Research Article

Study of Management of Dissociative Disorder in Students Through Stress Domain Mapping

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ABSTRACT

Introduction: Dissociative disorders involve disruptions in memory, identity, awareness, or perception, often triggered by trauma or stress. Students are particularly susceptible due to academic, social, and personal pressures. Stress Domain Mapping (SDM) offers a novel approach to identify and categorize stressors into specific domains, enabling personalized, targeted interventions to address underlying stressors and improve outcomes for individuals facing dissociative challenges. **Objective:** To evaluate the effectiveness of Stress Domain Mapping in managing dissociative disorders in students by analysing cumulative stress loading (CSL) and clinical outcomes. **Methods:** A six-week follow-up study was conducted on 100 participants aged 14-30 years meeting ICD-10 criteria for Dissociative Disorder (convulsion type) at IMS, BHU. Participants were randomized into SDM groups using the PSLES (SDM-ps) or SSDQ (SDM-ss) scales. Stress domains, including physical, interpersonal, behavioural, and educational aspects, were assessed at baseline, 1st, 2nd, 4th, and 6th weeks. Outcome measures included CSL, Clinical Global Impression (CGI) scores, and dissociative symptom severity. **Results:** Significant reductions in mean CSL scores were observed in the SDM-ss group over six weeks, indicating improved stress management ($p<0.05$). The SDM-ss group also demonstrated superior clinical outcomes with significant reductions in CGI-Severity (CGI-S) and CGI-Improvement (CGI-I) scores compared to SDM-ps ($p<0.05$). Stress mapping revealed the highest burdens in social, educational, and behavioural domains. Family conflict (26%) and educational stress (10%) were the most common stressors. **Conclusion:** Stress Domain Mapping effectively identified high-risk domains and tailored interventions for managing dissociative disorders in students. The SDM-ss approach demonstrated superior outcomes compared to SDM-ps, highlighting its potential as a therapeutic and preventive tool in educational settings.

INTRODUCTION

Dissociative disorders, which involve disruptions in memory, identity, awareness, or perception, are complex mental health conditions often arising as a response to trauma or intense stress [1]. These disorders can present challenges in daily functioning, particularly for students, who face unique pressures during critical stages of personal and academic development. Stress from academic performance, social dynamics, and personal expectations can overwhelm a student's ability to cope, increasing the likelihood of dissociative episodes. These episodes may range from mild, such as a temporary sense of detachment, to severe, involving significant memory loss or identity confusion. Despite the serious impact these disorders can have, they often go unnoticed or misdiagnosed, making it essential to explore effective ways to address them [2].

One innovative approach to understanding and managing dissociative disorders in students is stress domain mapping. This method focuses on identifying and organizing stressors into specific domains, such as academic, social, familial, and personal, to gain a comprehensive view of how these pressures interact and

contribute to psychological distress. Stress domain mapping provides a personalized understanding of the unique challenges each student faces, offering a clear framework for developing targeted interventions. Unlike traditional approaches that prioritize symptom management, stress domain mapping emphasizes addressing the root causes of stress and their role in dissociation [3].

For students, dissociation often serves as a defense mechanism against overwhelming stress, but it can hinder their ability to function academically, socially, and emotionally. Stress domain mapping can help by highlighting the specific sources of stress that trigger these responses. For instance, academic stress may arise from performance expectations or exam pressures, while social stress might stem from challenges in building relationships or dealing with conflicts [4]. By breaking down these domains, stress domain mapping allows mental health professionals to design interventions that directly target the most significant stressors, improving outcomes for students struggling with dissociative disorders.

Traditional treatments for dissociative disorders, such as therapy or medication, often focus on alleviating symptoms rather than addressing the underlying stressors. While these methods can provide temporary relief, they may not fully resolve the ongoing challenges contributing to dissociation. Stress domain mapping complements these approaches by providing a more nuanced understanding of the stress landscape, enabling more effective and personalized care. For example, if a student's primary stressor is academic pressure, interventions could include time management training, academic counseling, or adjustments to workload expectations. Similarly, if familial stress is a major factor, family therapy or communication training might be prioritized [5].

