

**IMPACT OF EXPOSURE TO ARMED VIOLENCE AND DRUG USE ON  
NIGHTMARES, ANHEDONIA AND SOMATIC SYMPTOMS IN THE KASHMIRI  
POPULATION**

**A**

***Thesis submitted***

***In the partial fulfilment of the requirement for the degree of***

**MASTER OF ARTS  
IN PSYCHOLOGY**

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## CERTIFICATE

This is to certify that the thesis titled, “**Impact Of Exposure to Armed Violence and Drug Use on Nightmares, Anhedonia and Somatic Symptoms in the Kashmiri population**” being submitted in partial fulfilment of requirements for the award of degree of **Master of Arts in Psychology**, submitted in the **School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala** is a bonafide work carried out under the supervision of Dr. Sohinee Ganguly, Assistant Professor, School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala and that no part of this project has been submitted for the award of any other degree.



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This is to certify that the above statement made by the student concerned is correct and true to the best of my knowledge.



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## CANDIDATE'S DECLARATION

I hereby declare that the work presented in this thesis titled, **“Impact Of Exposure to Armed Violence and Drug Use on Nightmares, Anhedonia and Somatic Symptoms in the Kashmiri population”** in partial fulfillment of the requirement for the award of the degree of **Master of Arts in Psychology**, submitted in the **School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala**, is an authentic record of my own work carried out under the supervision and guidance of Dr. Sohinee Ganguly, Assistant Professor, School of Humanities and Social Sciences, Thapar Institute of Engineering and Technology, Patiala and refers other researcher's work which are duly listed in the reference section. The matter embodied in this thesis has not formed the basis for the award of any other degree of this or any other university.

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## **ACKNOWLEDGEMENT**

The path towards completing this dissertation has been circuitous because of the COVID-19 situation. Its completion is thanks to those who supported me at every step and motivated me to keep working.

First and foremost, I am extremely thankful to my research supervisor, Dr. Sohinee Ganguly (Assistant Professor of School of Humanities and Social Sciences) for her support, supervision, and understanding. I feel extremely fortunate to have her as my supervisor. With her, she brought the depths of the knowledge and research experience that very few could match and always cleared my doubts without any hesitation. Although working with me she had to cope with a little extra work on the days close to the deadline, she always showered her trust and appreciation on me.

Secondly, I would like to thank those who were indirectly a part of this dissertation. Those, who answered my call every time I needed the slightest of help. I would like to thank my family and friends, who are more than just that, for always being there for me whenever I needed.

Last but not the least; I'd like to express my gratitude towards the participants of the study for attentively reading the questionnaires and filling them honestly.

## ABSTRACT

Armed violence can be defined as utilization of weapons to cause injury, death or psycho social hurt, which subverts advancement. This study was aimed to understand the impact of armed violence and drug use of anhedonia, nightmares and somatic symptoms in the Kashmiri population. The research followed a between subject design where exposure to violence, substance use and gender were the independent variables and nightmares, anhedonia and somatic symptoms were used as the dependent variables. The sample consisted of 74 males and 74 females from the various districts of the Kashmir valley. It was hypothesized that the prevalence of nightmares, anhedonia and somatic symptoms will be more in subjects who have been exposed to armed violence. Drug use was postulated to be positively related to these three internalizing symptoms. The t test used to measure the difference between mean scores of subjects exposed to armed violence v/s the ones that have never been exposed to armed violence was significant for nightmares and somatic symptoms but not for anhedonia. Females showed a significantly higher score on the somatic symptoms checklist whereas males scored significantly higher on the anhedonia scale.

**Keywords:** Armed violence, drug use, Kashmir, anhedonia, somatic symptoms, nightmares, gender, SHAPS, DAST- 10.

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## CHAPTER 1: INTRODUCTION

### 1.1 Armed violence

Armed violence comprises of the utilization of weapons to cause injury, death or psycho social hurt, which subverts advancement. According to a small arms survey conducted by World Health Organization (WHO) in 2003, despite of being present in all societies, armed violence excessively influences low and middle income nations. The World Health Organization (WHO) reports that armed violence is among the top five leading reasons for deaths of adults.

