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Original Research Article

PATTERN AND SEVERITY OF THE STRESSFUL LIFE EVENTS AND ITS RELATION WITH DISSOCIATIVE EXPERIENCE IN ADOLESCENTS WITH DISSOCIATIVE DISORDER

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ABSTRACT

Background: Association between stress and dissociative disorder is well established in the global literature. But pattern and severity of stress and stressful life events and dissociative symptoms may vary quantitatively as well as qualitatively in different sociocultural and geo-economic background depending on its pathogenic and pathoplastic effects. The issue was not well addressed in Bengali population having a strong sociocultural and geo-economic influences. **Materials and Methods:** This was a cross-sectional study on 50 consented new outpatient adolescent patients with Dissociative Disorder, as per International Classification of Diseases, Tenth Revision, Diagnostic Criteria for Research (ICD-10, DCR), from a tertiary care hospital of West Bengal. All of them were assessed in socio-demographic-clinical semi-structured proforma and Bengali adaptation of the Adolescent Dissociative Experiences Scale-II (A-DES) and Life Events Scale for Indian Children (LESIC). **Result:** Majority of the respondents were Hindu rural unmarried girl students of mean age 16.28 years (SD 1.37) from middle socio-economic nuclear family background, mostly presented with Dissociative Stupor, Motor disorders, Convulsions and Mixed Dissociative Disorders. The mean A-DES score for the whole sample was 59.6. Mean stressfulness score of LESIC for the whole sample was 139.58. A strong positive correlation (p value 0.009) was found between A-DES total score and LESIC total stressfulness score. **Conclusion:** Though pattern of stress and stressful life events were somewhat unique for Bengali rural adolescent girls but the causal association between the overall stress and pathogenesis of dissociative symptomatology were well established in the current study for Bengali population, like other parts of the world. Therapist should be vigilant for these specific patterns of stress to manage dissociative disorders as a part of primary or secondary prevention.

INTRODUCTION

Dissociative symptoms are conceptualized by disruption in the integration of past memories, current self-awareness and identity, perception, interpretation of bodily sensations and control of bodily movements of an individual.[1] Pathogenesis of dissociative symptoms evolves round the way to cope with overwhelming stress or trauma.[2] Adolescent is transitional period from one's childhood to adulthood stage when several crucial biological and psycho-social transformations take place. So, often they have to face many stressful situations and events. To handle those situations some of them try to cope with some aberrant psychological defenses leading to manifestation of dissociative symptoms. Facing these stressful life events during their personality developments has significant long-term impact in their future life. So,

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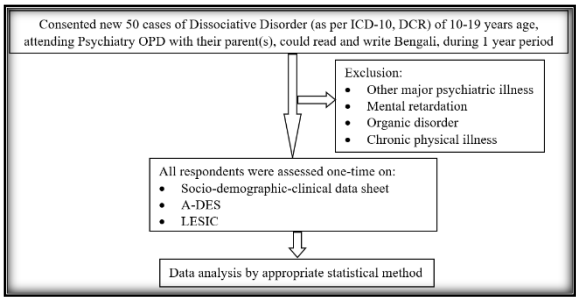
these events and related physical and psychological trauma should be identified and addressed optimally to heal up. But often it is difficult to reach out as adolescent often are unable to express about the situation by themselves. On the other hand, facing difficulty in managing the situations and deploying the abnormal defenses they often present with some dissociative symptoms.[3] Getting the link between dissociative symptoms and stressful life events, evaluation should be done for the past physical and psychological stressors or stressful life events in details. If identification of the pattern and severity of the trauma and its healing process are started early then its long-term psychological impact can be minimized. These issues were considered well in research from western countries, [4-7] but not much in our country in different socio-cultural milieu. The pattern and severity of the stressful life events and related overwhelmed state for Indian adolescent population might be quite different from western socio-cultural environment.[8,9] Suitable socio-culturally validated scales are to be applied to capture the actual scenario to conduct research on Indian adolescent population.[10] So, to fulfil the lacunae in the existing research available in the literature on the index issue, we had planned the current study.