Beyond its use in treatment, stress domain mapping has significant potential as a preventive tool. By identifying stressors before they escalate into dissociative symptoms, it helps students develop healthier coping mechanisms and resilience. This proactive approach reduces the likelihood of severe episodes and supports long-term mental well-being. Additionally, stress domain mapping's visual and interactive nature makes it particularly appealing to students, encouraging their active participation in understanding and managing their stress. This empowerment fosters a sense of control over their mental health, which is crucial for long-term recovery and resilience [6].

The adoption of stress domain mapping within educational institutions could transform how mental health challenges are addressed in these settings. By integrating this approach into counseling and support services, schools and universities can provide students with early interventions tailored to their specific needs. Moreover, stress domain mapping can serve as an educational tool, promoting awareness of the impact of stress and encouraging a culture of open communication about mental health. This can help reduce the stigma often associated with seeking help, creating a more supportive environment for students facing psychological difficulties [7].

However, implementing stress domain mapping is not without challenges. The method relies on accurate identification and categorization of stressors, which can be subjective and prone to biases. Additionally, the interaction between different stress domains, such as how academic stress might influence personal or social stress, can be complex and difficult to unravel. Addressing these challenges will require collaboration between educators, mental health professionals, and researchers to develop standardized protocols and ensure the reliability of stress domain mapping tools [8].

Technological advancements offer exciting possibilities for enhancing the effectiveness of stress domain mapping. Tools like artificial intelligence and machine learning can be used to analyze stress patterns, identify trends, and predict potential triggers for dissociation. These technologies can help streamline the process of data collection and analysis, making stress domain mapping more accessible and scalable. Future research should focus on evaluating the long-term effectiveness of this approach, particularly in diverse educational settings, to ensure its broad applicability and sustainability [9].

Accessibility and inclusivity are also critical considerations in applying stress domain mapping. Students come from diverse cultural, socioeconomic, and personal backgrounds that influence how they experience and respond to stress. Interventions must be tailored to reflect these differences, ensuring that stress domain mapping is effective for all students. This may involve adapting the method to address specific cultural norms, providing resources in multiple languages, or offering financial support for accessing mental health services [10].

Stress domain mapping is a ground-breaking method for addressing dissociative disorders in students by identifying and targeting the specific stressors that contribute to psychological challenges. Unlike conventional approaches, this personalized framework focuses on the underlying causes of dissociation, offering both immediate relief and long-term strategies for resilience. Its effectiveness as a tool for both treatment and prevention, along with its flexibility across different contexts, makes it a valuable component of mental health care. With continued innovation, collaboration, and research, stress domain mapping could become a foundational element of mental health support in educational settings, empowering students to manage their well-being effectively. By fostering resilience and creating a supportive environment, this approach equips educational institutions to address dissociative disorders more comprehensively, enabling students to achieve success in all aspects of their lives while navigating the complexities of modern education [11].

The study aims to analyse the socio-demographic

profile of subjects in the two study groups, identify stressors using specific tools, evaluate their impact, and assess the Stress Domain Mapping (SDM) over time as a measurable outcome for response in cases of Dissociative Disorder (Convulsion type).

MATERIAL AND METHODS

This study hypothesizes that common daily stressors (CDS) across multiple life domains contribute to Dissociative Disorders, highlighting the need for effective identification and mapping for targeted non-pharmacotherapeutic interventions. Conducted at IMS, BHU, this 6-weeks follow-up study included 100 participants aged 14-30 years, meeting ICD-10 criteria for Dissociative Disorder (Convulsion type). Participants were randomly assigned to Stress Domain Mapping using PSLES (SDM-ps) or SSDQ (SDM-ss) and

assessed at baseline, 1st, 2nd, 4th, and 6th weeks. Inclusion required informed consent, while exclusions included unstable conditions or comorbidities. Stress domains included physical, interpersonal, behavioral, and educational aspects.

