

# Clinical Patterns of Dissociative Disorder in In-Patients from Dakshina Kannada District across Two Decades: A Retrospective Study in a Tertiary Care Hospital

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## ABSTRACT

**Background:** Dakshina Kannada (D.K.), a coastal district of Karnataka, is a pilgrimage centre. It has many shrines and is rich in culture and tradition. Hence, trance and possession disorders are believed to be more common in this coastal region. We aimed to assess the change in the trend of trance and possession disorders and other dissociative disorders across two decades by retrospective chart review method.

**Methods:** Subjects of the study included in-patients hailing from Dakshina Kannada district, admitted and discharged from psychiatry wards of Father Muller medical college in the years 1999, 2009 & 2018 & diagnosed to have one or the other subtypes of dissociative disorders, according to ICD-10. Subtypes of dissociative disorder were recorded and demographic data collected. Fischer's exact test was used to test the significance.

**Results:** The frequency of dissociative disorders among inpatients hailing from D.K district was 2.13%, 2.03% & 0.9% in 1999, 2009 & 2018 was respectively. Dissociative motor disorder was found to be the most common subtype (47% and 23% respectively) in the year 1999 & 2009, whereas Trance & possession disorder was the most common subtype (60%) in 2018. Across these two decades dissociative disorder was found to be more common in those aged <25yrs, married, Hindu by faith, hailing from rural location of residence & belonging to lower socio-economic status. Female preponderance was seen across all subtypes of dissociative disorders.

**Conclusion:** The frequency & pattern of dissociative disorder was similar in 1999 & 2009, whereas the frequency declined significantly in 2018. Trance & possession was most common dissociative disorder in 2018 in contrast to the dissociative motor disorders in 1999 & 2009. Unlike in the West, dissociative identity disorders were rarely diagnosed; instead, possession states were commonly seen in the Indian population, indicating cross-cultural disparity.

**Key words:** Clinical pattern, dissociative disorders, Dakshina Kannada

## INTRODUCTION

Dissociation is defined as a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment. <sup>(1)</sup> It is a defensive mental process to

exigency, a "shut-off mechanism" against severe anxiety and severe traumatic events, especially which involve serious threat to

health or life. <sup>(2)</sup> Dissociative disorders constitute 2.3-13% of all psychiatry OPD cases. <sup>(3)</sup> Clinic-based studies have reported high rates of dissociative disorders in the Indian patients when compared to western population. <sup>(1,4)</sup> It has been argued that the cross-cultural variation in rates of the disorder is related to the possibility that Indian culture discourages direct expression

of emotional distress, and that physical symptoms are a common way of expressing psychological distress. <sup>(4)</sup> Certain psychiatric disorders are restricted to particular cultures & these culture-specific syndrome are a mixture of symptoms including psychiatric and somatic manifestations that are thought to be a recognizable ailment just inside a particular society or culture. The role of culture has been found to be both pathogenic and pathoplastic. <sup>(5,6)</sup> Cross-cultural variations in psychopathology of ICD-10 disorders have gained considerable visibility in the last few decades. Religious and spiritual dimensions of life are among the most important cultural factors structuring human experiences, beliefs, values, behavior and illness pattern. <sup>(7)</sup>

Dakshina Kannada (D.K) is a district in Karnataka which is rich in its cultural and traditional beliefs with possession rituals like Bhutha Kola (Spirit worship), Nagamandala (Serpent worship), Siri worship etc being a part of it. <sup>(8)</sup> To the best of our knowledge there are no studies that probe into the pattern of dissociative disorders in D.K district. Hence we aimed to: (1) Find out the frequency and nature of dissociative disorders in this part of the country (2) Understand the clinical patterns of dissociative disorder over two decades. (3) The association of socio-demographic characteristics with the disorder.