MATERIALS AND METHODS

A cross-sectional observational study was conducted in a tertiary care teaching hospital of Eastern India, after getting approval from the Institutional Ethics Committee (IEC). For one year duration, by simple randomization method, 50 consented new patients of age group of 10-19 years with diagnosis of Dissociative Disorder, as per the ICD-10 Classification of Mental and Behavioural Disorders, Diagnostic Criteria for Research (ICD-10, DCR) version, attending outpatient department, with at least one of their parents who could read and write Bengali, were recruited. Those with other major psychiatric illness, mental retardation, known organic disorder and chronic major physical illness were excluded from the current study. Socio-demographic and clinical data from all the respondents were collected in a pre-tested semi-structured proforma specially made for current study. Bengali adaptation of the Adolescent Dissociative Experiences Scale-II (A-DES),[11] and Life Events Scale for Indian Children (LESIC),[10] were used to assess dissociative experiences and stressful life events respectively for the current study. Data was analyzed by suitable statistical methods.



Flow chart of the study procedure

RESULTS

Socio-demographic profile: In the whole sample of 50 adolescents of the current study, a typical respondent was a girl (92%), of age between 14-17 years (90%), unmarried (82%), student of high and middle school (90%), coming from middle socio-economic status (68%), rural (82%) Hindu (56%) nuclear family (52%) background. The mean age of the whole sample was 16.28 years (SD 1.37).

Clinical profile: The mean age at onset of dissociative disorder was 15.66 years (SD 1.33) and mean duration of illness was 5.20 months (SD 6.07). In 12 (24%) cases had past H/O suicidal attempts and mean number of suicidal attempts was 1.50 (SD 0.67). Among the whole sample 26 (52%) patients had H/O hospitalization(s) for any psychiatric illness in the past and mean number of hospitalizations was 1.92 (SD 1.26). Family history of dissociative disorder and co-morbid physical illness in the current study population was not significant and only four (8%) participants had family H/O other psychiatric illness such as BPAD and MDD.

Regarding the distribution of dissociative subtype (as per ICD-10) among study population, 22 (44%) respondents had subtype of Dissociative Stupor (F44.2 by ICD-10), 4 (8%) had Dissociative Motor disorders (F44.4 by ICD-10), 12 (24%) had Dissociative Convulsions (F44.5 by ICD-10), 1 (2%) had Dissociative Anaesthesia and Sensory Loss (F44.6 by ICD-10) and 11 (22%) had Mixed Dissociative Disorders or Conversion Disorders (F 44.7 by ICD-10).

Table 1: Distribution of A-DES in study population. (N=50)

(A-DES) Items	Mean±SD	(A-DES) Items	Mean±SD
Item 1 score	2.80+3.86	Item 16 score	1.56+3.23
Item 2 score	3.84+4.19	Item 17 score	1.14+3.12
Item 3 score	2.80+3.66	Item 18 score	3.38+4.38
Item 4 score	6.46+3.18	Item 19 score	4.46+4.34
Item 5 score	4.16+5.88	Item 20 score	2.54+3.74
Item 6 score	0.24+1.18	Item 21 score	0.80+2.74
Item 7 score	3.36+4.28	Item 22 score	1.42+2.99
Item 8 score	2.42+3.06	Item 23 score	2.90+3.79
Item 9 score	1.30+3.06	Item 24 score	2.12+3.12

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Item 10 score	2.34+3.86	Item 25 score	0.00+0.00
Item 11 score	0.58+1.76	Item 26 score	3.38+3.84
Item 12 score	2.34+3.71	Item 27 score	0.00+0.00
Item 13 score	0.24+1.18	Item 28 score	0.00+0.00
Item 14 score	1.44+3.13	Item 29 score	1.60+3.35
Item 15 score	0.00+0.00	Item 30 score	0.00+0.00
Total A-DES score	59.6+230.25		

Dissociative experience: Item scores of all 30 items of the A-DES for each respondent reported by themselves (in a Likert scale of 0 to 10) on the basis of their experience of last six months, were added to get the total individual score and computing the average of the group (N=50) to get mean total A-DES score of the whole sample. Distribution of the dissociative experiences in the study population was depicted by the individual scores of the items of A-DES and total A-DES score in Table 1.

Stressful life events (SLE): The stressful life events which had occurred over last one year among the included events in the LESIC were assessed by yes/no responses from the parents and was depicted in Table 2. In item no 1, 6, 9, 26, 28, 31, 33 each, 5 respondents or more (N=50) gave their positive (i.e. Yes) responses. The stressfulness scores for individual evets as per LESIC were added for each respondent to get the LESIC total stressfulness score for each child and compute the mean score for the whole sample (n=50) was depicted in Table 3.