RESULTS

The study analysed participants' demographics in the SDM-ss and SDM-ps groups (N=50 each). Most participants were aged 14-18 years (60%), while 40% were aged 19-25 years, with none in the 26-30 age group, indicating a younger cohort. The SDM-ss group had 22% males and 78% females, while the SDM-ps group had 10% males and 90% females, with no significant sex difference ($\chi^2 = 2.679$, p = 0.102). The mean ages were similar: 18.18 (SD = 3.64) and 18.20 (SD = 3.67; p = 0.978).

Table 1: Comparison of Domicile Within the Study Groups

S. No	Domicile	SDM-ss Group (N=50) N	SDM-ss Group (N=50) %	SDM-ps Group (N=50) N	SDM-ps Group (N=50) %	Total N	Total %
1	Urban	17	34	10	20	27	27
2	Rural	33	66	40	80	73	73

The table compares urban and rural domicile distributions in two groups: SDM-ss and SDM-ps, each with 50 participants. Urban representation is lower, with 34% (17) in SDM-ss and 20% (10) in SDM-ps. Rural representation is higher, with 66% (33) in SDM-ss and 80% (40) in SDM-ps. Overall, rural participants dominate (73%).

Table 2: Comparison of Socio-Economic Status in Study Groups

S. No	Socioeconomic Status	SDM-ss Group (N=50) N	SDM-ss Group (N=50) %	SDM-ps Group (N=50) N	SDM-ps Group (N=50) %	Total N	Total %
1	Upper Middle	2	4	3	6	5	5
2	Lower Middle	32	64	34	68	66	66
3	Upper Lower	16	32	13	26	29	29
4	Lower	0	0	0	0	0	0

The table compares socioeconomic status distributions in SDM-ss and SDM-ps groups, each with 50 participants. Most participants belong to the Lower Middle class (66%), with 64% (32) in SDM-ss and 68% (34) in SDM-ps. The Upper Lower-class accounts for 29% overall, while Upper Middle represents only 5%. No participants are from the Lower class.
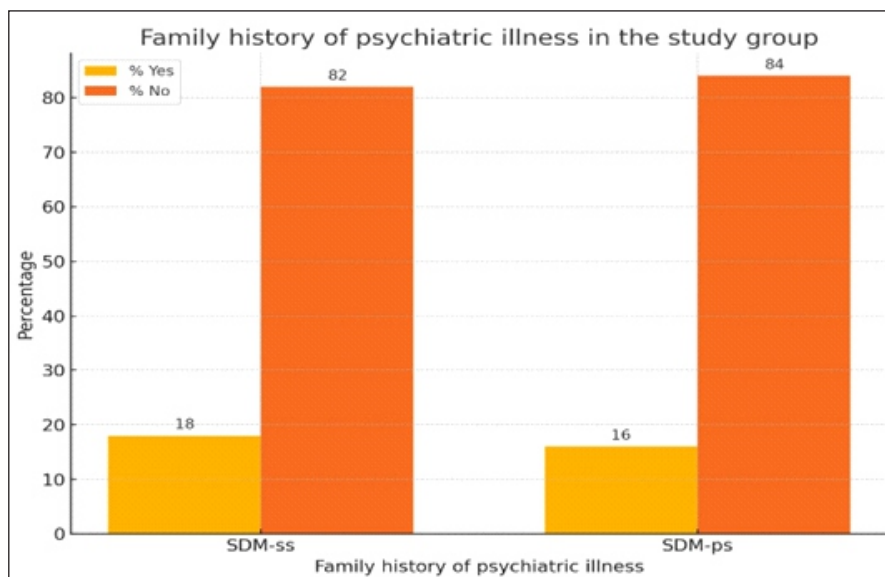

Figure 1: Family History of Psychiatric Illness in The Study Group

Both groups were comparable in family history of psychiatric illness. χ^2=0.071; p=0.790. This shows that there was no significant difference in two groups on the basis of family history of psychiatric illness

**Table 3: Comparison of Mean Difference of Cumulative Stress Load (CSL)
Score From Baseline to Subsequent Weeks Within the SDM-ss Group**