## **MATERIALS & METHODS**

The study was conducted in Father Muller Medical College Hospital, Kankanady, Mangalore. It is a tertiary care centre & is considered one of the best psychiatric centres in Karnataka. The institute has a separate building meant exclusively for the department of psychiatry called "The Mental Health Care Centre" (MHCC) run with the valid license as per the Indian Mental Health Act (MHA) of 1987. The Psychiatric wards are divided into a "Family Psychiatry Ward" (Wherein a Family member/Caretaker stays with the

patient), with 55 Beds (40 Males, 15 Females) and "General Psychiatry Wards" (Wherein patients stay independently without a caretaker or family member) with 89 Beds. This institute was the largest & the only Psychiatric ward in the city & catered for patients from D.K district, the neighbouring districts & states till about 2009-2010.

After receiving ethical clearance from the Institution, In-Patient charts of all patients hailing from Dakshina Kannada admitted and discharged from psychiatry ward in the year 1999, 2009 & 2018 were reviewed. Data from those patients diagnosed as dissociative disorder were recorded.

### **Exclusion criteria:**

1. In-Patients hailing from other areas of residence.
2. Those patients diagnosed as dissociative disorder but not admitted in psychiatry wards.

Data were collected using a semi-structured proforma which included the socio-demographic characteristics of patients & the subtypes of Dissociative disorder, according to ICD-10.

### **Statistical Analysis:**

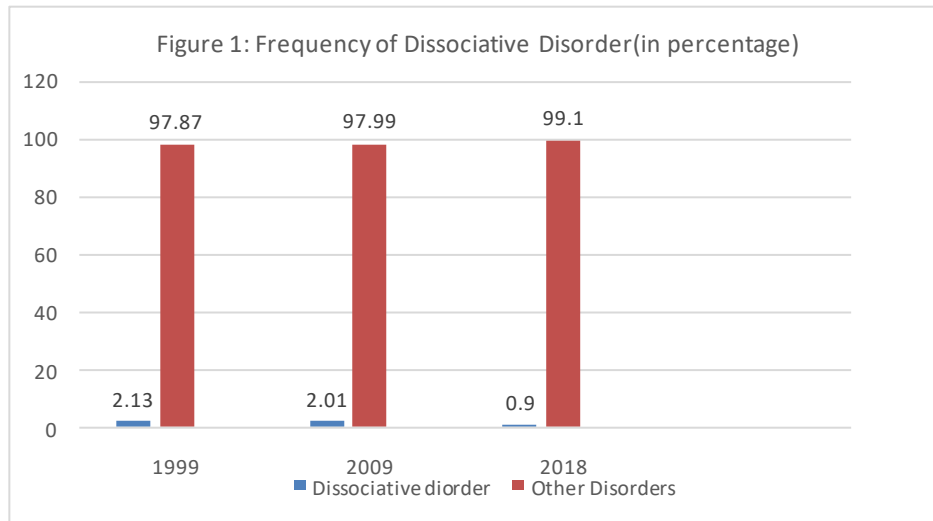
Fischer's exact test was used to calculate the statistical significance. The data about various parameters categorized according to socio-demographic characteristics & subtypes of dissociative disorders were entered into Microsoft Excel. Statistical analysis was carried out with Statistical Package for Social Sciences (SPSS) 20.0 version.

## **RESULTS**

The total number of In-patient admissions in the year 1999, 2009 & 2018 were 963, 874 & 1683 patients respectively. Among this 796 (82.65%), 645 (73.79%) & 1117 (66.36%) patients hailed from Dakshina Kannada district in the respective years.

The frequency of dissociative disorders (Figure 1):

The frequency of Dissociative disorders was found to be 17/796 (2.13%),13/645(2.01%) & 10/1117(0.9%) among the Inpatients admitted in Psychiatric wards in 1999,2009 & 2018 respectively.