Types of armed violence:

1. Conflict armed violence- Armed conflict destroys lives and livelihoods. Arms and lightweight weapons are liable for the majority of direct conflict deaths. The whole range of individuals dying directly throughout armed conflict is comparatively low compared to those dying indirectly from its consequences.

The real consequences of armed conflict go farther than the numbers of troopers and civilians that lose their lives. Armed conflicts even have a damaging impact on the social, political and economic infrastructure of societies, limiting the supply of basic services, forcing migration flows, and exposing affected communities to risks of death and illness. The psychological, social, and economic prices of armed violence and conflict have an adverse effect on countries and societies, probably for many years. Estimating the proportion of indirect victims of armed violence has been well-tried and found to be difficult. Several researchers have urged methodologies to estimate conflict-related deaths, however no validation mechanism has been developed to form accord on the ways that would best capture the complete vary of the phenomenon. The extent of immediate and indirect casualties will in general change all through the periods of armed conflict figuring on the intensity of conflict, its period and on previous conditions (for example the kind and state of the general public health infrastructure).

2. Non- conflict armed violence- Non-conflict deaths are usually distinguished from the deaths that arise from armed conflict on the grounds of the organization of killing. However, the intensity of large-scale criminal violence and low-level armed conflict differs very little, and

the line between the two is frequently blurred. Till now, the most conspicuous human weight of armed violence is brought about by casualties and injuries that occur in non-conflict and non-war settings.

## **1.2 Impact of armed violence on mental health**

The victims exposed to armed violence for the most part endure mental pressure and stress. Such stress may damage people. Trauma could be the consequence of living through violence or seeing demonstrations of violence or being straightforwardly victims of torment, assault, and so on. Like people, the general society and community may likewise face trauma on the off chance that it ends up going through violent circumstances on a regular basis. Mental health problems and psycho social consequences due to exposure to armed violence incorporate sleeplessness, fear, nervousness, anger, aggressiveness, depression, flashbacks, alcohol and substance abuse, suicide, and domestic and sexual violence. After a traumatic event, a significant proportion of the population might have nightmares, anxiety, and alternative stress-related symptoms, though these effects sometimes decrease in intensity over time. For some, the despair and helplessness related to persistent insecurity and statelessness can trigger reactions like those discussed above. For others, these experiences may lead to Post-Traumatic Stress Disorder (PTSD) and chronic depression.

The male members of a family may experience anxiety, psychosomatic illnesses and depression as a consequence of their experiences with armed violence because of flashbacks of violent acts they witnessed or performed, guilt because of not having the ability to safeguard their families adequately, or due to fulminant state and a lost sense of purpose. These effects, in turn, are also manifested as hostility toward relationships in the family. Although it's currently firmly established that armed violence features an impact on the psychological state of those living in active conflict zones, it remains the case that we still understand remarkably very little regarding how totally different characteristics of conflict result in specific forms of psychopathology and psychological impairment in civilians. This can be due to the fact that great majority of the research on the psychological consequences of armed conflict has been conducted on war veterans despite the fact that war results in a larger burden on the civilian population than on veterans.

Even though in the past, studies on civilians tended to maintain their focus on the impact of exposure to armed violence on the risk of developing posttraumatic stress disorder (PTSD), it has now become clear that the results of conflict extend on the far side of the direct effects of violence to incorporate a bunch of social and economic hardships that may be as equally necessary in determining the chance of developing a mental illness.

The findings of a study conducted by Bell and Mendez (2012) on characteristics of armed conflict and the mental health of civilians living in active conflict zones concluded that mental health state is not solely related to direct exposure of armed violence, as a variety of other serious consequences like depression, aggression and suicide-risk were associated equally, if not more strongly to its indirect exposure. It is important to understand armed violence as having a systemic effect on the risk for mental illness, which, while also including direct experience of conflict-related violence, will also include disruption of social support networks, accrued anti-social predictor, poverty, a restricted ability to access essential services and variety of alternative interconnected effects.

