

Management of Dissociative Disorders: The Stress Loading Hypothesis and Utility of Students Stress Dimension Questionnaire (SSDQ)

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ABSTRACT

Introduction- The Dissociative Disorder diagnosis is largely attributable to, and being preceded by, stressful life events or psychological trauma. Targeted intervention is mostly not possible in Dissociative Disorder making management ineffective. We sought to explore utility of Student Stress Dimension Questionnaire (SSDQ) in detecting stressors in Dissociative Disorder patients. Also, we hypothesized that not only a single, but multiple stressors across different life domains add up, leading to significantly high stress loads which are associated with the causation of Dissociative Disorder and treatment should be focussed on reducing these high stress loads, which we postulate to lead to clinical recovery.

Materials And Methods- We tested our hypothesis through three Cases of Dissociative Disorder, randomly selected for the study. Stress was evaluated through 1) routine semi structured clinical psychiatric interview (scpi) 2) Presumptive Stressful Life Events Scale (PSLES) and 3) SSDQ. Cases were evaluated at baseline and further at Week 2 and Week 4 for Stress Loading and clinical improvement.

In Statistical method, means of Cumulative Stress Loading and number of Dissociative episodes over time were calculated and percentage improvement analysed over time.

Results- The scpi and PSLES failed to identify varied Stressors in affected Cases effectively whereas SSDQ proved highly useful in their detection. Also, SSDQ alone was found applicable and effective in guiding therapeutic intervention in patients of Dissociative Disorder.

Conclusion- These findings support our hypothesis of Cumulative Stress Loading being associated with Dissociative Disorder.

Key Words- Dissociative Disorder, Stress, SSDQ, PSLES. Cumulative Stress Load, Targeted intervention

INTRODUCTION

Stress has been found to be associated with Dissociative disorders. The Dissociative disorder category has sudden onset varied symptoms which include convulsions, aphonia, amnesia, sensory and trance-possession symptoms etc. being preceded by stressful life events or psychological trauma and often present difficulties in management. ^[1] It is more common in young women. ^[2] ICD 10

requires evidence for psychological causation, in the form of clear association in time with stressful events and problems or disturbed relationship. ^[3] Stressors that precipitate it are varied and include physical or sexual abuse, trauma in adulthood, the stress of examination or failure, quarrel with peers or spouse, interpersonal conflicts, and difficulties of daily life. ^[2] Family environment has important role for history of abuse experiences, which are associated

with dissociation. Family environment characters including inflexibility, poor cohesion, family dissatisfaction and poor family communication are important variables. [4] These symptoms not only impact the subject adversely, but also cause significant burden on family.

Identifying stressors in patients of Dissociative Disorder remains a clinical enigma. Approach to identifying the stressor in clinical practice is usually difficult and extends beyond the routine Semi-structured Clinical Psychiatry Interview (scpi). The Presumptive Stressful Life Events Scale (PSLES) is an instrument which is looked upon to trace the Stressors. [5] Trouble arises when these measures fail to reveal the offending stressors as individualized management cannot be initiated.

Aims:

1. To assess the applicability and effectiveness of scpi in identification of stressor related to patients presenting with Dissociative Disorders.
2. To assess the applicability and effectiveness of PSLE in identification of stressor related to patients presenting with Dissociative Disorders.
3. To assess the applicability and effectiveness of SSDQ in identification of stressor related to patients presenting with Dissociative Disorders.
4. To assess applicability and effectiveness of scpi in guiding therapeutic intervention in these patients presenting with Dissociative Disorders.
5. To assess applicability and effectiveness of PSLE in guiding therapeutic intervention in these patients presenting with Dissociative Disorders.
6. To assess applicability and effectiveness of SSDQ in guiding therapeutic intervention in these patients presenting with Dissociative Disorders.

MATERIALS AND METHODS

We randomly selected three cases of Dissociative Disorders presenting to Psychiatry OPD of SS Hospital IMS, BHU, (a tertiary care Centre) over a single day for

our study. Attempt was made to identify the stressors in these patients using the three tools i.e. scpi, PSLE & SSDQ. Effectiveness of the questionnaires was evaluated and management in form of psychotherapeutic/behavioral techniques given in line with the type of stressors surfacing. These patients were evaluated at three times: at base line, Week 2 and Week 4 for Stress Loading and clinical improvement and in statistical method, means of Cumulative Stress Loading and no. of Dissociative episodes over time were calculated and percentage improvement analysed over from baseline to 2weeks and finally at 4weeks and depicted using appropriate graphs and the Observations discussed.

