Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/16600
DOI URL: http://dx.doi.org/10.21474/IJAR01/16600

RESEARCH ARTICLE

STUDY ON CLINICAL PRESENTATIONS, LEVEL OF STRESS & ROLE OF FAMILY ENVIRONMENT AMONG DISSOCIATIVE DISORDER PATIENTS

Gour Rahul, Reddy Srikanth, Kotadia Hiral, Keshwani Jitendra, Tiwari Apurva and Rathi Pawan
Department of Psychiatry Sri Aurobindo Medical College & PG Institute-Indore (M.P).

Manuscript Info

Manuscript History
Received: 31 January 2023
Final Accepted: 28 February 2023
Published: March 2023

Abstract

Background: Dissociative disorder is a stress-related disorder usually present in adolescent and younger age group. It is also accompanied with significant impairment in activity of daily living and family relationship. Family environment plays important role in initiation and maintenance of symptoms and this put significant burden on family. To assess different types of clinical presentations, level of stress and role of family environment among dissociative disorder patients and check for association between sex distributions.

Material and Method: This cross-sectional descriptive study was carried out on patients with primary diagnosis of dissociative disorder as per ICD-10 criteria coming to psychiatry outpatient department of Sri Aurobindo Medical College and Postgraduate Institute, Indore a premier tertiary care hospital situated at northern part of India, covering, and serving a large catchment area, during the period of 18 months. 80 patients were recruited for the purpose of study. The procedure and rationale for the study was explained to all subjects and informed written consent were taken in their local language. Patients were included after fulfilling inclusion criteria from both inpatients and outpatient department of psychiatry.

Result: In our study, majority of the patients (48.75%) belonged to the age group 18-30 years. The prevalence rates decrease with age. 37.5% of the patients were between the age group 31-40 years and 13.75% were over the age of 40 years. In a study of 80 patients with dissociative (conversion) disorder, 77.5% were females and 22.5% were male. There was female predominance.

Conclusion: Dissociative disorders are more common in females than males. It always occurs in the background of increased stressful life events and in the presence of significant psychosocial stressors. Future studies should be undertaken in a large sample with a prospective design to examine the impact of disease duration and other mediators, such as family type and coping style.

Introduction:-

Dissociative disorder (conversion disorder), is symptoms and signs affecting voluntary motor or sensory function that cannot be explained by a neurological or general medical condition.[1]

Corresponding Author:- Gour Rahul
Address:- Postgraduate Student Department of Psychiatry Sri Aurobindo Medical College & PG Institute-Indore (M.P.).

Prevalent rates of this disorder vary widely across cultures and the population studied. While the DSM-5 estimated the prevalence to be 2-5/100,000, others reported somewhat higher rates.[2]

Dissociative disorder, may develop at any time between early childhood and late old age, it is reported to be most common between 15 and 35 years of age. Dissociative disorder is more prevalent among females compared to males, with a ratio between 2:1 and 10:1.[3]

Dissociative disorder is also more prevalent in rural areas, in developing countries, among people of low socioeconomic classes, among undereducated people and among those with relatively lowmedical knowledge.[4]

As far as presentation of dissociative disorders is concerned, previous studies reported that almost any physical symptom can be produced but most 2 common manifestations are those of similar to motormanifestations of neurological disease, for example: paraparesis, pseudo seizures and aphonia.[5]

The patients with conversion disorder usually report in emergency department with multiple neurological symptoms including weakness, seizures like activity and loss of consciousness. In a hospital-based study, the commonest presenting symptom was found to be 'pseudo seizures', which presented in 45.71% female subjects as compared with 26.65% in male subjects.[6]

In our study we study about the various presentations in Dissociative disorder. Family is the most important institution that man has devised to regulate and integrate his behaviour as he strives to satisfy his basic needs. Family plays an important role in the overall development and well-being of its members. The Family is the first to affect the individual. It is the family which gives the child his first experience of living. Parents are the chief architects in shaping the personality of their child. Secure bonds between parents and their children allow them freedom to grow, explore and gain experience.[7]