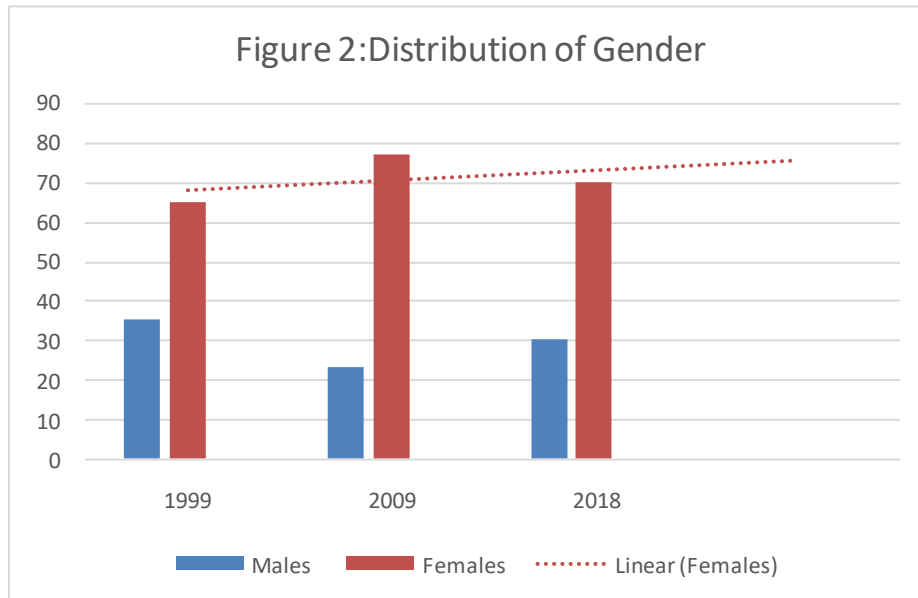


### Socio-demographic Variables (Table 1):

Dissociative disorders were found to be more frequent among females & this preponderance was seen across two decades (Figure 2),but this difference was not statistically significant (p=0.905). Dissociative disorder was found to be more common in those aged less than 25 years, with primary education, married & belonged to rural location of residence & Hindu by faith. The socio-demographic variables associated with dissociative disorders were similar across these two decades. Statistical analysis suggests that the chances of being affected by dissociative disorder over these years were not dependent on any of the socio-demographic variables studied.

**Table 1: Socio-demographic characteristics of patients with dissociative disorder**

Socio-demographic variables	1999			2009			2018			P value
	Male(6)	Female (11)	Total (17)	Male(3)	Female(10)	Total(13)	Male (3)	Female (7)	Total (10)	
Age										0.4611
<18yrs	-	-	-	1(7.69%)	1(7.69%)	2(15.38%)	-	-	-	
18-25yrs	4(23.52%)	7(41.17%)	11(64.70%)	1(7.69%)	5(38.46%)	6(46.15%)	2(20%)	6(60%)	8(80%)	
26-35rs	1(5.88%)	2(11.76%)	3(17.64%)	1(7.69%)	2(15.38%)	3(23.07%)	1(10%)	1(10%)	2(20%)	
36-45yrs	1(5.88%)	2(11.76%)	3(17.64%)	-	2(15.38%)	2(23.07%)	-	-	-	
46-55ys	-	-	-	-	-	-	-	-	-	
>56yrs	-	-	-	-	-	-	-	-	-	
Location of residence										1.0000
Rural	5(29.41%)	9(52.94%)	14(82.35%)	3(23.07%)	7(53.84%)	10(76.92%)	3(30%)	5(50%)	8(80%)	
Urban	1(5.88%)	2(11.76%)	3(17.64%)	-	3(23.07%)	3(23.07%)	-	2(20%)	2(20%)	
Religion										0.8205
Hindu	4(23.52%)	9(52.94%)	13(76.47%)	2(15.38%)	6(46.15%)	8(61.53%)	2(20%)	4(40%)	6(60%)	
Muslim	1(5.88%)	2(11.76%)	3(17.64%)	-	3(23.07%)	3(23.07%)	1(10%)	2(20%)	3(30%)	
Christian	1(5.88%)	-	1(5.88%)	1(7.69%)	1(7.69%)	2(15.38%)	-	1(10%)	1(10%)	
Education										0.3725
Illiterate	1(5.88%)	1(5.88%)	2(11.76%)	1(7.69%)	1(7.69%)	2(15.38%)	-	-	-	
Primary	4(23.52%)	8(47.05%)	12(70.58%)	1(7.69%)	5(38.46%)	6(46.15%)	3(30%)	2(20%)	5(50%)	
Secondary	1(5.88%)	2(11.76%)	3(17.64%)	1(7.69%)	2(15.38%)	3(23.07%)	-	2(20%)	2(20%)	
Intermediate	-	-	-	-	2(15.38%)	2(15.38%)	-	2(20%)	2(20%)	
Graduate	-	-	-	-	-	-	-	1(10%)	1(10%)	
Postgraduate	-	-	-	-	-	-	-	-	-	
Marital status										0.6267
Married	4(23.52%)	8(47.05%)	12(70.58%)	2(15.38%)	9(69.23%)	11(84.61%)	2(20%)	4(40%)	6(60%)	
Single	2(11.76%)	3(17.64%)	5(29.41%)	1(7.69%)	1(7.69%)	2(15.38%)	1(10%)	3(30%)	4(40%)	