S. No.	Interval	Mean	T-Value	P-Value
1	CSL-B to CSL-1	42.240±41.54	7.19	0.0
2	CSL-1 to CSL-2	29.22±41.04	5.034	0.0
3	CSL-2 to CSL-4	56.760±50.34	7.973	0.0
4	CSL-4 to CSL-6	44.22±19.96	15.665	0.0
5	CSL-b to CSL-6	172.440±78.661	15.501	0.0

There was significant change in mean CSL score at subsequent weeks in SDM-ss group as p-value less than 0.05 at intervals. So, stress domain mapping technique was effecti--ve in monitoring the overall cumulative stress loading in these patients and hence provide another monitoring measure to assess improvement in these patients
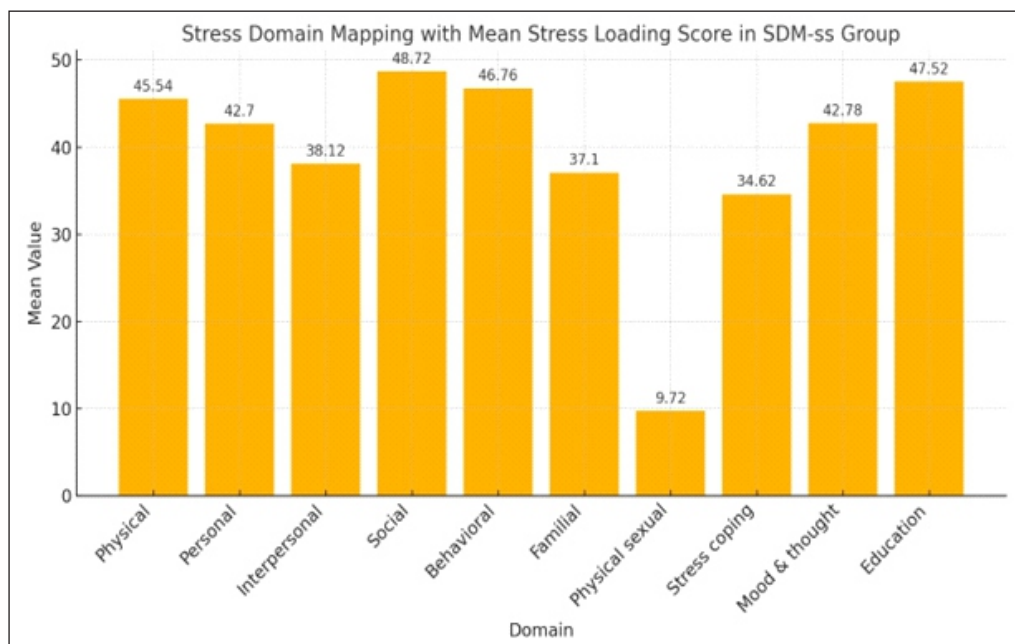

**Figure 2: Stress Domain Mapping With Mean Stress
Loading Score in SDM-ss Group (t= at Baseline)**

The Figure illustrates the mean stress loading scores across various domains within the SDM-ss group. The highest stress levels are observed in the education domain (47.52), followed by Social (48.72) and behavioural (46.76). The lowest stress is in the physical-sexual domain (9.72). Overall, significant variations exist across domains.

Table 4: Stress Domain Mapping in SDM-ss Group on SSDQ Scale

No. of Stressor (Impaired Domain)	N	%
Nil	5	10
Up to 2	2	4
3 - 5	22	44
More Than 5	21	42