Tools Used

1. Semi-structured Clinical Psychiatry Interview (scpi)- A semi-structured Performa to record socio-demographic details, including age, sex, education, occupation, domicile, marital status, family type and socioeconomic status, clinical presentations and any precipitating factor for developing dissociative (conversion) disorder, past history, family history, personal history and Mental status examination.
2. The Presumptive Stressful Life Events Scale (PSLES)- [5] It consists of 51 items to measure stress due to life events. It consists of life events relevant to the Indian setting, arranged in decreasing order of stress perceived. Assessment is done by marking if the particular life event is present or absent and scoring is done by adding the assigned scores to each item⁵.
3. Students Stress Dimension Questionnaire (SSDQ)- [6] It is a 93 item validated and reliable measure of capturing troubling life stressors for age group up to 35 years across multiple domains of a person's life. [6] This comprehensive tool captures life stressors across ten Domains namely Physical (Phy), Personal (P), Interpersonal (IP), Social (SD),

Behavioural (BD), Familial(FD), Stress coping (SC), Physical and sexual abuse (AB), Mood and Thought(MT) and Educational (ED) Domains giving it a multidimensional, holistic nature⁶. With total 93 items, each scored on a three point scale (0= not troubling, 1= some time troubling, 2= always troubling), it comprehensively maps the stress loading in a person's life. Domains scoring >40% were taken as affected.

4. Hamilton Depression Rating Scale (HAM-D).^[7] This is a 17 item scale for measuring the severity of depressive symptoms. Scores upto 7 are taken as Normal. Scores of 8 to 13 are taken as Mild Depression.

Statistical analysis: As we have studied only the individual cases, the means of the variables were calculated and percentage improvement calculated. Means of Cumulative Stress Loading and number of Dissociative episodes over time were calculated and percentage improvement analysed over time i.e. baseline, at 2 weeks and 4 weeks.

Cumulative Stress Load (CSL) - Stress score in the different domain of a person's life were added up to give Cumulative Stress Load (CSL) (which is expressed in percentages) in the patients studied, as it is hypothesized by us that all the stressor affecting a person, accumulate together to present a larger force taking a toll and this total stress loading is the variable most important in the causation of and maintenance of the dissociative disorder condition. Formula for calculation of Stress in a Domain is as follows.

$$\frac{\text{Stress score obtained in a particular Domain} \times 100}{\text{Maximum score in a particular Domain}} = D$$
.ie. in Domain 1 = D^1

CSL is calculated by the addition of the scores of all domains listed in SSDQ. ie.

Domain 1 to 10

$$CSL = D^1 + D^2 + D^3 + D^4 + D^5 + D^6 + D^7 + D^8 + D^9 + D^{10}$$

RESULT

CASE1. A young female aged 18 years presented with sudden onset episodes of hyperventilation followed by fainting spells lasting ½ - 1 hour. These episodes occurred 3-4 times per day and at irregular intervals at any time of the day. These episodes had been occurring for 3 weeks before she was brought to the hospital. On examination, her chest was found bilaterally clear with normal air entry and both heart sounds (S₁ and S₂) were heard normally. Her blood saturation for oxygen was also 100%. She was made comfortable and reassured of her physical well being. She was taught relaxation by deep breathing and other various relaxation exercises at the starting of session. Patient was first assessed through semi-structured clinical psychiatric Interview (scpi) routinely used in most General Hospital Psychiatric Units (GHPUs). Thereafter, Presumptive Stressful Life Events Scale (PSLES) was applied. This showed the stressor to be an exam the next day that she was to appear in. However, on further interviewing, the patient was found to have no discomfort on talking about the exams and studies. This aroused ambiguity regarding the stressor and association with the disorder. Though this finding could have been a la belle indifference, she was further subjected to specialized questionnaire, SSDQ to identify stressors. As HAMD score was 6, Depression was ruled out.

Base line assessment: Stress Areas which were revealed on the different tools are described below.