According to family system theorists, somatization permits the family to focus attention on illness behaviour while drawing attention away from other conflicts. Marital conflict has frequently been reported in the families of somatising patients, and such families have been found to be less supportive, cohesive, and adaptable than the control families. Somatising behaviour may evolve from strategies developed in childhood to cope with family conflict. These strategies may be adaptive during childhood, but when they persist into adulthood and are used in diverse social environments, they become problematic. Behaviours arising from childhood experiences may be powerfully reinforced by family members or the family system.[8]

The support and involvement of family can play a crucial role in helping someone who is suffering from dissociative disorders. The objective of the present study was to assess the role of family environment of the patients suffering from dissociative disorders.[9]

Stress is considered as a negative process that accounts emotional, cognitive, behavioural and physiological functioning related toadjustment with stressors. Stressors are certain circumstances that disturb or threaten an individual's daily functioning to work and function properly to make adjustments.[10]

There seems to be limited understanding of the mechanism by which psychological stress can convert into physical symptoms. Conversion disorder is attributed to conflicts or recent stressors.[11]

The conversion of emotional arousal to physical symptoms is termed the primary gain while secondary gain refers to the external benefits that may be derived as a result of having symptoms.[12]

The somatic symptomatology of conversion disorder lessens the anxiety and gives rise to la belle indifference, where a patient seems surprisingly careless about their physical complaints. Acute dissociative symptoms may undergo spontaneous resolution following explanation and suggestion. Some patients respond to active rehabilitation. Those with chronic conversion symptoms may need admission to hospital and may undergo psychiatric assessment toreveal underlying depression or even previously hidden psychosis.[13]

Our aim of study was to assessdifferent type of clinical presentation, family environment and the level of stressin patients with conversion disorder.

Material and Methods:-

This cross-sectional descriptive study was carried out on patients with primary diagnosis of dissociative disorder as per ICD-10 criteria coming to psychiatry outpatient department of Sri Aurobindo Medical College and Postgraduate Institute, Indore a premier tertiary care hospital situated at northern part of India, covering, and serving a large catchment area, during the period of 18 months.

Study Centre:

Sri Aurobindo Medical College and Postgraduates Institute, Indore, (M.P). Duration of Study: The study was run through a period of 18 months.

Sample:

80 patients were recruited for the purpose of study.The procedure and rationale for the study was explained to all subjects and informed written consent were taken in their local language.Socio-demographic data and clinical information was collected on a semi-structured Proforma. Family environment scale developed by Harpreet and Chadha (1993) was used to assess the family environment and Perceived Stress scale (PSS) was used to assess the perception of stressin patients with Dissociative disorder.

Inclusion Criteria:

1. Patients, of either gender, visiting the Department of Psychiatry, who are clinically diagnosed as Dissociative disorder according to International Classification of Diseases -10 (ICD-10).
2. Age more than 18 years.

Exclusion criteria:

1. Not willing to provide informed consent for the interview.
2. Patients with any other significant medical or psychiatric comorbidity affecting the assessment.

Tools:

Following scales were used for assessingthe familyenvironment and perception of stress.

Family Environment Scale:[14]

1. Family environment scale developed by Harpreet and Chadha (1993) was used to assess the family environment. The scale consists of 69 items and 8 dimensions (sub scale) like Cohesions, Expressiveness, Conflict, Acceptance & caring, Independence, Active recreational orientation, organization, and Control. Each item of every sub-scale is on a five-point scale of "four to zero." This scale has the reliability of 0.87 and a validity of 0.82.

Perceived stress scale:[15]

1. The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The questions in the PSS ask about feelings and thoughts during the last month. This is a 10 item and Five-point scale of "zero to four."

Ethical aspects:

Study was approved by research review board and ethical committee of the institution. Only those volunteers who are willing to participate in the study and given written consent were included in the study. The interview was conducted in privacy and the confidentiality of the information was ensured.

Statistical Analysis Plan:

1. All the data was collected and analysed. Descriptive studies would be presented using frequency and percentage. Inferential statistics would be first analysed for normalcy of data distribution.
2. Further t-test used for analyse quantitative data and chi square tests used for analyse qualitative data.
3. P value <0.05 would be considered as significant.

Aim and Objectives:-

To assess different types of clinical presentations, level of stress and role of family environment among dissociative disorder patients and check for association between sex distribution.

