

Effectiveness Of Cognitive Behavioural Therapy And Culture Based Instructions Among Post-Traumatic Stress Disorder Patients: A Comparative Study

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ABSTRACT:

In addition to individual and situational factors, cultural foundations have a role in the development of PTSD. Cultural beliefs and practices, along with customs, familial backgrounds, and social roles all have a significant impact on psychosocial regulation in those recovering from a major traumatic event. Although several studies have compared western and eastern interventions, there are few studies on culture-based treatment interventions. Individual differences make it difficult and unproductive to design a universal treatment for people of varied cultural backgrounds. For therapists to understand the symptoms of patients in their cultural settings, cultural knowledge is essential. The study aims to compare the effectiveness of CBT and CBI in the treatment of PTSD. Fifty (50) patients were enrolled in the study, out of which twenty-five (25) patients were randomly assigned to the CBT group and twenty-five (25) to the CBI group. Both the groups were assessed before and after treatment by using clinician-administered PTSD scale (CAPS), The study results revealed that both treatments effectively reduces symptoms of PTSD. However, CBI was more effective in reducing all symptoms of PTSD except the symptoms of hyperarousal.

Keywords: PTSD, CBT, CBI, Anxiety, Depression, and Quality of life.

Prevalence: In a study Singh et al (2020) reported higher prevalence of PTSD (28%) and depression (14.1%) in general people during pandemic of Covid -19. Kaysen et al (2019) conducted a study on prevalence of PTSD and reported that young adult women belonging to a minority group are at a higher risk to develop PTSD. Another study conducted by Marthoenis (2019) reported high prevalence of PTSD among adolescents who have faced earthquake of 2016 in Indonesia. As per Diagnostic and Statistical Manual (2013) the prevalence of PTSD in United States at the age of 75 was found to be (8.7%) and (3.5%) in young adults of United States. Lower rates of prevalence (0.5% -1.0%) was found in inhabitants of Europe, Asia Africa and Latin America while as higher prevalence was found in first respondents such as police personnel's, fire fighters and in medical doctors. In the Kashmir valley, the prevalence of Post-traumatic stress disorder (PTSD) finds rampant evidences and yet is an under-studied issue, Partly because such studies are not mostly attempted and partly because people as general fear

being stigmatized socially (Margoob et. al., 2006). In 2004, the Srinagar Psychiatric Hospital (SPH) alone diagnosed 15 percent to 20 percent, of the cases as PTSD (Jeelani, 2002).

Introduction: Trauma is generally described as the emotionally distressed and painful experience or a situation which affects person's ability to cope, leaving them with feeling of worthlessness and helplessness. It is not confined only to exposure to violence; rather it involves observing violence on the basis of factors like race, class, gender, confinement, or sexual orientation. The victims of trauma mostly find themselves into different states ranging from a calming and stable state to the alternating shifts of agitated expressiveness, extreme anxiety, anger, hyper-vigilance and relatively erratic spells of arousal (Roberts, 2002). The response derived from any of the traumatic events and the psychological make-up of the victim, eventually leads him towards acute stress disorder. However, many individuals react to any traumatic stressor in a delayed phase spread over weeks to months and showed the symptoms such as recurrent nightmares, isolation, depressive bouts, intense fears, hallucinatory experiences, insomnia, irritability, and hyper-arousal activity of psychological trauma. Witnessing those traumatic events such a natural disaster, brutal accident, war, or combat, sexual abuse etc lead victims to Post-Traumatic Stress Disorder that is a psychiatric condition in which victims experience various variety of symptoms such as intrusive, avoidance and hyper arousal.

Rationale: Although there are many studies regarding comparisons between western and eastern interventions but there are limited studies about culture based treatment interventions. Developing a universal treatment for the people of different cultural backgrounds is neither easy nor effective as there are individual differences. Cultural understanding is important for the therapists so that they become able to understand symptoms of patients in their specific cultural context. Furthermore, integration of eastern technique into treatment process increases willingness of Asian patients to undergo treatment process, as patients of different cultural backgrounds need different therapeutic styles in order to produce best treatment outcomes. So it becomes necessary for the therapist to consider culture, integrate specific cultural techniques, and modify therapy in order to cater specific needs of their patients. These efforts may help in reducing drop-out rates, stigma, and establishing alliances between the patients and clients.

