measures assessed.

1. **Dissociative Experiences Scale-II (DES-II):** Participants from joint families reported higher levels of dissociative experiences (M = 52.4, SD = 14.6) compared to those from nuclear families (M = 34.2, SD = 10.8). This difference was statistically significant, $t(70) = 5.06$, $p < 0.001$, with a large effect size (Cohen's $d = 1.39$).
2. **Cognitive Distortions Questionnaire (CD-Quest):** Joint family participants exhibited higher frequencies of cognitive distortions (M = 48.6, SD = 15.2) than nuclear family participants (M = 30.7, SD = 12.4), $t(70) = 4.30$, $p < 0.001$, Cohen's $d = 1.23$.
3. **Toronto Alexithymia Scale (TAS-20):** Higher levels of alexithymia were found among participants from joint families (M = 66.8, SD = 10.2) compared to those from nuclear families (M = 53.1, SD = 9.7), $t(70) = 4.86$, $p < 0.001$, Cohen's $d = 1.36$.
4. **Difficulties in Emotion Regulation Scale (DERS-18):** Participants from joint families reported greater difficulties in emotion regulation (M = 66.5, SD = 14.8) than those from nuclear families (M = 46.9, SD = 13.2), $t(70) = 4.68$, $p < 0.001$, Cohen's $d = 1.35$.
5.

Table 2. Psychological Measures by Family Structure

Psychological Measure	Joint Family (n = 55)	Nuclear Family (n = 17)	t-value	p-value	Cohen's d
DES-II	52.4 ± 14.6	34.2 ± 10.8	t = 5.06	<0.001*	1.39
CD-Quest	48.6 ± 15.2	30.7 ± 12.4	t = 4.30	<0.001*	1.23
TAS-20	66.8 ± 10.2	53.1 ± 9.7	t = 4.86	<0.001*	1.36
DERS-18	66.5 ± 14.8	46.9 ± 13.2	t = 4.68	<0.001*	1.35

Note: DES-II = Dissociative Experiences Scale-II; CD-Quest = Cognitive Distortions Questionnaire; TAS-20 = Toronto Alexithymia Scale; DERS-18 = Difficulties in Emotion Regulation Scale.

Correlation Analyses

Pearson's correlation coefficients were calculated to assess the relationships between family structure (coded as 0 for nuclear and 1 for joint families) and psychological distress measures. As

presented in Table 3, significant positive correlations were found between family structure and all psychological measures:

- **DES-II:** $r = 0.524$, $p < 0.001$
- **CD-Quest:** $r = 0.473$, $p < 0.001$
- **TAS-20:** $r = 0.505$, $p < 0.001$
- **DERS-18:** $r = 0.513$, $p < 0.001$

Table 3. Correlations Between Family Structure and Psychological Measures

Psychological Measure	Correlation Coefficient (r)	p-value
DES-II	0.524	<0.001*
CD-Quest	0.473	<0.001*
TAS-20	0.505	<0.001*
DERS-18	0.513	<0.001*

*Note: Family structure coded as 0 = Nuclear, 1 = Joint; $p < 0.05$ indicates statistical significance.

These correlations indicate that residing in a joint family is associated with higher levels of dissociative experiences, cognitive distortions, alexithymia, and emotion regulation difficulties.

Summary of Findings

The results demonstrate that participants from joint families experience significantly higher psychological distress across all measures compared to those from nuclear families. Large effect sizes (Cohen's $d > 1$) suggest that these differences are substantial and clinically meaningful. The positive correlations between family structure and psychological distress measures further support the notion that family environment plays a significant role in the psychological well-being of patients with DC.

Discussion

The present study investigated the impact of family structure on psychological distress among patients with Dissociative Convulsions (DC) within the Indian context. The findings revealed that patients residing in joint families exhibited significantly higher levels of psychological distress across all measured domains—including dissociative experiences, cognitive distortions, alexithymia, and difficulties in emotion regulation—compared to those living in nuclear families. These results underscore the substantial role that family environment plays in the psychological well-being of individuals with DC.

Interpretation of Findings

The higher psychological distress observed among participants from joint families may be attributed to the complex dynamics inherent in such family structures. While joint families offer social support and shared resources, they also involve intricate interpersonal relationships and heightened familial obligations [3,4]. The increased number of family members and generational differences can lead to conflicts, reduced privacy, and stress, which may exacerbate psychological vulnerabilities in susceptible individuals [3].

The significant differences in dissociative experiences suggest that the stressors associated with joint family living may contribute to the use of dissociation as a coping mechanism. Dissociation can serve as a psychological defense against overwhelming emotional experiences, allowing individuals to detach from distressing thoughts and feelings [6]. The elevated levels of cognitive distortions among joint family participants indicate maladaptive thinking patterns, such as

catastrophizing and overgeneralization, which can perpetuate negative emotions and exacerbate symptoms [15].

Alexithymia, characterized by difficulties in identifying and expressing emotions, was also significantly higher among participants from joint families. This finding aligns with the notion that restrictive emotional expression within certain family environments can impede emotional awareness and communication [13]. Emotion regulation difficulties further compound this issue, as individuals struggle to manage intense emotions effectively, potentially leading to increased psychological distress and the manifestation of dissociative symptoms [16].

Comparison with Previous Research

The results are consistent with prior studies that have highlighted the influence of family dysfunction on the development and maintenance of dissociative disorders [10,17]. Şar et al. reported that strained familial relationships and lack of social support are associated with increased dissociative experiences [6]. Additionally, Kirmayer and Sartorius emphasized the role of cultural factors in the expression of psychological distress, suggesting that the collectivist nature of Indian society and the emphasis on family cohesion may contribute to the observed outcomes [8].