Result:-

Table 1:- Sociodemographic characteristics:

Socio demographic Characteristics	Domain	N (Frequency)	%
Age Group	18-30 YEARS	39	48.75
	31-40 YEARS	30	37.5
	>40 YEARS	11	13.75
Sex	Female	62	77.5
	Male	18	22.5
Marital status	Divorced	4	5.0
	Married	67	83.75
	Single	8	10.0
	Widow	1	1.25
Education	Illiterate	5	6.25
	Primary	38	47.5
	Secondary	12	15.0
	Higher secondary	11	13.75
	Graduates	14	17.5
Occupation	House wife	53	66.25
	Professional	5	6.25
	Skilled worker	5	6.25
	Semi-skilled worker	11	13.75
	Student	4	5.0
	Unemployment	2	2.5
Religion	Hindu	64	80.0
	Muslim	14	17.5
	Other	2	2.5
Residence	Rural	63	78.8
	Urban	17	21.2
Family type	Joint	16	20.0
	Nuclear	64	80.0
Socio-economic status	Lower	3	3.75
	Upper Lower	58	72.5
	Middle	18	22.5
	Upper Middle	1	1.25

Table 2:- Clinical Variables:

Duration of illness	<1 month	15	18.75
	1-6 month	26	32.5
	7-12 month	23	28.75
	> 1 year	16	20.0
No. of episodes	1 episode	20	25.0
	2-5 episode	44	55.0
	more than 5 episode	13	16.25
	Continous	3	3.75
Psychiatric comorbidity	Present	73	91.25
	Absent	7	8.75
Family history	Present	51	63.75

	Absent	29	36.25

Table 3:-Types of Presentation:

Types of presentation	Frequency (N)	Percentage (%)
Dissociative amnesia	1	1.25%
Dissociative stupor	1	1.25%
Trance and possession attacks	12	15%
Dissociative motor disorders	22	27.5%
Dissociative convulsions	39	48.75%
Dissociative Anaesthesia and sensory loss	2	2.5%
Mixed dissociative disorder	3	3.75%
Total	80	100%

Table 4:- Sex Distribution:

Types of presentation	GENDER DIFFERENCES		
	Female	Male	Total
Dissociative amnesia	1	0	1
	1.6%	0.0%	1.25%
Dissociative stupor	0	1	1
	0.0%	5.6%	1.25%
Trance and possession attacks	10	2	12
	16.1%	11.1%	15.0%
Dissociative motor disorders	18	4	22
	29.0%	22.2%	27.5%
Dissociative convulsions	29	10	39
	46.8%	55.6%	48.75%
Dissociative Anaesthesia and sensory loss	2	0	2
	3.2%	0.0%	2.5%
Mixed dissociative disorder	2	1	3
	3.2%	5.6%	3.75%
Total	62	18	80
	100.0%	100.0%	100.0%

Table 5:- Family Environment:

DOMAIN	N	MEAN	SD
F1 Cohesion	80	40.68	7.376
F2 Expressiveness	80	24.54	7.798
F3 Conflict	80	34.38	7.435
F4 Acceptance & caring	80	36.60	8.281
F5 Recreational orientation	80	28.58	4.397
F6 Independence	80	24.19	8.756
F7 Organisation	80	6.49	2.643
F8 Control	80	10.09	3.191

Table 6 :-Gender Distribution:

DOMAIN	SEX	N	MEAN	SD	T TEST	P VALUE
F1 Cohesion	Female	62	41.79	6.969	2.600	.011*
	Male	18	36.83	7.641		
F2 Expressiveness	Female	62	25.18	8.418	1.370	.175
	Male	18	22.33	4.653		
F3 Conflict	Female	62	32.90	6.360	-3.51	.0007**
	Male	18	39.44	1.338		
F4Acceptanceand caring	Female	62	37.24	8.909	1.292	.200
	Male	18	34.39	5.215		

F5Recreational orientation	Female	62	27.45	4.341	-4.79	.00001**
	Male	18	32.44	2.763		
F6 Independence	Female	62	23.05	9.175	-2.21	.029*
	Male	18	28.11	5.759		
F7 Organization	Female	62	6.37	2.681	-.730	.468
	Male	18	6.89	2.541		
F8 Control	Female	62	10.53	2.963	2.38	.019*
	Male	18	8.56	3.552		