Literature review: Study conducted by Amoke et al (2020) on effectiveness of CBT for psychological distress among prisoners of Nigeria has suggested that CBT is effective in relieving psychological distress in prisoners of Nigeria. Bisson et al (2020) meta-analytically reviewed the six non psychological approaches for PTSD treatment. The result of the study reviewed that use of non psychological approaches such as yoga, acupuncture, neuro-feedback, magnetic stimulation, and herbal preparations are not recommended treatment for PTSD, some components such as yoga and acupuncture may be given to patients who have not responded to standard PTSD treatments. Giacomucci et al (2020) conducted a study on effectiveness of Trauma- focused psychodrama for the treatment of PTSD among Substance Abuse Disorder patients. The result of the study suggested that psychodrama is effective and relatively less painful treatment for PTSD. Lewis et al (2020) meta analytically reviewed the psychological therapeutic treatments for PTSD and vindicated the findings that CBT and EMDR is more

effective therapy for PTSD. However when it comes to CBT treatments for PTSD, cognitive processing therapy (CPT), sustained exposure or prolonged exposure, as well as cognitive therapy (CT), are more helpful. Macedo et al (2018) conducted a meta analytical study on long term effects of CBT on PTSD, out of 2324 studies initially included; eight studies were finally selected for measuring the long term efficacy of CBT on PTSD patients. Bryant et al (1999) conducted a study on treating acute stress disorder with cognitive behavioral therapy. The reports of the study vindicated that we can prevent PTSD if cognitive therapy is provided earlier to the acute stress victims. The findings of the study also suggested that anxiety management does not enhance treatment gains after prolonged exposure is given and prolonged exposure plays an important role in treating acute stress disorder. Devilly et al (1999) did a head to head comparison of trauma treatment protocol based on cognitive behavior procedures verses Eye Movement Desensitization and Reprocessing (EMDR) for the treatment of PTSD. The research found that trauma treatment protocol is effective in relieving Pathological symptoms of PTSD and the effectiveness of EMDR disappears over time. Fecteau et al (1999) conducted a study and evaluated the role of cognitive behavior therapy for motor vehicle accidents. As per the outcomes of their study cognitive behavior therapy is clinically significant remedy for post-traumatic stress disorder. Apart from individual and situational reasons there have been the cultural underpinnings underlying the reasons for the PTSD as well. Cultural belief systems, along with traditional familial and societal role expectations, prominently affect psychosocial regulation in individuals recuperating from severe trauma. In the cross-cultural psychotherapy treatment of posttraumatic stress disorder (PTSD), cultural factors can add greatly to a more comprehensive and robust diagnostic devising and recommend potential approaches to treatment. Gilmoor et al (2019) conducted a study and highlighted the complexities in understanding the nature of PTSD in an Indian context. The findings of the study reported that diversity exists in Indian culture as far as assessment, diagnosis and treatment of PTSD is concerned. It also explains how social and cultural background of Indian people produce influence in manifesting PTSD symptoms. The study further suggested that there is a need to develop culture based approach for addressing symptoms of PTSD. Perry et al (2019) carried out a study and highlights the role of culture in traumatic experiences. The findings of the study suggested that all the children's of the world experience trauma in one or other form. Research has confirmed that culture plays an important role in manifestation of trauma related symptoms. DSM 5 and ICD put emphasis on clinicians to include culture in assessment, diagnosis, and treatment of mental disorders. In a study, Khambaty et al (2017) discussed the cultural influences on anxiety treatment in India. As per the conclusion of the research, culture has a significant role in accurate diagnosis, assessment and treatment of anxiety and other culture oriented syndromes such as dhat and kono etc. The study further suggested that knowledge of cultural factors helps in developing holistic treatment. In India various cultural based techniques such as meditation, yoga, mindfulness, Unani medicine, and Ayurveda are used for the treatment of mental disorders. Marsella (2010) conducted a study and explain ethno cultural factors in PTSD with special reference to clinical issues and therapeutic considerations. In the light of the available literature presented above it is evident that CBT and other related techniques are beneficial in the prevention as well as in the treatment of PTSD but the cultural based interventions developed across the world also have remained significant concern to the

therapist. In the treatment of PTSD and other mental illnesses, these cultural based strategies have proven to be quite successful and beneficial. Additionally, literature have witnessed that cultural based interventions have been found more effective than other treatments in certain circumstances. The overall picture depicted from the available literature suggested that CBI need to be explored to examine its effectiveness by conducting further research in this field.