### Subtypes of Dissociative disorder (Table 2):

In 1999, dissociative motor disorder were found to be the highest (47.05%) followed by dissociative convulsion(23.52%), dissociative stupor(11.77%)&mixed dissociative disorder(11.77%).In 2009 , dissociative motor disorder and dissociative stupor were of equal frequency(23.07%) followed by dissociative convulsions and transient dissociative disorder occurring in childhood and adolescents(15.38% each). However, in 2018, Trance & possession disorder was the most common diagnosis constituting 60% of cases. This is in contrast to the previous decade where its frequency was negligible (0% & 7.69% respectively). Statistical analysis suggest that being affected by subtypes dissociative disorder over the years do not depend on sex of the patients.

Table 2: Subtypes of Dissociative disorders

Year	1999			2009			2018			P value
	Male (6)	Female (11)	Total (17)	Male(3)	Female(10)	Total(13)	Male (3)	Female (7)	Total (10)	
Dissociative amnesia	-	-	-	-	1(7.69%)	1(7.69%)	-	1(10%)	1(10%)	0.905
Dissociative stupor	1(5.88%)	1(5.88%)	2(11.76%)	-	3(23.07%)	3(23.07%)	-	-	-	
Trance & possession disorder	-	-	-	-	1(7.69%)	1(7.69%)	2(20%)	4(40%)	6(60%)	
Dissociative motor disorder	3(17.64%)	5(29.41%)	8(47.05%)	1(7.69%)	2(15.38%)	3(23.07%)	1(10%)	2(20%)	3(30%)	
Dissociative convulsion	1(5.88%)	3(17.64%)	4(23.52%)	1(7.69%)	1(7.69%)	2(15.38%)	-	-	-	
Dissociative anaesthesia & sensory loss	-	1(5.88%)	1(5.88%)	-	-	-	-	-	-	
Mixed dissociative disorder	1(5.88%)	1(5.88%)	2(11.76%)	-	-	-	-	-	-	
Transient dissociative disorder occurring in childhood & adolescents	-	-	-	1(7.69%)	1(7.69%)	2(15.38%)	-	-	-	
Dissociative disorder, unspecified	-	-	-	-	1(7.69%)	1(7.69%)	-	-	-	

### DISCUSSION

This is the first study which studied the clinical patterns of dissociative disorder across two decades, considering the

cultural context & its influence on psychopathology. However, a similar study was conducted in a psychiatric institute in India which studied the clinical patterns of

dissociative disorders over a decade. <sup>(9)</sup> They included both out-patients & inpatients diagnosed with dissociative disorders in 1999 & 2008, but did not take cultural aspects in the area into consideration. We included only inpatients hailing from Dakshina Kannada District.