Table 7:- PSS:

DOMAIN	N	MEAN	SD
PSS	80	26.34	3.014

Table 8:- Gender:

DOMAIN	SEX	N	MEAN	SD	T TEST	P VALUE
PSS	FEMALE	62	26.97	2.586	3.746	0.0003*
	MALE	18	24.17	3.434		

Table 9:- Level of Stress:

Domain	Level of stress			TOTAL
	Low	Moderate	High	80
PSS	0	45	35	
	0%	56.25%	43.75%	100%

In our study, majority of the patients (48.75%) belonged to the age group 18-30 years. The prevalence rates decrease with age. 37.5% of the patients were between the age group 31-40 years and 13.75% were over the age of 40 years. In a study of 80 patients with dissociative (conversion) disorder, 77.5% were females and 22.5% were male. There was female predominance. The majority of subjects (80%) were Hindu, followed by Muslim (17.5%). Out of 80 participants, 22.5% were from the middle socioeconomic group,72.5% were from the upper lower socio-economic group, and 3.75% & 1.25% were from the lower and upper middle socio-economic group respectively.

The majority (47.5%) of patients have received primary education, 17.5% had graduated, 15% received secondary education, and 6.25% didn't receive any formal education. In this study, the majority of patients (66.25%) were housewives, 13.75% were semi-skilled workers, 6.25% were skilled workers, 6.25% were professional, 2.5% were unemployed and 5% were students. The majority of patients (83.75%) were married, while 10% were single (unmarried). The majority of patients (80%) were from nuclear families, with the remaining 20% from joint families. 78.75% patients were from rural background, while 21.25% were from urban background. In this study, 63.75% of dissociative (conversion) disorders had a positive family history of psychiatric illness.

The number of episodes of illness ranges from 2 to 5 in 55%, more than 5 in 16.25%, 25% had 1 episode, and 3.75% had continuous illness. In 32.5% of cases, the duration of illness was 1 to 6 months, 28.75% had a duration of 7 to 12 months, 20% had a duration of more than 1 year, and 18.75% had a duration of less than 1 month.

According to ICD-10 (F-44), out of total 80 patients, 39 (48.75%) had dissociative convulsion ,22 (27.5%) had Dissociative motor disorder, and 12 (15%) had trans & possession attacks, while 3 (3.75%) had mixed dissociative disorder and 2 (2.5%) had dissociative anaesthesia and sensory loss. 1 (1.25%) female patient had a dissociative amnesia and 1 (1.25%) male patient had dissociative stupor.

According to the results of family environment scale, under relationship dimension, the mean cohesion score in female and male was 41.79 and 36.83, respectively (P=0.011), which is significant. In expressiveness, the female mean score was 25.18, while the male mean score was 22.33 (P=0.175), which is insignificant. In the conflict domain, the female and male mean scores were 32.90 and 39.44, respectively. In acceptance and caring domain, mean score in female and male were 37.24 and 34.39, respectively. Under personal growth dimensions, the mean score for women in the Active recreational orientation domain was 27.45, whereas the the mean score for men was 32.44. The mean score for Independence domain in women was 23.05 and 28.11 in men. under system maintenance

dimensions, In Organization domain, the mean score in female and male was 6.37 and 6.89, respectively. In the control domain, the mean score for a female was 10.53 and 8.56 for men.

PSS:
In our study, the mean perceived stress score was 26.34. 45 (56.25%)of the 80 patients experienced moderate perceived stress, while 35 (43.75%) experienced high perceived stress. females (mean score=26.97) had significantly higher perceived stress (P<0.05) than males (mean score=24.17).

Discussion:-

In our study, the majority of patients (48.75%) were between the ages of 18 and 30 years. This is consistent with the findings of previous studies conducted by Tabassum et al[16], f deveci et al[17], in which the most common age group is between the ages of 18 and 25. This could be because a young adult faces a lot of psychosocial stressors at this age.