In the SDM-ss group, stressors were identified in 90% (45) of participants. Among them, 86% (43) had three or more stressors, and 42% (21) experienced more than five stressors, reflecting significant stress loading. This highlights the prevalence of high cumulative stress in the majority of the group.
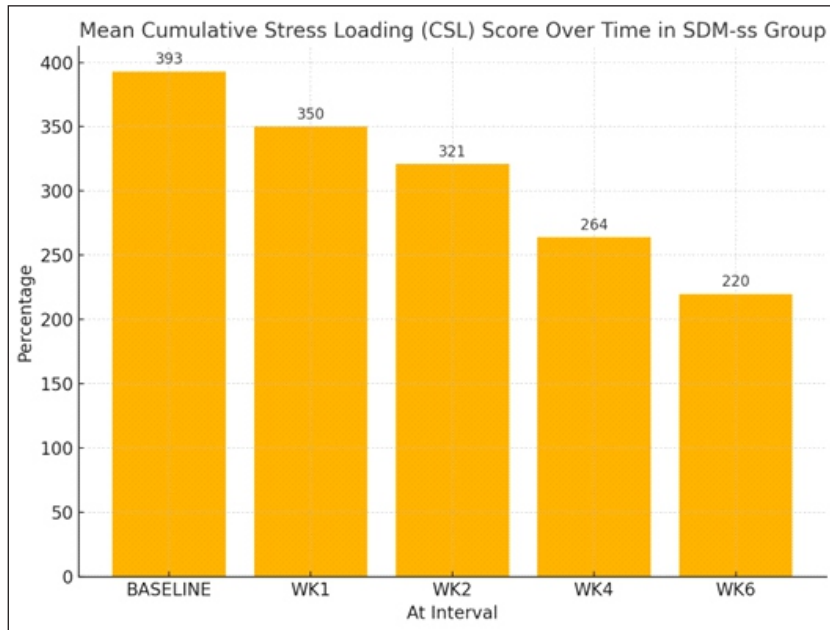
**Figure 3: Mean Cumulative Stress Loading (CSL)
Score Over Period of Time in SDM-ss Group**

Our study showed a reduction in CSL scores from 393 to 220 over 6 weeks of therapy, highlighting its effectiveness in dissociative disorder. CSL, a novel concept, was analysed only in the SDM-ss group as PSLE in SDM-ps couldn't quantify stress across domains.

Table 5: Stress Domain Mapping in SDM-ps Group (On PSLE Scale)

S. N	Stressor	N	%
1	Family conflict	13	26
2	Relationship issue	4	8
3	Education	5	10
4	Traumatic event	5	10
5	Nil	23	46

The table summarizes stressors in the SDM-ss group. Family conflict is the most common stressor (26%), followed by education and traumatic events, each at 10%, and relationship issues at 8%. Notably, 46% of participants reported no stressors, indicating a significant portion of the group experienced minimal stress-related challenges
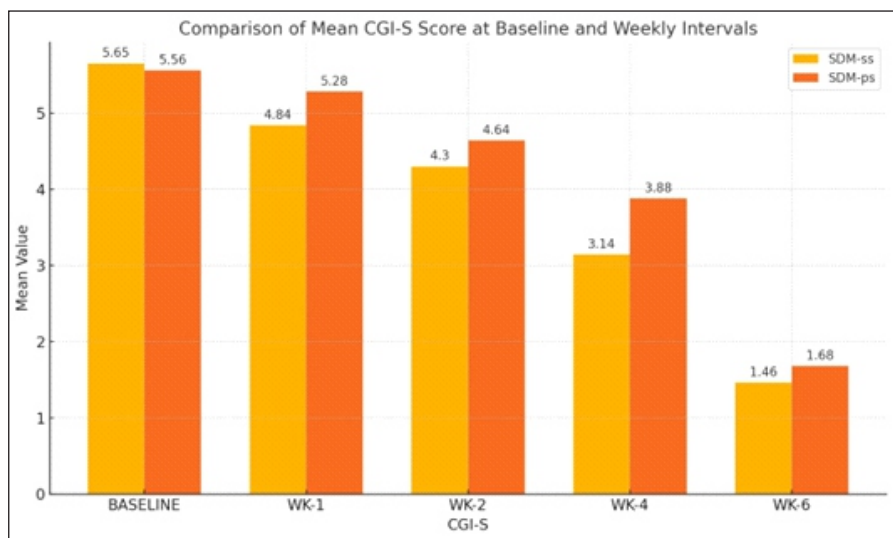

**Figure 4: Comparison of Mean CGI-S Score at Baseline,
1st, 2nd, 4th & 6th Week Between The Two Groups**

CGI-S scores were compared at baseline, 1st, 2nd, 4th, and 6th weeks for SDM-ss and SDM-ps groups. Baseline scores showed no significant difference (p=0.700). Significa-nt differences ($p < 0.05$) were observed from the 1st week onwards, indicating SDM-ss as a more effective management strategy for dissociative disorder.