Methodology:

Research problem: On the basis of careful study of reviewed literature that was going through magazines, journals, articles, books, and internet surfing, the research problem was stated as:

“Effectiveness of Cognitive Behavioral Therapy and Cultural Based Instructions in Post Traumatic Stress Disorder Patients: A Comparative Study”

Research design: A research design is a systematic procedure for testing hypotheses, gathering and analyzing data, and drawing objective findings. On the basis of rationale of the study, objective assessments were carried out utilizing various statistical procedures based on the study’s purpose and the characteristics of the study’s variables. To achieve the research goals, a completely randomized design (Pre-test, post-test design) was adopted.

Variables of the study and their operational definitions: Independent variable

I. Types of therapeutic treatment:

This means type of treatment which was received by the patient (Cognitive behavioral therapy & Cultural based instructions). There are 10 sessions in both the treatment groups which were given weekly. Each session has 60 minutes duration given individually to each patient.

(a) Cognitive behavioral therapy (CBT): It is a type of western talk therapy which puts emphasis on cognition. It helps in reconstructing negative thoughts into positive ones. CBT was administered individually on the basis of Beck’s paradigm. There were 10 sessions in CBT manual which were received by the patient for 10 weeks. In the hospital setting, CBT was given by a trained therapist.

(b) Cultural based instructions (CBI): It is a modification of CBT based on cultural induced instruction. Based on the FMAP model, an instructional manual was devised which includes elements of CBT, RST, stress management, anger management, prayer therapy, Acceptance and commitment therapy, and interpersonal skills. Instructional manual was devised to administer individually. There are 10 sessions of 60 minutes each and was given to the patient weekly.

(c) Dependent variables:

Post- traumatic stress disorder (PTSD) is taken as per the criteria of Diagnostic and Statistical Manual (DSM) DSM IV.

(d) Symptom severity of PTSD: It is the sum of all of the symptoms of PTSD recorded on the clinician- administrated PTSD scale (CAPS) based on DSM IV criteria.

(e) Procedure of Sampling

- (f) The Sample consists of post traumatic stress disorder (PTSD) patients. The Patients were selected from Institute of Mental Health and Neurosciences Kashmir Srinagar (IMHNS), Shri Maharaja Hari Singh hospital (SMHS) and from various clinics. Treatments were given at the institute of Mental Health and Neurosciences Kashmir Srinagar (IMHNS), by registered therapist. 101 patients were enrolled for the study out of which 50 patients were selected for the study on the basis of the set eligibility criteria of Diagnostic statistical Manual IV
- (g) **Sample size:** Fifty (50) PTSD patients were selected meeting the set criteria. They were assigned to two groups at random with 25 participants in each group. The sample includes conflict related victims (pellet, torture, killing, murder, and missing).
- (h) **Assessment Tools / Techniques Used:**
- (i) **a. Assessment of PTSD:**
- (j) The Clinician- Administered PTSD scale was used to assess post-traumatic stress disorder (CAPS: Blake et al., 199). It is a semi-structured psychometric tool (interview) that is used for measuring post-traumatic stress disorder symptoms according to DSM IV (American Psychiatric Association 1994). It is used to assess the symptoms of a various associated disorders including acute stress disorder and survivor guilt. It also gives us information on the onset and diagnosis of post- traumatic stress disorder at different time intervals, such as information about the patient’s PTSD from the past week, current week, and during the life time. It is a validated tool for measuring the symptom severity of PTSD. It also gives information about individual symptoms as well as about symptom severity of PTSD. It gives us measurements regarding the intensity and frequency of symptoms and their impact on an individual’s social and occupational functioning.
- (k) **Statistical techniques:** Keeping in view the objectives of the study, nature of sample, and research design non parametric statistical tests were applied which includes Mann-Whitney U Test, , as well as Wilcoxon Signed Rank test

Result interpretation: The first section deals with the comparison analysis where the Wilcoxon test, has been used to compare differences between individuals before and after treatment. In the second section the Mann Whitney U test has been applied to analyze the difference between the treatments (CBI & CBT).