The frequency of Dissociative disorders was found to be 2.13%, 2.01% & 0.9% among the Inpatients admitted in Psychiatric wards in 1999, 2009 & 2018 respectively. This was similar to another study by Nandi et al (1992), who studied the prevalence of dissociative disorders in two villages- Gambhirgachi and Paharpur in 1972 & repeated the survey after 10 years in the former village and after 15 years in the latter one. In Gambhirgachi, the rate of hysteria dropped from 16.9 to 4.6 per 1000 in 10 years, and in Paharpur it dropped from 32.3 to 2.05 per 1000 in 15 years. The survey showed that the total mental morbidity remained the same & the decline in dissociative disorder was counterbalanced by an increase in the prevalence of depression. <sup>(10)</sup> Earlier studies have shown a prevalence of 1.5-11.5/1000 among inpatients. <sup>(3,9)</sup>

Some epidemiological studies from India have reported that these disorders are rare, which could be because of the transient nature of the illness & low cultural sensitivity of instruments of assessments. <sup>(4)</sup> Moreover, the clinic based samples are biased. Most of the cases attending a tertiary care centres are referred, severe in intensity & have comorbidities.

The decline in the frequency of dissociative disorders in our study could be because we included only inpatients admitted in psychiatric wards. A large proportion of people also tend to attribute their psychiatric ailments to physical problems and consequently, visit the general physicians before reaching the mental health professionals. Patients with dissociative disorders frequently present in out patient psychiatry & neurology units & medical in-patient wards where they would

be admitted for evaluation. Previous studies have shown that dissociative disorders constitute 6-15% of the OPD diagnoses, 1% in neurology clinics & 6.36% in in-patients referred to consultation -liaison unit. <sup>(3,11)</sup> In addition to this, most patients presenting with dissociative symptoms are eventually diagnosed to have depressive or anxiety disorders, decreasing the overall frequency of dissociative disorders.

We found that dissociative disorders were more frequently seen among females & this preponderance was seen across the two decades, but it was not statistically significant. Among the patients who were diagnosed with dissociative disorder, 64.7%, 76.92% & 70% were females in 1999, 2009 & 2018 respectively. This is similar to previous studies in which females usually outnumbered males. <sup>(3,12-18)</sup> Some studies have shown the prevalence to be as high as 80-88%. <sup>(19)</sup> This is understandable as women as a gender are not just suppressed but also over stressed with entwined religious rituals & hence more prone to dissociative disorders. Most of the patients in our study were less than 25 years, which was similar to that in previous studies. <sup>(3,12,14,16,20,21)</sup> This age group was noticed to be the vulnerable age group across two decades. This could be because of the major changes occurring in people in this age group, which includes education, marriage or relationship, occupation. Inability to cope with these cross roads in life could serve as a precipitating factor. <sup>(22)</sup>

Most of the patients diagnosed with dissociative disorders were married, which is similar to earlier studies. Women enter into a new environment with marriage. Maladjustment with in-laws plays havoc on their psyche. These stressful life events may be contributing to the higher frequency in married women. <sup>(22)</sup> However, there are a few studies contrary to this, wherein dissociative disorders were more common among patients who were single, especially females. <sup>(19)</sup>

Most of the patients with dissociative disorders in our study were educated upto 5<sup>th</sup> std, except one patient who was a graduate & presented with dissociative amnesia. Earlier studies also show similar results. (3,12,13,19) Poor coping mechanisms & inability to procure a good job & income might serve as stressors in these patients.

In terms of religion, Hindus were found to be more frequently diagnosed with dissociative disorder, which was similar to earlier studies. (12,23) This difference was seen across two decades too. This could be because majority of the patients in the study sample were Hindus, a predominant religion in India. Hindus in D.K district strongly believe in the “Bhutas” who are often thought to be the incarnations (avatars) or messengers (ganas) of Hindu gods. The Bhutarituals (called kolas) are performed by impersonators who serve as mediators between the deities & devotees belong to different sub castes of Hinduism.

Most of the patients belonged to rural areas & lower socioeconomic status. These findings are similar to earlier studies. Literatures on dissociative disorders have shown that patients belonging to these groups are more likely to present the psychological distress in somatic symptoms, rather than psychological ones. (19) This is strengthened by our studied, which shows that this difference continued across two decades.