### **1.3 Drug Use**

Addiction may be a chronic illness characterised by drug seeking and use which compulsive, or tough to curb, despite the harmful consequences. The initial choice of using drugs is voluntary for many individuals, however continual drug use can result in brain changes that challenge the individual's self-control and reduce their ability to resist intense urges to take drugs. These brain changes are often persistent, that is why dependency is taken into account as a "relapsing" disease i.e. people in recovery from drug use disorders are at accumulated risk for using drugs again even after not taking them for years.

During the previous decade, there has been developing acknowledgment of the significance of considering drug use and abuse indicators. Despite the fact that drug use is for the most part seen as less extreme than drug abuse, there are a few theoretical and methodological qualifications between these two phases of drug consumption. Firstly, as drug use can often simply be measured by frequency, quantity, and length, it's this stage that's usually employed on nonclinical samples. Contrary to that, drug abuse is more amenable to diagnostic criteria applied to clinical samples, i.e. analysis on substance abuse is commonly conducted on in- or outpatient

populations. Furthermore, while drug use is more often associated with interpersonal and environmental factors (e.g., peer pressure, drug availability), drug abuse is commonly related to biological and psychiatric factors in interaction with the environment of the individual.

An individual with a substance use disorder usually ends up using more of the substance than they initially intended to and goes on to use that substance even after suffering significant adverse consequences. A compulsive pattern of drug use is found in individuals diagnosed with a substance use disorder. This is a trend which is mostly linked to both physical and psychological dependency. Physical dependence involves changes in traditional bodily functions i.e. the user may experience withdrawal from the drug upon decrease in usage. On the contrary, an individual with psychological dependence, who has associated emotional instead of physical needs to the drug use, would take it to alleviate psychological distress. Drug withdrawal comes with a range of negative symptoms which an individual experiences when drug use is stopped. These symptoms are usually the opposite of the consequences of the drug use. Along with withdrawal, several people who are diagnosed with substance use disorders also tend to develop tolerance to those substances. Drug craving or psychological dependence has recently been added in the DSM-5 as diagnostic criteria for substance use disorder.

For an individual who is addicted to a drug, the consistent use of drugs is the main focus in life. If the drug use stops, the individual will crave the drug due to their intense and strong desire for the substance. The person's physiological mechanism generates these cravings to take care of a state of equilibrium that depends currently on those drugs. The cravings mentioned before have a physiological mechanism-, which is, they stimulate the part of the brain (predictor) that controls the emotional memory in drug users as shown by PET scans done on an addicted individual. An addict can experience this kind of craving at any stage of the drug dependency, use or abuse. Depending on the amount of dose, the drug does not only impair addicts' cognitive skills and behaviour, but it also leaves a permanent damage to certain other abilities. Specialists are of the view that a few changes due to the drug addiction disappear in a few days after the drug use, whereas certain other anomalies remain permanent. One among the primary changes within the brain which occur in response to continual substance abuse is tolerance. Tolerance develops once an individual needs a better quantity of drug to achieve that level of delight or a state of alteration of consciousness that he achieved earlier through lower doses of the drug. Additionally to the impairment of brain, dependency makes users vulnerable to alternative health risks. For

instance, inhalant abusers are at higher risk of heart issues like disruption of heart rhythms. Usually drug Addicts consume and inject medication in a group for a heightened experience which places them at higher risk of acquiring HIV virus due to contaminated needles employed in the procedure.

Kashmir has been put through decades of turmoil that has resulted in a rise of psychiatric health problem and psychosocial disturbances. A variety of psychiatric issues have emerged like depression, OCD, PTSD, drug dependency, etc. However long the issue of chronic drug use in Kashmir is concerned it has seen that this contention ridden locale has a huge ascent in substance abusers over the previous decade. Through observation it has been concluded that that the problem of drug addiction in the conflict region of Kashmir has had a significant rise in the number of drug user over the past years. United Nations Drug management Programme (UNDCP) reported that around seven thousand individuals are drug addicts within Kashmir alone among which four thousand are females. Government Psychiatric Hospital-the lone psychological well-being clinic in the valley in one of its report expressed that most quantities of drug use cases have a place with an extremely youthful age. According to the director of drug de-addiction centre, Srinagar Dr. Khan expressed that the pattern of drug use is on the ascent among younger students as we have enrolled numerous such cases where students of Class IX to XII are engaged with drugs. A prestigious specialist in Kashmir Dr. Maqgoob in one of her books has revealed that there are around 2.11 lakh drug addicts in Kashmir valley.