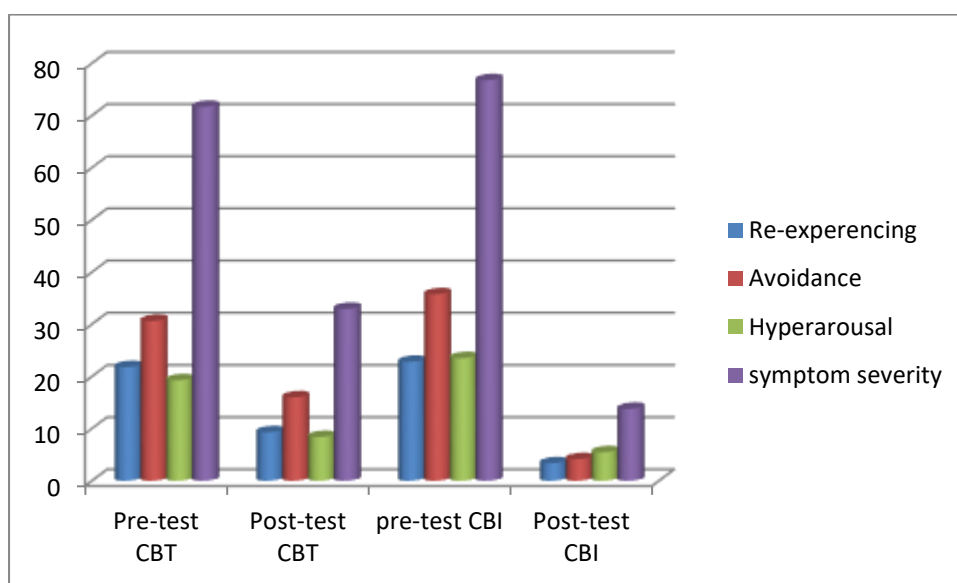
Table:1 Comparison of pre and post test scores using Wilcoxon Signed Rank Test

Measures	Treatments	Pre-test score	Post-test score	Z-value	P- value
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CAPS	CBT/CBI				
Re-experiencing	CBT	21.80	9.32	4.349	.000
	CBI	22.00	3.36	4.376	.000
Avoidance	CBT	30.64	16.00	4.375	.000
	CBI	35.76	4.16	4.376	.000
Hyper arousal	CBT	19.28	8.40	4.376	.000
	CBI	23.52	5.48	4.376	.000
Symptom severity	CBT	71.68	32.96	4.374	.000
	CBI	76.78	13.8	4.374	.000

The above table shows that both the treatments are effective in reducing symptoms of PTSD,

Figure 4.1 Graphical representations of dimensions of PTSD



Dimension wise description of dimensions of CAPS

1. Treatment (CBT)

(a) CAPS

Re- experiencing symptom: There is significant decrease in symptoms of re-experiencing after CBT treatment as reflected by the pre test score (21.80) and post test score (9.32) with $Z = 4.349$ and $P = .000$.

Avoidance and Numbing symptom: There is significant decrease in symptoms of avoidance and Numbing after CBT treatment as reflected by the pre test score (30.64) and post test score (16.00) with $Z = 4.375$ and $p = .000$

Hyper arousal symptoms: There is significant decrease in symptoms of hyper arousal after CBT treatment a reflected by the pre test score (19.28) and post-test score (8.40) with $Z = 4.376$ and $p = .000$

Symptom severity PTSD: There is significant difference in the symptom severity of PTSD after CBT treatment as reflected by the pre test score (71.68) and post test score (32.96) with $Z = 4.374$ and $p = .000$

2. Treatment (CBI)

(a) CAPS

Re-experiencing symptom: There is a significant decrease in symptoms of re-experiencing after CBI treatment as reflected by the pre-test score (22.00) and post-test score (3.36) with $Z = 4.376$ and $P = .000$