- a) With scpi : No Stress areas were identified with scpi showing that this tool is ineffective for identifying stressors in Dissociative Disorder patients. Hence, it is neither applicable nor effective for the same subjects.
- b) With PSLE: Only one stressor of appearing for examination was elicitable.
- c) With SSDQ: This tool revealed

- i) various stressors across specific Life Domains (depicted in Figure 1),namely
1. Physical Domain
 2. Sexual Abuse Domain
 3. Social Domain
 4. Stress Coping Domain
 5. Education Domain
 6. Mood and Thought Domain
 7. Behavioural Domain

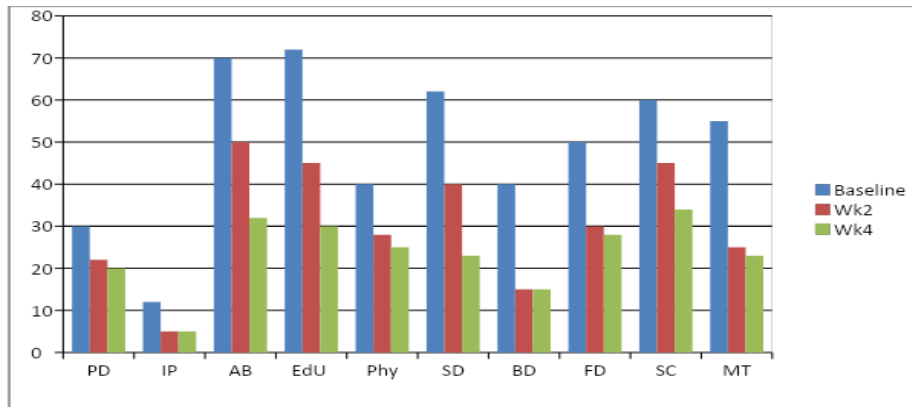


Fig-1. SSDQ revealing multiple Stress factor association in Subject 1

ii) The SSDQ tool also yielded a Score of Cumulative Stress Load (in %) in the Subject by adding up the stress scores on the specific domains:
 PD=30, IP=12, AB=70, ED=72, PHY=40, SD=62, BD=40, FD=50, SC=60, MT=55
 SSDQ Assessment reveals HIGH Cumulative Stress Loading =491

At 2nd week: PD=22, IP=5, AB=50, ED=45, PHY=28, SD=40, BD=15, FD=30, SC=45, MT=25 At 2nd Week HAMD=4 SSDQ CSL Score=305

At 4th week: PD=20, IP=5, AB=32, ED=30, PHY=25, SD=22, BD=15, FD=28, SC=35, MT=23

At 4th Week HAMD=4 SSDQ CSL Score=235

Follow up Assessment-

As per the stressors surfacing, the patient was administered domain specific psychotherapeutic/ behavioural therapy and evaluated further at Week 2 and Week 4. Results show

It was found that the Stress Loading scores came down to 235 from 491 over 4 weeks of therapy and also clinical improvement over this time was evident, with episode decreasing in frequency after 2 wk and no episode after 4th wk .These results are depicted in Figure 2, Figure 3 and Table 1.

SSDQ stress score in different domains:

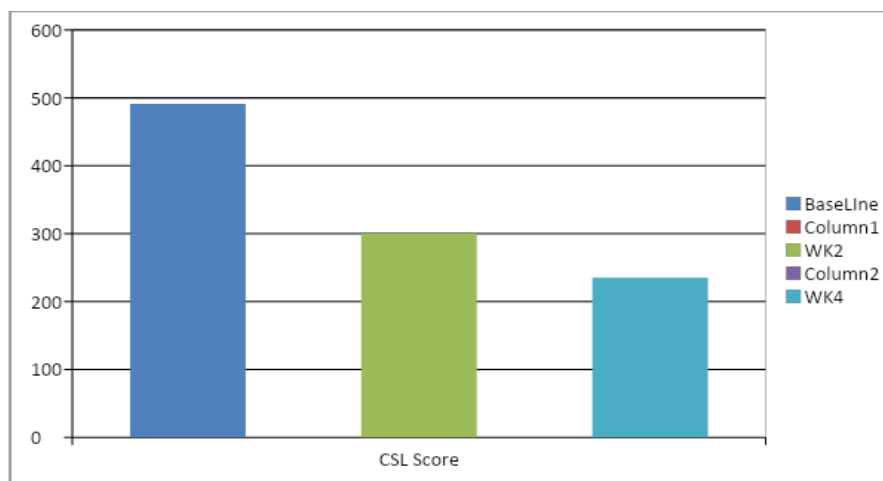


Figure 2- Cumulative Stress Loading (CSL) over time.....through SSDQ

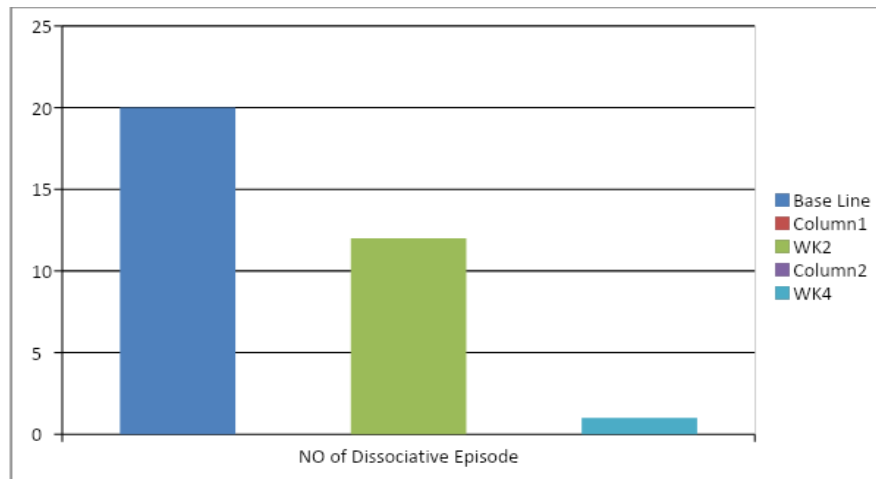


Figure 3-Number of Dissociative Episodes over time

Table:1 Reduction in CSL Score & no. of Dissociative episodes over time

	Assessment at	CSL score	% reduction of CSL Score from Baseline	No of Dissociative episode	% reduction of Dissociative episode from Baseline
1.	Baseline	491		20	
2.	2Wk	305	38	12	40
3.	4Wk	235	47.9	1	95

CASE 2. A 25 year old married female presented with fainting spells with abnormal body movements and frothing from mouth lasting ½ - 1 hour. She had such episodes every 3-4 hours for past three days before presentation. The episodes were not associated with fall injury, tongue bite or urinary incontinence. She was made comfortable and relaxed by deep breathing and relaxation exercise during psychotherapeutic session. Patient was first assessed through semi-structured clinical psychiatric interview technique (scpi) which is routinely used in most General Hospital Psychiatric Units (GHPUs) which revealed ongoing financial problem in family; further Presumptive Stressful Life Events Scale (PSLE) was also applied. This revealed the cause of her stress to be a financial problems & family conflict. She was further subjected to specialized questionnaire to identify stress loading in different domain of

subject's life. This was done using the specially designed questionnaire SSDQ. As HAMD score was 6, Depression was ruled out

Base line assessment: Stress Areas revealed on the different Tools

- a) With scpi : Only Financial was identified as a Stress area with scpi
- b) With PSLE: It also revealed financial problems along with, broadly, a family conflict.
- c) With SSDQ: The SSDQ was able to reveal the stressors

a) across individual domains for the Subject 2 in great detail (Figure 4)