In a study conducted by Naqshbandi (2012) on drug addiction and youth of Kashmir 270 young residents of Kashmir in the age range of 16-30 from different districts of Kashmir were interviewed. Based on these interviews, it was concluded that conflict and unemployment were the primary reasons of drug addiction among the youth. A few studies have shown that 80% of drug addicts get this compulsion before the age of 30 years. In another study conducted by Bhat, Manish and Mushtaq (2013) titled 'Smoking patterns among people in Jammu region of Jammu and Kashmir State', it was concluded that most of the students are of the view that people start to take drugs in the age group of 20-30. It was further reported that smoking often acts as a starting point to drugs or at least is a doorway. A study conducted by Bhat et al. (2016) further revealed that above 90% college students are not aware of the drug De addiction process and only 8% have knowledge of the drug de addiction facility in Srinagar, Kashmir.

## 1.4 Nightmares

According to Schredl (2018), dreams whose negative effects cause an awakening are called nightmares. Studies uncover that at any rate 5% of the complete population experiences nightmares. This commonness is firmly raised in patients in psychiatric treatment. In a study conducted by Wittmann, Schredl and Kramer (2007) it was reported that the prevalence of nightmares in posttraumatic stress disorder (PTSD) is 50–70%. PTSD severity is often associated with nightmare frequency. According to ICD-10 (WHO, 2004) and DSM-5 (APA, 2013), posttraumatic nightmares are a diagnostic criterion of PTSD and are considered to be emotionally the most intense type of dreaming. Similarly, re-experiencing of traumatic experiences in nightmares is linked with higher subjective distress in PTSD patients (Freese et al., 2018).

Even though it has been established that nightmares are a feature of PTSD, they have been found to independently add to psychiatric distress and have a significant contribution in poor outcomes including heightened suicidal thoughts. Nightmares are frequently impervious to suggested pharmacological or psychological PTSD treatments. However, there are treatments available that are nightmare-specific. Clinically significant improvements in sleep quality and severities of daytime PTSD symptoms have also been strongly linked to improvements in nightmares. Nightmares are a hallmark of posttraumatic stress disorder (PTSD). As a feature of PTSD, nightmares are generally defined as dysphoric dreams that entirely or somewhat depict parts of traumatic events. Chronic weakness and therapy results like helpless rest quality, daytime trouble, and higher danger of self destruction have additionally been related with nightmares. Sleep pattern and daytime symptoms of anxiety and depression can also be tackled through treatments that usually target nightmares.

Traumatic themes are also greatly affected by cultural differences. Hinton et al. (2000) conducted a study in which Cambodian refugees that survived and lost loved ones in the Pol Pot genocide (1975–1979) were interviewed about the frequency, content, and meaning of dreams that they had. The word ‘nightmares’ was not referred to; however, dreams described as “deeply upsetting” by all participants were associated with it. One of the participants used the words “awoke sobbing” which was paired with sadness and fear. In this social setting, dreams themselves could be horrible for the one experiencing them.

## **1.5 Somatic symptoms**

Somatisation (or psychosomatisation) is defined as the expression of emotional distress in the form of bodily symptoms. Characteristic psychosomatic symptoms include recurrent headaches, widespread bodily pains, unexplained malaise, dizziness, and palpitations. Such complaints are just as real and objective sources of hardship as those that might be caused by physical disease or injury. Somatisation is a worldwide phenomenon. However, it has been regarded as particularly prevalent in cultures in which expression of emotional distress in a psychological idiom is traditionally inhibited; perhaps these are cultures which place a high value on interpersonal harmony and thus implicitly discourage direct expression of feeling.