Table 6: Comparison of Mean CGI-I Score at Weekly Intervals Between Groups

Group	Wk1	Wk2	Wk4	Wk6
SDM-ss	2.90±0.450	2.92±0.461	1.68±0.621	1.30±0.407
SDM-ps	3.30±0.479	3.02±0.414	1.92±0.254	1.62±0.479
Between The Group Comparison Unpaired T Test	T= -3.960 P=0.000	T= -1.213 P=0.228	T= -2.757 P=0.007	T= -3.960 P=0.000

CGI-I scores at 1st, 2nd, 4th, and 6th weeks showed significant differences ($p<0.05$) between SDM-ss and SDM-ps groups. These findings highlight the SDM-ss technique as a superior management strategy for dissociative disorder compared to SDM-ps.

Table 7: Comparison of Mean Dissociative Scores at Weekly Intervals Between Groups

Group	Baseline	Wk1	Wk2	Wk4	Wk6
SDM-ss	15.00±1.690	09.74±0.986	4.86±1.235	1.10±0.735	0.48±0.544
SDM-ps	15.06±1.476	10.38±1.157	6.34±1.002	2.20±0.808	1.34±0.479
Between The Group Comparison Unpaired T-Test	T= -0.189 P=0.850	T= -2.975 P=0.004	T= -6.669 P=0.000	T= -7.119 P=0.000	T= -8.397 P=0.000

Mean dissociative scores were compared at baseline, 1st, 2nd 4th and 6th weeks for SDM-ss and SDM-ps groups. Baseline scores showed no significant difference ($p=0.850$), but significant differences ($p<0.05$) emerged from the 1st week onwards, indicating SDM-ss as a superior management strategy for dissociative disorder compared to SDM-ps.

DISCUSSION

This pioneering study on Dissociative Disorder (convulsion type) evaluates the Stress Domain Mapping (SDM) technique for its management. It compares the effectiveness of SDM-ps and SDM-ss groups in treating convulsion-type dissociative disorder. Additionally, it examines the utility of the Students Stress Dimension Questionnaire (SSDQ) as a tool for managing stress in patients with dissociative disorder.

The majority of patients in both study groups were female (SDM-ss: 78%, SDM-ps: 90%), aligning with prior studies. Ponnudurai et al. (1981) reported 63.2% females in hysteria, Verma et al. (2017) found 60% females in Dissociative Disorders, and Deka et al. (2007) observed 92.5% females in Conversion Disorder. Reddy et al. (2018) reported 78.18% females. Our study focused on students aged 14–30 years (mean: 18), with most aged 14–18. Similar studies are scarce; Shah (2002) and Ray & Dutta (1962) reported comparable age groups without specifying students [12,13,14,15,16,17].

Thapa et al. (2014) found 84.5% of Dissociative Disorder cases under 30 years (mean: 21.23), with specific means for Dissociative Convulsion (18.8), Motor Disorder (26.4), and Stupor (20.6). Reddy et al. (2018) reported a mean age of 21.96 years, with 50.91% aged 10–19, and Deka et al. (2007) noted 57.5% in the 18–29 range. Socioeconomic status in our study was mostly lower-middle class (SDM-ss:

64%, SDM-ps: 68%), similar to Bagadia et al. (1973) and Gupta et al. (2019). Religion was predominantly Hindu, and most patients were educated up to 10th grade, consistent with Shah (2012) and Reddy et al. (2018) [14,15,16,18,19].