Among the subtypes of dissociative disorders, dissociative motor disorder was the most common in 1999 & 2009. However, trance & possession disorders which were infrequent across the first decade, was the most common subtype in 2018. Earlier studies show that dissociative convulsions are the most common followed by trance & possession, amnesia & fugue states. However, some authors claim atypical dissociative disorders are the most common presentations of dissociative disorders in Indian patients. (3,17,24-27) This is in contrast to the studies from North America, where

there is an exponential rise in Multiple Personality Disorders. (3) When patients present with persistent physical symptoms like inability to move or seizures, which are considered to be life threatening they are likely to be brought to clinical attention more frequently than individuals with other symptoms. Greater attention to this symptom may also be responsible for perpetuation due to social learning and modelling. (4) In India, Possession phenomena are considered as a part of normal range of human experience. However, its important to acknowledge that besides the non pathological forms of trance & possession phenomena, pathological forms exist & produce significant impairment. (28) In Southern India, which includes the D.K district, possession per se is not considered pathological & being possessed by a god or a benevolent spirit is seen as a gift. It is only when the possession agent is considered a bad spirit that traditional healing is sought. Indians believe in magical cure resulting from eradication of these evils through the goodwill of the Almighty. When the possession agent is the soul of a deceased human being, the condition is seen as pathological & medical help is frequently preferred.

It is conspicuous from this study that trance & possession disorders, which have a strong cultural bearing has been increasingly diagnosed in 2018, whereas the frequency of the same was negligible in 1999(n=0) & 2009(n=1). The increase in the frequency of patients with trance & possession could be because of the awareness among the general population of its psychiatric origin. (29) It could also be indicative about the decreasing stigma associated with mental illness & patient's seeking treatment for their ailments. However, a significant percentage of patients seen in psychiatric practice in India may not fit into the defined subcategories of dissociative (conversion) disorders of the current systems of classification. (30)

The limitations of our study include: (1) Inherent limitations due to the methodology used, which is a retrospective chart review & limited usage of structured assessments. (2) It was a hospital-based sample and hence the findings cannot be generalized. (3) Sample size was too small (4) Lack of control group .

## CONCLUSION

This study highlights the role of culture & the traditions in shaping the psychopathology. The clinical patterns & frequency of dissociative disorders have shown a visible change. Future studies with a larger sample size, including inpatient & outpatient population, using structured interviews and assessment of patients prospectively might yield better results.