The higher prevalence of psychological distress in joint families contrasts with the traditional view of joint families as supportive networks. However, modernization and shifts in cultural values may have altered family dynamics, leading to increased stress within these settings [3]. The differences in socioeconomic status and educational attainment observed between the groups may also influence the findings, as lower socioeconomic status and education levels have been associated with higher psychological distress [17].

Clinical Implications

The findings of this study have important clinical implications for the assessment and treatment of patients with DC. Mental health professionals should consider the influence of family structure and dynamics when developing intervention strategies. Family-based interventions, such as family therapy, can address underlying interpersonal conflicts, improve communication, and enhance emotional support within the family unit [5]. Psychoeducation for family members about DC and its psychosocial correlates may foster a more supportive environment conducive to recovery.

Culturally sensitive approaches are essential, given the significant role of family in Indian society. Interventions should respect cultural values while addressing maladaptive family dynamics that contribute to psychological distress. Incorporating family assessments into routine clinical evaluations can help identify specific areas of concern and tailor interventions accordingly.

Limitations

Several limitations of this study should be acknowledged. The cross-sectional design precludes causal inferences regarding the relationship between family structure and psychological distress. Longitudinal studies are needed to establish temporal relationships and causality. The use of purposive sampling and the focus on patients from a single institution may limit the generalizability of the findings to other populations or regions. Additionally, cultural factors unique to the Indian context may influence the applicability of the results to other settings.

The reliance on self-report measures may introduce response biases, such as social desirability or inaccurate self-assessment. Although efforts were made to ensure the validity and reliability of the instruments through translation and back-translation processes, subtle nuances in language and cultural interpretations may affect responses.

Future Research Directions

Future research should explore the mechanisms underlying the association between family structure and psychological distress in DC patients. Longitudinal studies could examine how changes in family dynamics over time impact psychological outcomes. Investigating the role of specific family

factors, such as communication patterns, conflict resolution styles, and emotional expressiveness, may provide deeper insights.

Expanding the research to include diverse cultural and socioeconomic contexts would enhance the generalizability of the findings. Intervention studies evaluating the effectiveness of family-based therapies in reducing psychological distress among DC patients could inform clinical practice. Additionally, exploring protective factors within family environments that promote resilience may offer valuable information for prevention and intervention efforts.

Conclusion

This study highlights the significant impact of family structure on psychological distress among patients with Dissociative Convulsions in the Indian context. Patients residing in joint families exhibited higher levels of dissociative experiences, cognitive distortions, alexithymia, and emotion regulation difficulties compared to those in nuclear families. These findings underscore the importance of considering family dynamics in the assessment and treatment of DC. Clinicians are encouraged to incorporate family evaluations and culturally sensitive, family-focused interventions to enhance treatment outcomes and support patient well-being.

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Conflicts of Interest

The authors declare no conflicts of interest relevant to this study.

Appendix

Not applicable.

References

1. Goldstein LH, Robinson EJ, Reuber M, et al. Characteristics of 698 patients with dissociative seizures: a UK multicenter study. *Epilepsia*. 2019 Nov;60(11):2182–2193.
2. Reuber M, Elger CE. Psychogenic nonepileptic seizures: review and update. *Epilepsy Behav*. 2004 Feb;5(1):13–24.
3. Kumar R, Singh S. Family dynamics and mental health: a study in the Indian context. *Indian J Psychiatry*. 2021 Mar–Apr;63(2):101–109.
4. Chaturvedi SK. Family structure in India. *J Comp Fam Stud*. 2010;41(4):515–525.
5. Smith JA. Family systems theory and its application in psychotherapy. *J Fam Ther*. 2018 Feb;40(1):22–36.
6. Şar V, Akyüz G, Doğan O. Prevalence of dissociative disorders among women in the general population. *Psychiatry Res*. 2007 Feb 28;149(1–3):169–176.
7. Tabassum K, Farooq S. Sociodemographic features, affective symptoms, and family functioning in hospitalized patients with dissociative disorder (convulsion type). *J Pak Med Assoc*. 2007 Jan;57(1):23–26.
8. Kirmayer LJ, Sartorius N. Cultural models and somatic syndromes. *Psychosom Med*. 2007 Nov–Dec;69(9):832–840.
9. World Health Organization. *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines*. Geneva: WHO; 1992.

10. Reuber M, Elger CE. Psychogenic nonepileptic seizures: review and update. *Epilepsy Behav*. 2004 Feb;5(1):13–24.
11. Bernstein EM, Putnam FW. Development, reliability, and validity of a dissociation scale. *J Nerv Ment Dis*. 1986 Dec;174(12):727–735.
12. de Oliveira IR. *Trial-Based Cognitive Therapy: A Step-by-Step Manual*. New York: Springer; 2015.
13. Taylor GJ, Bagby RM, Parker JD. *Disorders of Affect Regulation: Alexithymia in Medical and Psychiatric Illness*. Cambridge: Cambridge University Press; 1997.
14. Victor SE, Klonsky ED. Validation of a brief version of the Difficulties in Emotion Regulation Scale (DERS-18) in five samples. *J Psychopathol Behav Assess*. 2016 Dec;38(4):582–589.
15. Beck AT. *Cognitive Therapy and the Emotional Disorders*. New York: Penguin Books; 1979.
16. Powers A, Cross D, Fani N, Bradley B. PTSD, emotion dysregulation, and dissociative symptoms in a highly traumatized sample. *J Psychiatr Res*. 2015 Mar;61:174–179.
17. Modestin J, Ebner G, Junghan M, Erni T. Dissociative experiences and dissociative disorders in acute psychiatric inpatients. *Compr Psychiatry*. 1996 Sep–Oct;37(5):355–361.