Table 2: Distribution of frequency of stressful life events (N=50)

LESIC items		No of Cases (%)	LESIC Items		No of Cases (%)	LESIC Items		No of Cases (%)
Item 1	Yes	07 (14)	Item 18	Yes	00 (00)	Item 35	Yes	03 (6)
	No	43 (86)		No	50 (100)		No	47 (94)
Item 2	Yes	00 (00)	Item 19	Yes	00 (00)	Item 36	Yes	00 (00)
	No	50 (100)		No	50 (100)		No	50 (100)
Item 3	Yes	04 (8)	Item 20	Yes	03 (6)	Item 37	Yes	00 (00)
	No	46 (92)		No	47 (94)		No	50 (100)
Item 4	Yes	02 (4)	Item 21	Yes	03 (6)	Item 38	Yes	04 (8)
	No	48 (96)		No	47 (92)		No	46 (92)
Item 5	Yes	03 (6)	Item 22	Yes	04 (6)	Item 39	Yes	02 (4)
	No	47 (94)		No	46 (92)		No	48 (96)
Item 6	Yes	05 (10)	Item 23	Yes	00 (00)	Item 40	Yes	01 (2)
	No	45 (90)		No	50 (100)		No	49 (98)
Item 7	Yes	03 (6)	Item 24	Yes	01 (2)	Item 41	Yes	02 (4)
	No	47 (94)		No	49 (98)		No	48 (96)
Item 8	Yes	00 (00)	Item 25	Yes	01 (2)	Item 42	Yes	00 (00)
	No	50 (100)		No	49 (98)		No	50 (100)
Item 9	Yes	19 (38)	Item 26	Yes	20 (40)	Item 43	Yes	00 (00)
	No	31 (62)		No	30 (60)		No	50 (100)
Item 10	Yes	03 (6)	Item 27	Yes	00 (00)	Item 44	Yes	00 (00)
	No	47 (94)		No	50 (100)		No	50 (100)
Item 11	Yes	00 (00)	Item 28	Yes	15 (30)	Item 45	Yes	01 (2)
	No	50 (100)		No	35 (70)		No	49 (98)
Item 12	Yes	00 (00)	Item 29	Yes	00 (00)	Item 46	Yes	00 (00)
	No	50 (100)		No	50 (100)		No	50 (100)
Item 13	Yes	02 (4)	Item 30	Yes	00 (00)	Item 47	Yes	02 (4)
	No	48 (96)		No	50 (100)		No	48 (96)
Item 14	Yes	02 (4)	Item 31	Yes	08 (16)	Item 48	Yes	00 (00)
	No	48 (96)		No	42 (84)		No	50 (100)
Item 15	Yes	02 (4)	Item 32	Yes	04 (8)	Item 49	Yes	00 (00)
	No	48 (96)		No	46 (92)		No	50 (100)
Item 16	Yes	02 (4)	Item 33	Yes	07 (14)	Item 50	Yes	02 (4)
	No	48 (96)		No	43 (46)		No	48 (96)
Item 17	Yes	00 (00)	Item 34	Yes	01 (2)			
	No	50 (100)		No	49 (98)			

Table 3: LESIC total stressfulness score (n=50)

LESIC items	Mean	SD
LESIC total stressfulness score	139.58	47.99

Relation between dissociative symptoms and stressful life events: Correlational analysis was done between the A-DES total score and LESIC total stressfulness score for the whole sample (N=50) and a positive correlation was found between these two variables, depicted in Table 4.

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Table 4: Correlation between A-DES total score and LESIC total stressfulness score

Correlations			
		ADES	**LESIC**
ADES	Pearson Correlation	1	.368**
	P value		.009
	No of cases	50	50
**. Correlation is significant at the 0.01 level (2-tailed)			

DISCUSSION

Current study was conducted on Indian adolescents and responses were taken almost exclusively from rural girl population of average age of 16 years, attended with their parents to Psychiatry OPD of a tertiary care hospital of West Bengal, where mostly Bengali socio-cultural norms were prevailing. In this study we applied the scale 'Life Events Scale for Indian Children (LESIC)' which was developed by an Indian researcher. The scale was widely used and well validated for Indian children.[10] We validated it in Bengali before applying on Bengali adolescent population. We also applied Adolescent Dissociative Experiences Scale-II (A-DES) which is also a widely used well validated scale.[11] As it was developed in the west, we also validated it in Bengali. No study was found in the literature in Bengali adolescent population addressing the similar research question. Though similar studies were conducted in other parts of India of different socio-cultural milieu. One such study[8] was conducted over Indian adolescent population of northern India where mean age of the population was slightly lower (14 years) and proportion of female and rural counterparts were not so strong, in otherwise similar socio-economic and demographic background. In another two studies were conducted from other parts of India on young adults where average age of the respondents was above 20 years.[12,13]