1. Familial Domain. 2. Behavioural Domain 3. Physical Domain.
4. Stress Coping 5. Mood and Thought Domain

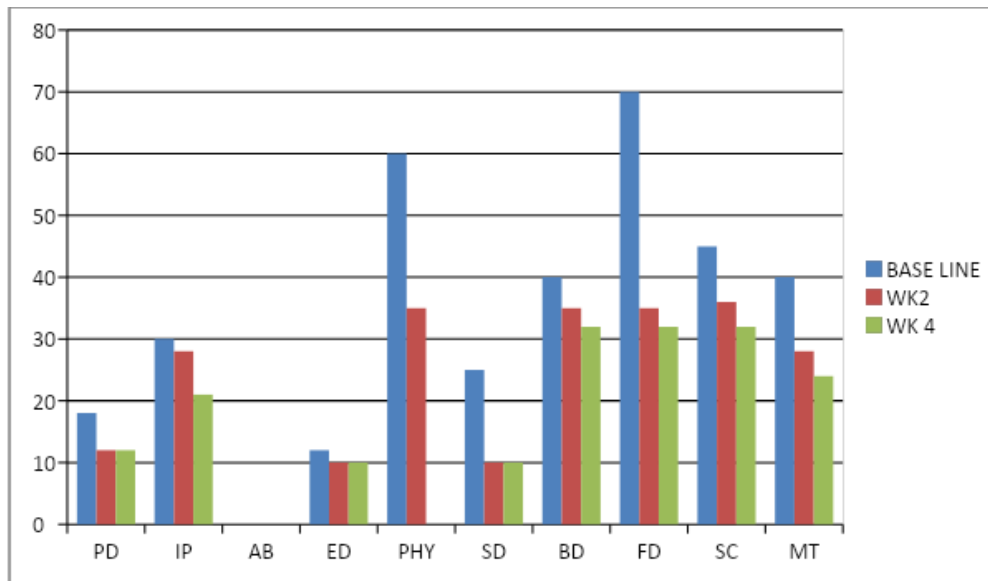


Fig-4. SSDQ revealing multiple Stress factor association in Subject 2

ii) The SSDQ tool also yielded a Score of Cumulative Stress Load (in %) in the Subject by adding up the stress scores on the specific domains:

PD=18, IP=30, AB=0, ED=12, PHY=60, SD=25, BD=40, FD=70, SC=45, MT=40

SSDQ Assessment reveals HIGH Cumulative Stress Loading =340

Follow up Assessment:

As per the stressors surfacing, the patient was administered domain specific psychotherapeutic/ behavioural therapy and evaluated further at Week 2 and Week 4.

SSDQ stress score in different domains:

At 2nd week: PD=12, IP=28, AB=0, ED=10, PHY=35, SD=10, BD=35, FD=35, SC=36, MT=28 At 2nd Week: HAMD=4 SSDQ CSL Score=229

At 4th week: PD=12, IP=21, AB=0, ED=10, PHY=0, SD=10, BD=32, FD=32, SC=32, MT=24

At 4th Week: HAMD=4 SSDQ CSL Score=173

The scores came down to 173 from 340 over 4 weeks of therapy and also clinical improvement over this time was evident, with episode decreasing in frequency after 2 wk with no episode at 4th wk. These results are depicted in Figure 5, Figure 6 and Table 2.