## REFERENCES

1. Sar V, Epidemiology of Dissociative disorders: an overview, *Epidemiology Research International*, Hindawi Publishing Corporation, Vol 2011, Article ID 404538:1-8.
2. Raheel Mushtaq, Sheikh Shoib, Tasleem Arif, Tabindah Shah, and Sahil Mushtaq, First Reported Case of Lorazepam-Assisted Interview in a Young Indian Female Presenting with Dissociative Identity Disorder and Improvement in Symptoms after the Interview: a case report, *Case Reports in Psychiatry*, Hindawi Publishing Corporation, Vol 2014, Article ID 346939:1-4.
3. Ahuja N, Hebbar S, Dissociative Disorders, Chapter 20, Text book of Postgraduate Psychiatry edited by Vyas JN & Ghimire SM, 3<sup>rd</sup> edition, Vol 1, Jaypee Brothers Medical Publishers Ltd, New Delhi, 2016:603-629.
4. Prabhswamy M, Jairam R, Srinath S, Girimaji S, Seshadri PS, A systematic chart review of Inpatient population with childhood dissociative disorder; *J Indian Assoc Child Adolesc Ment Health* 2006, 2(3):72-77.
5. Kihlstrom JF. Dissociative disorders; *Annu Rev Clin Psychol*. 2005, Vol 1:227-53.
6. Somer E. Culture-bound dissociation: a comparative analysis, *Psychiatr Clin North Am* 2006, 29(1):213-26.
7. Suzuki Masataka. Bhuta and Daiva: Changing cosmology of rituals and narratives in Karnataka; *Senri Ethnological studies*, 2008, Vol 71:51-85.
8. Thakur S, Pirta RS. Mental health and cognitive representations of people experiencing spirit possession; *Journal of Indian Academy of Applied Psychology* 2009, 35(2):203-209.
9. Chaturvedi SK, Desai G, Shaligram D. Dissociative disorders in a psychiatric institute in India-A selected review and pattern over a decade, *Int J Soc Psychiatry* 2010, Vol 56:533-539.
10. Nandi DN et al, Is hysteria on the wane? :A community survey in West Bengal, India, *Br J Psychiatry*, 1992, Vol 160:87-91.
11. Patra P, Divinakumar KJ, Prakash J, Patra B, Chakraborty R, Clinico-psycho-social profile of patients brought under consultation-liaison psychiatry care in a large tertiary care referral hospital, *Ind Psychiatry J* 2017, Vol 26:24-7.
12. Bagadia VN et al, A prospective study of demographic factors of 192 cases of hysteria, *Indian J Psychiatry*, 1973, 15(2): 179-86.
13. Wig NN et al, A follow-up study of hysteria, *Indian J Psychiatry*, 1982, 24(2): 120-5.
14. Vyas JN et al, Aversion therapy in hysterical fits, *Indian J Psychiatry*, 1977, 19(4):27-30.
15. Hafeiz HB, Hysterical conversion: A prognostic study, *Br J Psychiatry*, 1980, Vol 136:548-51.
16. Hafeiz HB, Clinical aspects of hysteria. *Acta Psychiatr Scand*, 1986, Vol 73:676-80.
17. Trivedi JK et al, A clinical study of hysteria in children & adolescents, *Indian J Psychiatry*, 1982, Vol 24:70-4.
18. Somasundaram O et al, Hysteria in children & adolescents, *Indian J Psychiatry*, 1974, Vol 16:274-82.
19. Khattak T, Sociodemographic Features, Affective Symptoms and Family Functioning in Hospitalized Patients With Dissociative Disorder (Convulsion Type), *J Pak Med Assoc*, 2007, 57(1):23-26.
20. Subramanian D et al, A clinical study of 276 patients diagnosed as suffering from hysteria, *Indian J Psychiatry*, 1987, Vol 29:283-6.

21. Marfatia JC, Psychiatric problems of children, Bombay: Popular Prakashan; 1971.
22. Pathapati LP, Prabhakar Y, Nallapaneni RN, Thatikonda PS, A study to assess the prevalence of possession disorder in a district of South India, AP J Psychol Med 2014; 15(1): 111-6.
23. Reddy LS, Patil NM, Nayak RB, Chate SS, Ansari S. Psychological dissection of patients having dissociative disorder: A cross-sectional study. Indian J Psychol Med 2018;40:41-6. 28. Saxe et al. Dissociative disorders in psychiatric inpatients; Am J Psychiatry, 1993; 150(7):1037-42.
24. Das PS et al, Classification of dissociative states in DSM-III-R & ICD-10: A study on Indian outpatients, BR J Psychiatry, 1991, Vol 159:425-7.
25. Chandrashekar R et al, Hysterical neurosis: a follow-up study, Acta Psychiatr Scand, 1994, Vol 89:174-9.
26. Alexander VK, A case study of multiple personality, J Abnorm Soc Psychol, 1956, Vol 52:272-6.
27. Nagaraja J, Hysterical twilight & fugue states in early adolescence, Indian J Psychiatry, 1969, Vol 11:46.
28. Saxe et al. Dissociative disorders in psychiatric inpatients, Am J Psychiatry. 1993; 150(7):1037-42.
29. Avasthi A, Kate N, Grover S. Indianization of psychiatry utilizing Indian mental concepts. Indian J Psychiatry. 2013;55(2), 136-144.
30. P. J. Alexander S. Joseph A. Das, Limited utility of ICD-10 and DSM-IV classification of dissociative and conversion disorders in India, Acta psychiatrica Scandinavica, 1997, 95(3), 177-182.

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