In our study, most patients were from rural areas (SDM-ss: 66%, SDM-ps: 80%), similar to Deka et al. (2007) (42.5%) and Verma et al. (2017) (83%). Nuclear families predominated (SDM-ss: 56%, SDM-ps: 62%), aligning with Reddy et al. (2018) (59%). Motor symptoms were the most common presentation (Deka et al., 2007), with pseudo-seizures at 71.4%. Our study focused solely on Dissociative Convulsions, the most common subtype in India (Srinath et al., 1993; Chandrasekaran et al., 1994; Prabhuswamy et al., 2006). Reddy et al. (2018) assessed neurotic traits in 50%, while SSDQ effectively addressed behavioral problems in our study [13,14,15,20,21,22].

Previous studies link life events to Dissociative Disorders. Tina et al. (2000) found more stressors in dissociative convulsions cases, while Binzer et al. (1997) reported 2.7 life events in patients versus 1.67 in controls. In our study, mean stressors were significantly higher in the SDM-ss group (4.76) than SDM-ps (0.82, $P<0.05$). Reddy et al. (2018) reported family disharmony (41.82%) and education issues (29.09%) as common stressors. Chand et al. (2000) and Gupta et al. (2019) highlighted family conflicts and school issues, supporting SSDQ's effectiveness in identifying stress [15,23,24,25,31].

Bowman et al. (1996) found abuse prevalent among Dissociative Disorder cases, with 67% reporting sexual and physical abuse. Mulder et al. (1998) reported childhood sexual abuse twice as common and physical abuse five times more common in dissociative cases than controls. In our study, stressors like family conflict (26%) and educational problems (10%) dominated, while SSDQ

detected physical/sexual abuse (mean score: 9.7), unlike PSLE. Thapa et al. (2014) found family conflict (23.1%) as the common stressor, with higher life event scores in dissociative cases than controls [18,26,27].

In the SDM-ss group, stressors were quantified across domains, with the highest mean stress scores in the Social Domain (48.7), followed by Education (47.52) and Behavioural (46.76). Mean Cumulative Stress Loading (CSL) scores reduced significantly over 6 weeks: 393 at baseline, 350 at 1 week, 321 at 2 weeks, 264 at 4 weeks, and 220 at 6 weeks (p<0.05), indicating fewer dissociative episodes. SSDQ holistically measured stress across dimensions and facilitated targeted interventions. PSLE in the SDM-ps group lacked domain-specific quantification, making CSL analysis exclusive to SDM-ss.

In our study, improvement was assessed over six weeks using Clinical Global Impression (CGI) scales. At baseline, mean CGI-Severity scores were comparable (p=0.700), but at 1st, 2nd, 4th and 6 weeks, SDM-ss patients showed significantly better improvement (p<0.05) than SDM-ps patients. Similarly, CGI-Improvement scores demonstrated significant differences at the same intervals (p<0.05), confirming superior outcomes in the SDM-ss group. These findings highlight that SDM-ss is a more effective management strategy for Dissociative Disorder compared to SDM-ps.

Goldstein et al. (2010) found Cognitive-Behavioral Therapy (CBT) with Standard Medical Care (SMC) more effective than SMC alone for Psychogenic Nonepileptic Seizures (PNES), with seizure episodes decreasing from 19.73 to 11.81 in CBT and 22.62 to 19.44 in SMC over six months. Mousavi et al. (2008) reported faster recovery with muscle relaxation than hypnosis (p=0.04) or diazepam (p=0.006) in Acute Conversion Disorder. Gupta et al. (2019) validated Cumulative Stress Loading (CSL) as a key factor in dissociation, recommending individualized interventions targeting stressors across life domains to improve outcomes [28,29,30].

CONCLUSION

Stress Domain Mapping (SDM) emerged as an effective technique for managing dissociative disorders, particularly in students, by targeting stressors across multiple life domains. The study demonstrated significant reductions in cumulative stress loading (CSL) scores and improvements in clinical global impression (CGI) scores over six weeks in the SDM-ss group compared to the SDM-ps group. This highlights the superiority of domain-specific stress mapping for holistic management. SDM also proved valuable in identifying high-risk domains and tailoring interventions, offering a promising approach for preventive and therapeutic strategies in educational settings, fostering better outcomes for students facing dissociative challenges.

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