The majority of patients (77.5%) were female. This finding has been replicated by Carson et al[18], Deveci et al[17], and Sar et al[19]in previous studies. The reason could be that women tend to repress emotion, which manifests as physical symptoms, and women are subjected to more bio-psychosocial stressors than men.

The majority ofpatients educated to the primary level (47.5%), These findings are consistent with Sar et al[20], Tezcan et al[21], and Uguz et al[22], which state that dissociative (conversion) disorder is common amongpatients educated to the primary level.

The majority of the patients in this study (66.25%) are housewives, which is consistent with the findings of Sar et al[20], Tezcan et al[21], and Uguz et al[22], who state that conversion disorder is common in patients who do not have personal income.

The majority of the patients (83.75%) were married, which is consistent with the finding of kamala et al[23] but contradictory to Tabassum et al[16], who stated that dissociative (conversion) disorder is more prevalent in singles.

The majority of patients (80%) are from nuclear families, which contradicts Kamala et al[23]'s finding that it is more common in joint families.

Hence, the majority of study participants are female, from low to middle income levels, with a primary school education, married, and housewives. These findings suggest that dissociative (conversion) disorder is more common in people with lower socioeconomic status and education levels, which is consistent with previous research.

In this study, 63.75% of people with dissociative (conversion) disorders had a positive family history of psychiatric illness. These findings are similar to those of Sinyan et al[24] and Deveci et al.[17]

Dissociative convulsions are the most common type of presentation, occurring in 48.75% of patients. This was consistent with previous studies by Devici et al[17] and Kamala et al[23], in which dissociative convulsions were the most common. Dissociativemotor disorders are the second most common presentation (27.5%). Dissociative motor disorder was discovered in 26% of cases by Kamala et al. These figures are comparable to those reported by Akyuz et al[25] (19%) and Uguz et al[22] (22%).

In 32.5% of cases, the duration of illness was one to six months, 28.75% had a duration of seven to twelve months, 20% had a duration of more than one year, and 18.75% had a duration of less than one month.These findings are consistent with the finding of Akyuz et al[25]. Previous research byUguz et al[22]reported that co-morbid psychiatric disorderincrease the treatment duration. As treatment duration increases, we should search for co-morbid psychiatric disorders, low socioeconomic status, a lack of insight, and long-hidden childhood stressful life event or trauma.

Psychiatric comorbidity is prevalent (91.25%) in our study's dissociative (conversion) disorder patients.

In family environment, we discovered Cohesion and expressiveness were found to be low in the family of dissociative (conversion) disorder patients, whereas conflict was found to behigh. This was consistent with previous study by Brown et al.[26] they found that dissociative disorder group reported a significantly higher level of family conflict and a significantly lower level of family cohesion. The incidence of dissociative disorder are raised in an

environment characterized by frequent arguments, emotional distance, and poor support, consistent with the high levels of physical and emotional abuse.Hence,chronic emotional abuse might be the most important factor for the development of dissociative disorder.Independence and active recreational orientation were also found to be low and average respectively in dissociative (conversion) patients.

The mean score for female and male for cohesion are 41.79 and 36.83 respectivelyindicates statistically significant difference for males and females. Femalesperceive the degree of commitment, help and support among the family members for each other more compared to males.

On the area of expressiveness, the mean value for females and males are 25.18 and22.33 respectively which is not statically significant. Femalesdifferinexpressing feelings and thoughts openly among familymembers compared to males however the difference is not statically significant.

On the area of conflict, the mean values for female and male are 32.90 and 39.44 respectively which statistically significant. Females perceive more aggression and conflict among family members when compared to males.

On the area of acceptance and caring the mean values for females and males are 37.24 and 34.39 respectively which is not statistically significant. The results indicate that femalesexperience more unconditional acceptance and care from family memberscompared to malesthough the difference is not statistically significant.

On the area of recreational orientation, the mean values for females and males are 27.45 and 32.44 respectively,the difference is statistically significant. The results indicate males differ significantly compared to females. Males enjoy in participating social and recreational activities than females. In Indian culture males enjoy more freedom and power than females.

On the area of independence, the mean value for female and male are 23.05 and 28.11 respectivelywhich is significant, indicating males perceive their family members as significantly more assertive and independent in taking important decisions when compared to females.