Avoidance and Numbing symptom: There is a significant decrease in symptoms of avoidance and Numbing after CBI treatment as reflected by the pre-test score (35.76) and post-test score (4.16) with $Z = 4.376$ and $p = .000$

Hyperarousal symptoms: There is a significant decrease in symptoms of hyperarousal after CBI treatment as reflected by the pre-test score (23.52) and post-test score (5.48) with $Z = 4.376$ and $p = .000$

Symptom severity PTSD: There is a significant decrease in the symptom severity of PTSD after CBI treatment as reflected by the pre-test score (76.78) and post-test score (13.8) with $Z = 4.374$ and $p = .000$

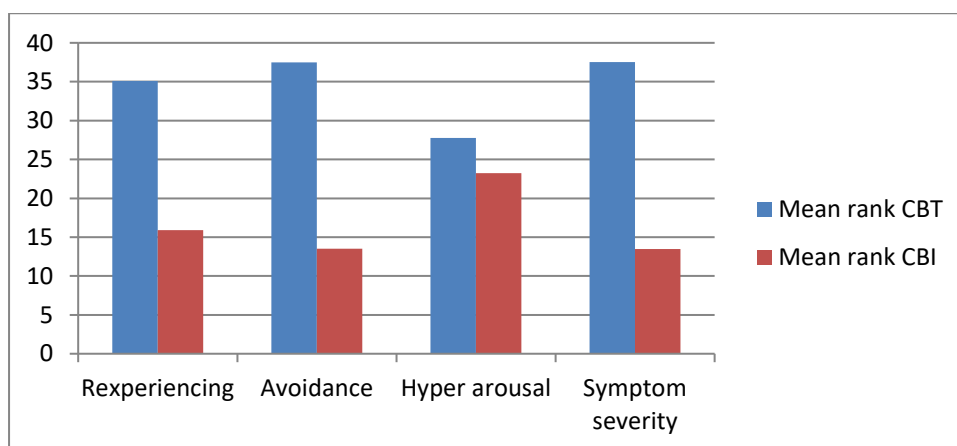
Table 2: Mann Whitney U test of CBT and CBI Post test Scores

Measures	Treatment Groups	N	Mean Rank	Sum of Ranks	U value	P value
CAPS	CBT/CBI					
Rexperiencing	CBT	25	35.10	877.50	72.500	.000
	CBI	25	15.90	397.50		
Avoidance	CBT	25	37.48	937.00	13.000	.000
	CBI	25	13.52	338.00		
Hyper arousal	CBT	25	27.76	694.00	256.000	.269
	CBI	25	23.24	581.00		

Symptom severity	CBT	25	37.52	938.00	12.000	.000
	CBI	25	13.48	337.00		

Table 2 shows a significant difference between CBT and CBI in reducing symptoms of PTSD except for the symptom of hyperarousal.

Graphical representation of treatments(CBT&CBI)



Dimension wise description of CAPS, are as:

1. Treatment (CBT &CBI)

(a) CAPS

Re-experiencing symptom : There is a significant reduction in symptoms of re-experiencing by CBI than CBT as significant difference exists between mean rank of CBT group (35.10), and mean rank of CBI group (15.90) with $U = 72.500$ and $p = .000$. This means that CBI is more effective than CBT in reducing re-experiencing symptoms of PTSD.

Avoidance and Numbing symptom: There is significant reduction in the symptoms of avoidance and numbing by CBI than CBT as significant difference exists between mean rank of CBT group (37.48) and mean rank of CBI (13.52) with $U = 13.000$ and $p = .000$ so we can say that CBI is more effective in reducing avoidance and numbing symptoms of PTSD than CBT.

Hyperarousal symptoms: There is no significant difference in the symptoms of hyper arousal by CBI and CBT group as significant difference does not exist between mean rank of CBT group (27.76) and mean rank of CBI group (23.24) with $U = 256.000$, and $p = .269$. Here both the treatments are equally effective in reducing hyper arousal symptoms of PTSD.

Symptom severity of PTSD: There is a significant reduction in the symptom severity of PTSD by CBI than CBT as significant difference exists between mean rank of CBT group (37.52) and mean rank of CBI group (13.48) with $U = 12.000$ and $p = .000$. Hence CBI is more effective than CBT in reducing symptoms of PTSD.