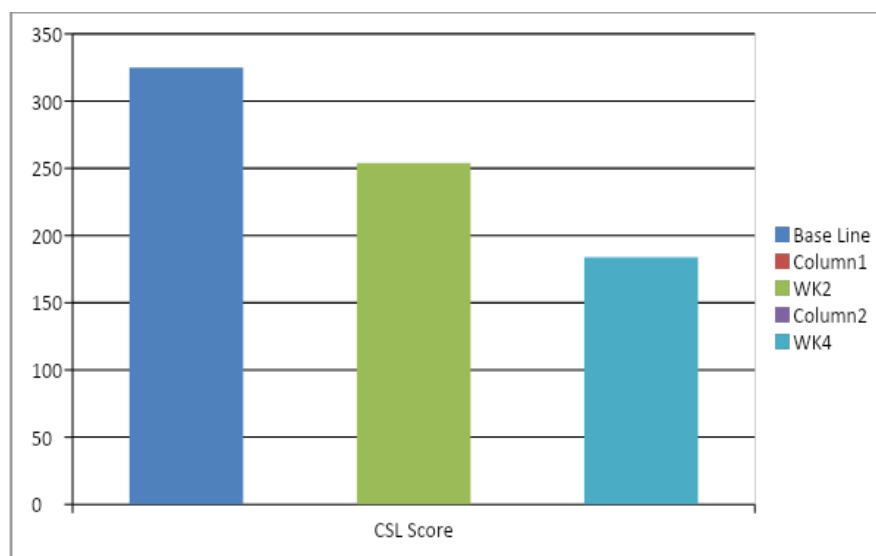


Figure 5- Cumulative Stress Loading over time.....through SSDQ

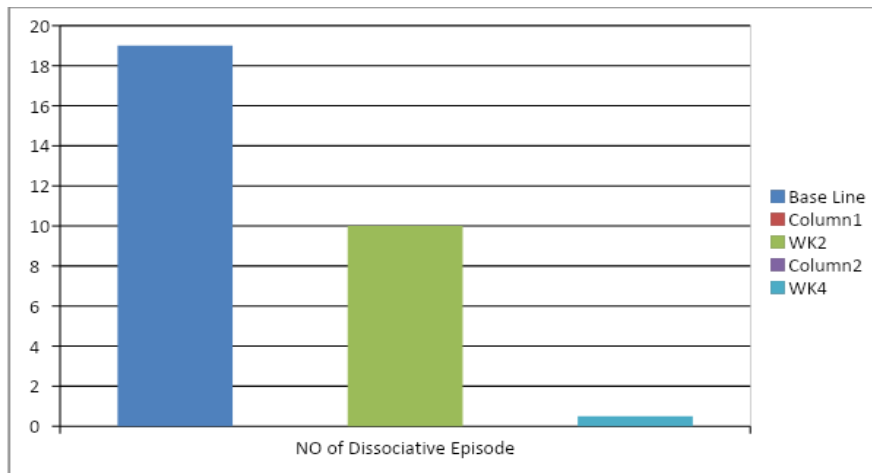


Figure 6-Number of Dissociative Episodes over time

Table: 2 Reduction in CSL Score & no. of Dissociative episodes over time

	Assessment at	CSL score	% reduction of CSL Score from Baseline	No of Dissociative episode	% reduction of Dissociative episode from Baseline
1.	Baseline	340		19	
2.	2Wk	229	32.7	10	47.4
3.	4Wk	173	49.2	0.5	97.4

Case: 3. An 18 years old unmarried female studied up till 12th class presented with decreased sleep, anxiety, decreased concentration for 10 days. Family members also complained that sometimes she developed unresponsive episode. Ten days before presentation, while studying in her room in the evening time, the patient suddenly developed anxiety and restlessness followed by an unresponsive episode which persisted for 30 min. When she regained consciousness she was able to recognize family members. The unresponsive episode was not associated with tongue bite, frothing or urinary incontinence. Patient was assessed through scpi, PSLE and SSDQ. As

HAMD score was 7, Depression was ruled out. Base line assessment revealed.

- a) With scpi : Stress in the Physical domain (headache, vomiting, decreased sleep and irritability) was identified with scpi
- b) With PSLE: Only one stressor in form of financial problem was elicitable.
- c) With SSDQ: This tool revealed
 - i) Following individual stress domains (depicted in Figure 7),
 1. Family Domain 2. Behavioural Domain
 3. Physical Domains 4. Interpersonal Domain
 5. Education Domain 6. Social Domain
 7. Mood and Thought 8. Stress Coping Domain

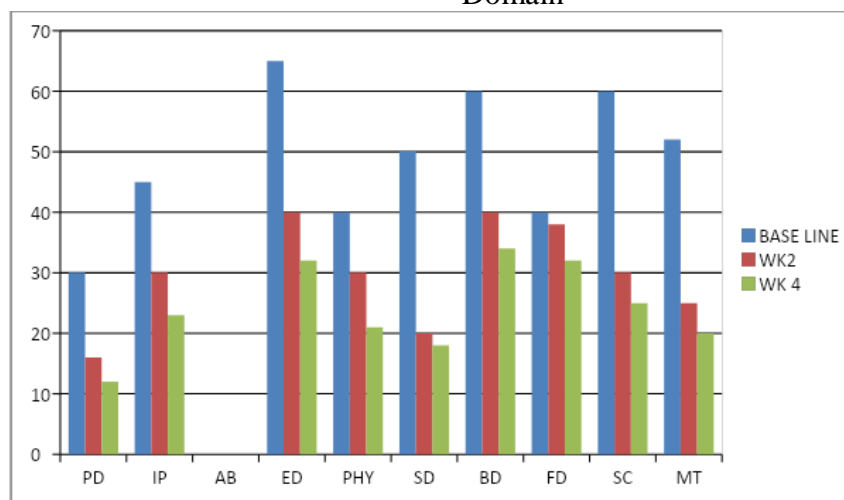


Fig-7. SSDQ revealing multiple Stress factor association in Subject 3

ii) The SSDQ tool also yielded a Score of Cumulative Stress Load (in %) in the Subject

by adding up the stress scores on the specific domains:

SSDQ stress score on different domain:
 PD=30, IP=45, AB=0, ED=65, PHY=40, SD=50, BD=60, FD=40, SC=60, MT=52

SSDQ Assessment reveals HIGH Cumulative Stress Loading =442

Follow up Assessment- As per the stressors surfacing, the patient was administered domain specific psychotherapeutic/behavioural therapy and evaluated further at Week 2 and Week 4.