The mean values for female and male for the family organization are 6.37 and 6.89 respectively which is not significant at .05 level indicating no significantdifference between females and males, with respect to planningand taking responsibilities in their families. Though males feel their family being moreorganized compared to females the findings are not statistically significant.

The mean values for females and males of family control area are 10.53 and 8.56 respectively,the difference issignificant at .05 level which indicates females feel more limitations put on them compared to males.

Thus, these finding suggesting that if the family environment is positive, andother family members generate an affective environment that is cohesive/expressive/low conflict, physically abusive events perpetrated by adult family members are less likely to result in elevated dissociation.[27]narang

Perceived stress was moderately high in our study subjects, and it was significantly higher in females. One reason for higher perceived stress in these patients could be female dependence on their family in rural areas and less autonomy in decision making in joint families.These findings were consistent with previous study by singhnk et al[28],in which they found that perceived stress was higher in females those belonging to rural background and joint families.This study has once again established the role of psychosocial factors and perceived stress in dissociative disorders.

Conclusion:-

Dissociative disorders are more common in females than males. It always occurs in thebackground of increased stressful life events and in the presence of significant psychosocial stressors. in our study high perceived stress was also found in patient with dissociativedisorder. So, management of dissociative disorder should also focus on family interventions aimed at reducing family and psychosocial stress.

It is also evident that the family environment in terms of personal development and relationship dimension affects a patient's dissociative disorder symptoms. The cohesion and expressiveness of dissociative disorder patients and high

negative family conflicts are associated to the occurrence or manifestation of dissociative symptoms. Active recreational orientation also plays a role in the development of dissociative symptoms in dissociative disorder patients. Future studies should be undertaken in a large sample with a prospective design to examine the impact of disease duration and other mediators, such as family type and coping style.

Limitation:
It is a hospital-based study rather than a community-based study. We have taken a small sample size. So, we should be cautious in generalizing. The results to the whole population. There is lack of a control group. This study predominantly had upper lower socio-economic status group. Therecould be different presentation for high socio-economic status people and wemust be cautious in generalizing the results to the community.Several mediators of burden such as coping, appraisal, expressed emotions, and social support were notassessed.

Financial support and sponsorship:
Nil

Conflicts of interest:
There are no conflicts of interest.

References:-

1. Vahia V. Diagnostic and statistical manual of mental disorders 5: A sglance. Indian Journal of Psychiatry. 2013;55 (3):220.
2. Ross C, Browning E. The self-report Dissociative Disorders Interview Schedule: A preliminary report. Journal of Trauma & Dissociation. 2016;18(1):31-37.
3. Nimnuan C, Hotopf M, Wessely S. Medically unexplained symptoms. Journal of Psychosomatic Research. 2001;51 (1):361-367.
4. Henningsen P, Zipfel S, Sattel H, Creed F. Management of Functional Somatic Syndromes and Bodily Distress. Psychotherapy and Psychosomatics. 2018;87(1):12-31.
5. Jith A, Narayanan D. Dissociative Motor Disorder. Indian Journal of Psychological Medicine. 2017;39 (1):99-101.
6. Musekamp G, Gerlich C, Ehlebracht-König I, Faller H, Reusch A. Evaluation of a self-management patient education program for patients with fibromyalgia syndrome: study protocol of a cluster randomized controlled trial. BMC Musculoskeletal Disorders. 2016;17 (1).
7. Subramanyam AA, Somaiya M, Shankar S, Nasirabadi M, Shah HR, Paul I, Ghildiyal R. Psychological Interventions for Dissociative disorders. Indian J Psychiatry 2020;62, Suppl S2:280-9.
8. Nugent N, Sledjeski E, Christopher N, Delahanty D. The influence of family environment on dissociation in pediatric injury patients. Clinical Child Psychology and Psychiatry. 2011;16 (4):485-497.
9. Khan MNS, Ahmad S, Arshad N. Birth order, family size and its association with conversion disorders. Pak J Med Sci 2006; 22:38-42.
10. Bashar M, Bammidi R, Ravipati L, Kumar K. Clinical, sociodemographic profile and stressors in patients with conversion disorders: An exploratory study from southern India. Industrial Psychiatry Journal. 2020;29 (2):222.
11. Mahmood R, Komal A, Asif A, Jawaid K. Impact of Childhood Psychosocial Stressors on Adolescence Period and Its Management: A Case Study of Conversion Disorder. Annals of King Edward Medical University. 2017;23 (2).
12. Roy S, Roy G, Begum M, Karim M, Akhter M, Begum O. Psycho-social stressors and life events of the patients with conversion disorder: a study in a tertiary care hospital in north east zone of Bangladesh. Bangladesh Journal of Psychiatry. 2017;28(2):41-44.
13. Akhtar J, Shah U, Zaman S. Anxiety symptoms in patients with conversion disorder. J Postgrad Med Inst 2015; 29(4): 223-6.
14. Bhatia, H. & Chadha, N. K. (2001). Manual for Family Environment Scale (FES). Lucknow: Aandur Psychological Agency.
15. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. J Health Soc Behav. 1983; 24:385–96.
16. Tabassum Alvi and Fareed Aslam Minhas. Type of Presentation of Dissociative Disorder and Frequency of Co-morbid Depressive Disorder Journal of the College of Physicians and Surgeons Pakistan 2009, Vol. 19 (2): 113-116.