3. Treatment (CBI)

(b) CAPS

Re-experiencing symptom: There is a significant decrease in symptoms of re-experiencing after CBI treatment as reflected by the pre-test score (22.00) and post-test score (3.36) with $Z = 4.376$ and $P = .000$

Avoidance and Numbing symptom: There is a significant decrease in symptoms of avoidance and Numbing after CBI treatment as reflected by the pre-test score (35.76) and post-test score (4.16) with $Z = 4.376$ and $p = .000$

Hyperarousal symptoms: There is a significant decrease in symptoms of hyperarousal after CBI treatment as reflected by the pre-test score (23.52) and post-test score (5.48) with $Z = 4.376$ and $p = .000$

Symptom severity PTSD: There is a significant decrease in the symptom severity of PTSD after CBI treatment as reflected by the pre-test score (76.78) and post-test score (13.8) with $Z = 4.374$ and $p = .000$

(c) HADS

Anxiety symptoms: There is a significant difference in the symptoms of anxiety after CBI treatment as reflected by the pre-test score (10.56) and post-test score (3.24) with $Z = 4.381$ and $p = .000$

Depression symptoms: There is a significant decrease in the symptoms of depression after CBI treatment as reflected by the pre-test score (12.56) and post-test score (5.32) with $Z = 4.208$ and $p = .000$

Discussion and conclusion: As far as the result of this study is concerned, it was found that there is improvement in symptom severity of PTSD before and after receiving CBT treatment. All the symptoms of PTSD such as re-experiencing symptoms, as well as avoidance and numbing symptoms, and symptoms of hyperarousal show improvement after receiving sessions of CBT. These results are in line with other studies like (Blanchard et al 2003; Cloitre 2009; & Chand et al 2012) found that CBT treatment is an effective treatment for reducing the symptoms of PTSD. Study conducted by Takazawan (2015) on effectiveness of CBT for PTSD among adolescents and children that have faced severe trauma revealed that CBT is effective and efficacious treatment for PTSD patients. Lopes et al., (2014) meta-analytically evaluated

effectiveness of CBT among natural disaster PTSD patients. The findings of the study suggested that CBT is effective treatment for PTSD. The findings of the study suggested that traumatic event cause victims to develop PTSD and that cultural based instructions are more effective than CBT in reducing symptom severity of PTSD, with the exception of hyper-arousal symptoms where there is no significant difference in scores of PTSD symptom severity in the CBT and CBI groups. Besides, other symptoms of PTSD such as Re-experiencing, as well as symptoms of avoidance and numbing showed marked improvement after receiving sessions of cultural based instructions. These findings are in accordance with those of other studies, such as study done by Dossa & Hatem (2012), who found that adapted version of CBT is effective in reducing symptoms of PTSD among war related victims. Cultural based instructions are specially meant for PTSD in which each and every symptom cluster was targeted in order to produce better outcome.

Limitation:

1. Due to paucity of time and financial constraints, the researcher could not cover a broader geographic area that may increase the generalizability of the study.
2. The researcher could not carry out follow-ups that might increase the external validity of the research.
3. It was not possible for the researcher to incorporate victims of all ages, compare, and evaluate children's recovery process with adults.
4. Smaller sample size may restrict the universal generalizability of results.

Recommendations:

1. There is a dearth of health care professionals. Trained trauma specialized professionals are needed.
2. There is a need for the development of an intervention for the Kashmiri population.
3. Treatment should be structured, training must be provided to mental health professionals, and trauma specialists to equip themselves with modern practices and become able to treat trauma victims in a better way.
4. Trauma management and screening centers are needed to be established in educational, community or clinical settings that will be helpful in early detection of trauma, and also will be helpful in providing early intervention, and prevention of development of PTSD. There will be easy access to the services provided by those health care centers so that trauma victims can easily avail these services for quick recovery and better coping.
5. Mass awareness programs need to be developed regarding PTSD and the psychological impacts of trauma on the mind and body.
6. Cultural-based psychotherapeutic interventions need to be endorsed to become the best alternative psychotherapy for people of different cultural backgrounds.
7. Traditional healers and spiritual priests can be trained in order to provide better service by scientifically orienting their wisdom.
8. Restricted use of lethal weapons
9. There is a dire need to replicate such studies so that other factors such as a coping mechanism, emotional processing, and perception of a patient were taken into account.