SSDQ stress score on different domain:

At 2nd week: PD=16, IP=30, AB=0, ED=40, PHY=30, SD=20, BD=40, FD=38, SC=30, MT=25 At 2nd Week HAMD=4
 SSDQ CSL Score=269

At 4th week: PD=12, IP=23, AB=0, ED=32, PHY=25, SD=18, BD=34, FD=32, SC=25, MT=20

At 4th Week HAMD=4 SSDQ CSL Score=221

The scores came down to 221 from 442 over 4 weeks of therapy (Figure 7) and also clinical improvement over this time was evident, with episodes decreasing in frequency after 2 wk and no episode after 4th wk (Figure 8). These results are depicted in Figure 8, Figure 9 and Table 3

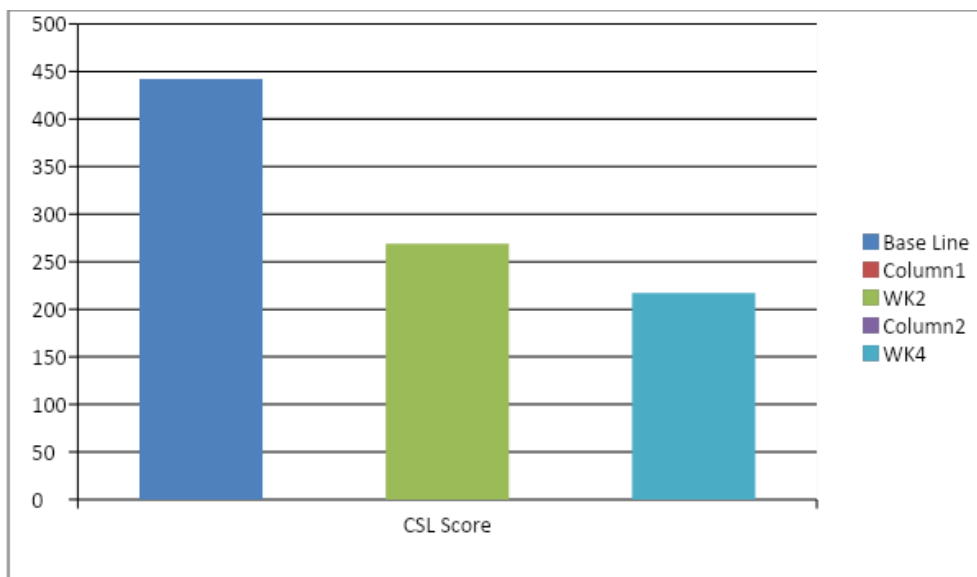


Figure 8- Cumulative Stress Loading over time.....through SSDQ

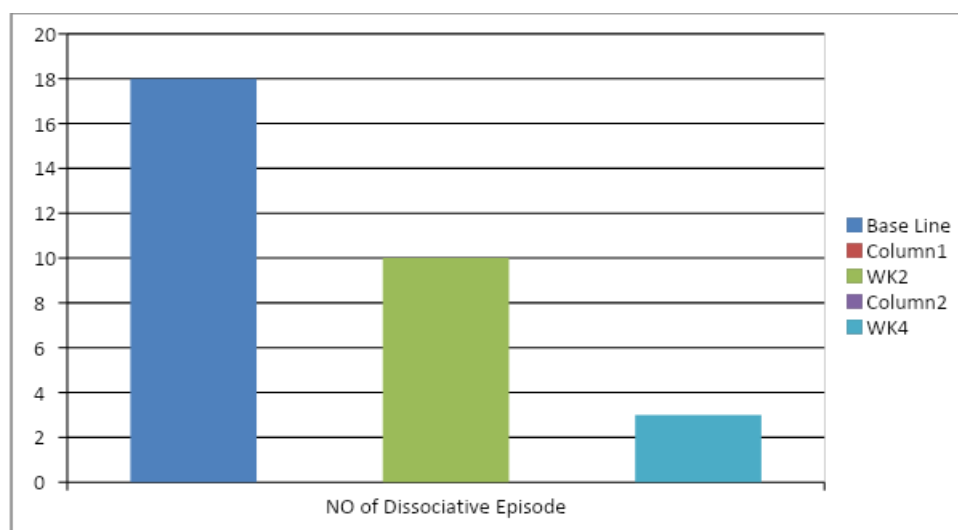


Figure 9-Number of Dissociative Episodes over time

Table:3 Reduction in CSL Score & no. of Dissociative episodes over time

	Assessment at	CSL score	% reduction of CSL Score from Baseline	No of Dissociative episode	% reduction of Dissociative episode from Baseline
1.	Baseline	442		18	
2.	2Wk	269	49.2	10	44.5
3.	4Wk	221	50	3	83.4

Final Results summated of the three together: Data emerging from the three individual cases, when clubbed together (given in Table 4) show significant reduction of CSL Scores over time as well as decrease in Dissociative episodes in the clubbed sample, respectively.