17. Deveci A, Taskin O, Dinc G, Yilmaz H, Demet MM, Erbay-Dundar P, Kaya E, Ozmen E (2007). "Prevalence of pseudoneurologic conversion disorder in an urban community in Manisa, Turkey". Soc Psychiatry Psychiatr Epidemiol. 42 (11): 857.
18. Carson AJ, Ringbauer B, Stone J, McKenzie L, Warlow C, Sharpe M (2000). "Do medically unexplained symptoms matter? A prospective cohort study of 300 new referrals to neurology outpatient clinics". J. Neurol. Neurosurg. Psychiatry. 68 (2): 207–10.
19. Şar V, Akyüz G, Doğan O. Prevalence of dissociative disorders among women in the general population. Psychiatry Res 2007; 149:169-176.
20. Şar V. Epidemiology of Dissociative Disorders: An Overview. Epidemiology Research International Vol. 2011, Article ID 404538, 8 pages.
21. Tezcan E, Atmaca M, Kuloğlu M Geçici O, Büyükbayram A, Tutkun H. Dissociative disorders in Turkish inpatients with conversion disorder. Compr Psychiatry 2003; 44: 324-330.
22. Uğuz S, Toros F. Sociodemographic and clinical characteristics of patients with conversion disorder. TürkPsikiyatriDerg 2003; 14:51-8.
23. Kamala Deka, Pranit K. Chaudhury, Kavery Bora, and Pranab Kalita. A study of clinical correlates and socio-demographic profile in conversion disorder. Indian J Psychiatry. 2007 Jul-Sep; 49(3): 205–207.
24. Sinan YaylaMDa, BahadırBakımMDb, OnurTankayaMDc, Omer Akil,OzerMDd, OguzKaramustafaliogluMDe, HulyaErtekinMDb& Atilla TekinMDf Psychiatric Comorbidity in Patients with Conversion Disorder and Prevalence of Dissociative Symptoms : Journal of Trauma & Dissociation · November 2014: 10.1080/15299732.2014.938214.
25. Conversion Disorder Comorbidity and Childhood Trauma Fatma AKYÜZ1, Peykan G. GÖKALP2, Sezgin ERDİMAN3, Serap OFLAZ4, Çağatay KARŞIDAĞ5 Arch Neuropsychiatry 2017; 54: 15-20.
26. Brown RJ, Schrag A, Trimble MR. Dissociation, childhood interpersonal trauma, and family functioning in patients with somatization disorder. Am J Psychiatry 2005; 162:899-05.
27. Narang DS, Contreras JM. The relationships of dissociation and affective family environment with the intergenerational cycle of child abuse. Child Abuse Negl 2005; 29:683-99.
28. Singh NK, Gupta P, Yadav JS. A study of expressed emotion, perceived stress and socio-demographic profile in patients of dissociative disorder. International Journal of Research in Medical Sciences. 2020 Aug;8 (8):2861.