References:

- Amoke, C. V., Ede, M. O., Nwokeoma, B. N., Onah, S. O., Ikechukwu-Ilomuanya, A. B., Albi-Oparaocha, F. C., ... & Nweze, T. (2020). Effects of group cognitive-behavioral therapy on psychological distress of awaiting-trial prison inmates. *Medicine*, 99(17).
- Bisson, J. I., van Gelderen, M., Roberts, N. P., & Lewis, C. (2020). Non-pharmacological and non-psychological approaches to the treatment of PTSD: results of a systematic review and meta-analyses. *European Journal of Psychotraumatology*, 11(1), 1795361.
- Bryant, R. A., Harvey, A. G., Dang, S. T., Sackville, T., & Basten, C. (1998). Treatment of acute stress disorder: A comparison of cognitive-behavioral therapy and supportive counseling. *Journal of Consulting and Clinical Psychology*, 66, 862-866.
- Devilley, G. J., & Spence, S. H. (1999). The relative efficacy and treatment distress of EMDR and a cognitive-behavior trauma treatment protocol in the amelioration of posttraumatic stress disorder. *Journal of anxiety disorders*, 13(1-2), 131-157.
- Fecteau, G., & Nicki, R. (1999). Cognitive behavioural treatment of post traumatic stress disorder after motor vehicle accident. *Behavioural and Cognitive Psychotherapy*, 27(3), 201-214.
- Gilmoor, A. R., Adithy, A., & Regeer, B. (2019). The cross-cultural validity of post-traumatic stress disorder and post-traumatic stress symptoms in the Indian context: a systematic search and review. *Frontiers in psychiatry*, 10, 439.
- Jeelani, A. (2002). *Turmoil and Trauma, Voices Unheard: A Newsletter of Kashmiri Women's Initiative for peace and Disarmament*.
- Lewis, C., Roberts, N. P., Andrew, M., Starling, E., & Bisson, J. I. (2020). Psychological therapies for post-traumatic stress disorder in adults: systematic review and meta-analysis. *European journal of psychotraumatology*, 11(1), 1729633.
- Macedo, T., Barbosa, M., Rodrigues, H., Coutinho, E. D. S. F., Figueira, I., & Ventura, P. (2018). Does CBT have lasting effects in the treatment of PTSD after one year of follow-up? A systematic review of randomized controlled trials. *Trends in psychiatry and psychotherapy*, 40(4), 352-359.
- Margoob AM, Ahmad SA. Community prevalence of adult posttraumatic stress disorder in South Asia: experience from Kashmir. *Jammu Kashmir Practitioner* 2006;13:S18-S25.
- Margoob M.A. A study of present magnitude of psychiatric disorders and the existing treatment services in Kashmir (1990-1994). *JK Practitioner* 1995;2(3):165-168.
- Marsella, A. J. (2010). Ethnocultural aspects of PTSD: An overview of concepts, issues, and treatments. *Traumatology*, 16(4), 17-26.

- Marthoenis, M., Nirwana, A., & Fathiariani, L. (2019). Prevalence and determinants of posttraumatic stress in adolescents following an earthquake. *Indian journal of psychiatry*, 61(5), 526.
- Perry, J. M., Modesti, C., Talamo, A., & Nicolais, G. (2019). Culturally Sensitive PTSD Screening in Non-Western Youth: Reflections and Indications for Mental Health Practitioners. *Journal of Refugee Studies*, 32(Special_Issue_1), i151-i161.
- Roberts, A. R. (2002). Assessment, crisis intervention and trauma treatment: The integrative ACT intervention model. *Brief Treatment and Crisis Intervention*, 2, 1-21.
- Singh, S. P., & Khokhar, A. (2020). Prevalence of Posttraumatic Stress Disorder and Depression in General Population in India During COVID-19 Pandemic Home Quarantine. *Asia Pacific Journal of Public Health*, 1010539520968455.