In the current study most common subtype of dissociation was dissociative stupor (44%). Other subtypes were dissociative convulsion (24%), dissociative mixed (22%), dissociative motor (8%), dissociative anaesthesia and sensory loss (2%) etc. In literature common subtype were noted from other Indian studies were dissociative motor, convulsions and trans & possession, though mostly in adult population. On the other hand, dissociative identity disorder which was commonly found in studies from west is rarely found in Indian studies.[14,15] Pathogenic and pathoplastic effect of socio-cultural background of the community in shaping psychopathology can explain the differential observations.

In the current study, in LESIC in item no 1, 6, 9, 26, 28, 31, 33 each [Table 5], 5 respondents or more out of 50 gave their positive responses and LESIC total stressfulness score was 139.58. Perceived stress is a psychological construct where subjective appraisal to a psychosocial event by individual or collectives or community does matter. For these life events (listed in Table 5 as emerged from the current study) specifically, the stress level remained high in the previous one year in the study population. From this observation we can understand the pattern and severity of the stressful life events for the Bengali adolescents. Observation from other western and Indian studies were quite different form the observation from the current study.[5-9] Differences in socio-cultural and academic parameters, perceptions by the adolescents and expectations from parents of that specific community can explain the disparity. One study was conducted in West Bengal on Bengali adult population with similar socio-cultural background to understand the association between stress and dissociation in patient with anxiety disorder and had similar kind of observation.[16]

Table 5: Significant LESIC item emerged from the current study

LESIC items	Description of the live events	Stressfulness score
Item 1	Decrease in number of arguments with brothers and sisters	18
Item 6	Change in parent's financial status	34
Item 9	Increase in number of arguments with brothers and sisters	39
Item 26	Increase in number of arguments with parents	51
Item 28	Increase in number of arguments between parents	54
Item 31	Excessive use of alcohol by parents leading to unbearable behaviour	60
Item 33	Change in child's popularity with friends	57

In the current study severity of dissociative experience (A-DES total score) had a strong positive correlation with the LESIC total stressfulness score. The causal relation between the stress and stressors with the manifestation of dissociative symptoms is well established in literature and the observation is unanimous for different groups of population practicing different socio-cultural norms. This association was explained by the researchers by different hypotheses. Widely accepted one is presence of past experience of trauma in adolescents especially in interpersonal domain alters the development and functioning of brain in managing a crisis situation. It perpetuates a cascade phenomenon leads to some maladaptive pattern of coping and related behaviour on exposure of similar type of situations in succeeding occasions. In vulnerable individual, in any case of overwhelming stress in future, the cascade is being activated leading to dissociative experience. In hypersensitive

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individual even with exposure to subthreshold stimulus of stress either quantitatively or qualitatively subsequently activates the cascade phenomena and leading to recurrent dissociative symptoms.[17-22] Finding from current study is congenial with the existing literature that establish the similar causal relationship of stress and pathogenesis of dissociative symptoms in the Bengali adolescent population.

CONCLUSION

In Bengali rural adolescent girls are prone to some kinds of stressful life events such as financial vicissitude of the parents, arguments in the family between siblings, parents, stress related to parent's alcohol related behaviour and stress related to acceptance in the peer group etc. This pattern of proneness is compatible with their bio-socio-cultural and geo-economic terrain. This kind of incident and their emotional impact are closely associated with a significant causal relation with their dissociative experiences and at large pathogenesis of dissociative disorder in this population. So, during psychological assessment of adolescent population especially for the rural girls, we should be vigilant for these patterns of stress and stressful life events to identify and resolve the stress optimally in managing the cases with dissociative disorders.

Limitations

The study was conducted on a small sample from a tertiary care hospital of West Bengal, may not be generalizable to larger Bengali population. For unavailability of a suitable scale validated for Bengali, for the current study, English version of the scales was used after Bengali validation in a pilot study. These are limitations of the current study. Future research is needed with larger representable community sample to implicate the research issue in larger clinical benefit.

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