Table: 4 CSL Score and number of Dissociative episodes over time in clubbed sample n=3

	Assessment at	CSL score(Mean)	% reduction of CSL Score from Baseline	No of Dissociative episode(Mean)	% reduction of Dissociative episode from Baseline
1.	Baseline	424		19	
2.	2Wk	267	37	11	42
3.	4Wk	209	51	2	90

DISCUSSION

Stress manifests in various clinical forms including Dissociation and is not easily picked up by routine interviews as scpi results of our study show. Stress factors are highly individual specific and studies have shown that often people incorrectly detect stress issues in others as their individual perceptual differences creep in [8] which adds many confounding variables to routine interviewing, rendering it not only ineffective, but often faulty, driving the management in wrong directions. The inability to detect the stress factors operating in an individual are fraught with disastrous consequences. Management of stress is particularly important as extended periods of stress can cause destructive changes in the body such as heart disease, cancer, stroke, ulcers, back pain, headaches, raised blood pressure, indigestion, and a variety of other psychological problems. [9] Chronic stress is also linked with changes in brain areas like reduction in volume of Prefrontal cortex and Limbic system. Chronic Stress changes neuronal plasticity due to dendritic atrophy with reduction in spine density. [10] The consequences of these alterations in a brain region cause cognitive, emotional and behavioural dysfunctions that are commonly associated with chronic stress which may increase vulnerability to psychiatric disorders. If the distressing stimulus persists, the HPA axis kicks in to sustain the immediate reaction mediated by the centrally activated peripheral systems.

In a situation of chronic stress, the neuro immune axis gets over stimulated and breaks down, thus causing neuroendocrine /immune imbalances that can establish a state of chronic low-grade inflammation, a possible prelude to various illnesses. Diseases whose development has been linked to both stress and inflammation include cardio-vascular dysfunctions, diabetes, cancer, autoimmune syndromes and mental illnesses such as depression and anxiety disorders. [11] Dissociative Disorder presents a clinical enigma with specific stressors not being readily picked up resulting in ongoing damage through the stressors operating. Towards this, our results show that SSDQ provides a time efficient method to identify source of stress in these types of clinical conditions. SSDQ measures the stress holistically over different dimensions which is not only helpful in making diagnosis but is also important for planning further individualized targeted intervention

Further, the notion of major stress playing a role in the genesis of intra-psychic conflicts leading to Dissociation is disproven through our results on the PSLE. We propose the concept of Cumulative Stress Loading (CSL) to account for the conflict formation. Various minor stressors, which themselves are not of overwhelming intensity, pile up together with the other stressors to disabling proportions, playing on the mind leading to generation of significant intra-psychic conflict expressing

in form of dissociative symptoms like convulsions, aphonia, amnesia, sensory and trance-possession, etc. This is evident through the cases in which Reduction of CSL is shown to be associated with Clinical improvement in our study. Thus, our hypothesis of (Cumulative) Stress Loading being causally/clinically associated with Dissociative Disorder stands ratified. We recommend that cases of Dissociative disorder must be given individualized targeted intervention based on the specific stressors operating in their various life domains and time their progress over time monitored through Scores on Stress loads across life domains.

Further, we do not advocate use of Anti Depressant Drugs in these cases. The use of antidepressant in treatment of Dissociative Disorder is mostly irrational as the primary condition in these patients are in the dimension of anxiety and not depression which goes against their routine use in such patients, further adding an iatrogenic component. Our cases also show this as HAMD score in the three cases were 6, 6, and 7 at initial assessment which does not fall in the category of even mild depression.

CONCLUSIONS

Our results show the semi structured clinical psychiatry proforma (scpi) and the Presumptive Stressful Life Events Scale are both ineffective for identifying stressors in Dissociative Disorder patients. Iso, they are neither applicable nor effective in guiding therapeutic intervention in these patients. Cases presented here clearly shows that SSDQ, as a self report Questionnaire on which the subject can rate his/her own perception of the stresses, is better and more efficient method when planning the management of patients with

Dissociative

Disorder and its routine use is recommended in cases of Dissociative Disorder to ascertain stress factors in an individual holistically.

Limitations: Our case Illustrations though clearly demonstrating utility and efficacy of SSDQ in Assessing Stress factors in Dissociative Disorder subjects, needs to be replicated in similarly designed studies with a larger sample size. Also, the stress loading hypothesis though proven in our study, also needs further studies with larger sample sizes to become generalized statement. Also, studies with larger samples are already under way with results awaited.

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