Patients with somatic symptom disorder usually consult with a primary care physician and not with a psychiatrist or a mental health professional. It can be tough for such individuals to understand and accept the fact that their worries and concerns about the symptoms of the illness are excessive. Even presenting evidence of not having a serious illness may not be enough and the individual may continue to worry excessively. The onset of somatic symptom disorder is usually around the age of 30.

In a study conducted by Caroline Rometsch (2020) on pain, somatic complaints, and subjective concepts of illness in traumatized female refugees who experienced extreme violence by the IS, it was found that traumatized female refugees suffer from diverse somatic health problems such as pain symptoms, feelings of suffocation, and movement disorders alongside immense mental health disorders such as PTSD. The subjective feelings of personal injury, wellbeing and health restrictions are influenced by pain due to its special position after a traumatic event. Somatic symptoms are attributed to a multi causal explanatory model, with psychological causes as the leading cause.

The reports of somatic symptoms are linked with multiple socio- emotional factors. In a study conducted by Bailey (2005) it was reported that African American children who were victims of community violence had a 28 % increased risk of appetite problems, 94 % increased risk of sleeping problems, 57 % increased risk of headaches, and 174 % increased risk of stomach aches. Additionally, another study done by Reynolds et al. (2001) on low-income urban

adolescents reported that there were higher rates of somatic symptoms in the subjects of this study than in a nationally representative normative sample of children and adolescents. Furthermore, internalizing and externalizing symptoms were found to co-occur with somatic symptoms.

In a study conducted by Shayla L. Hart, Stacy C. Hodgkinson and Harolyn M. E. Belcher (2012) titled 'somatic symptoms, peer and school stress, and family and community violence exposure among urban elementary school children', it was reported that exposure to community violence was associated with an increased odds of having borderline or clinically significant somatic complaints. In a study conducted by Comellas (2015) on Patterns of somatic distress among conflict-affected persons in the Republic of Georgia reported high levels of somatic symptoms among returnees in Georgia, which are strongly associated with exposure to traumatic events and other mental disorders. These high somatic symptom levels indicate significant suffering. Somatic symptoms might be expected to be common in conflict-afflicted populations given the high levels of known risk factors for its development such as exposure to traumatic events, existing mental disorders and socioeconomic deprivation. Even though the potential risk factors for somatic symptoms disorder are high in frequency, yet there is very limited literature on somatic symptoms disorder in conflict affected areas, especially in low and middle income countries.

In a study conducted by Housen, Ara and Shah (2019) on Dua Ti Dawa Ti: understanding psychological distress in the ten districts of the Kashmir Valley and community mental health service needs, it was found that a perceived test in Kashmir is that overall wellbeing experts have practically zero comprehension of somatisation as a pointer of psychopathology, and therefore individuals who suffer from it consult with neurologists, cardiologists and other specialized medical services where they undergo a battery of tests, burdening the family in huge costs. The assistance seeking to and fro conduct between seeking after care from customary/profound pioneers and the clinical framework with saw practically no detailed improvement in this investigation which brought about expanded disappointment and expanded monetary expense for the patient. This isn't special to Kashmir. A study by Murray (2007) reported that if an individual with somatic symptoms is misdiagnosed, it can cause an increase in monetary costs to the patient and the health system. It may also contribute to an increase in symptoms and higher impairment.

Thus, it has become essential to improve the mental health literacy among healthcare professionals, traditional healers and communities so as to facilitate early diagnosis of psychopathology and psychological distress and ensure timely access to care and treatment.

## **1.6 Anhedonia**

Anhedonia (or loss of interest and joy) is a main symptom of depression and may foresee poor treatment result. Anhedonia has been ensnared as a center side effect of depression and schizophrenia, and considering anhedonia has yielded a wide exhibit of significant discoveries supporting the understanding and diagnosis of mental disorders. Nonetheless, anhedonia is a perplexing and diverse term; undoubtedly, the term anhedonia has been characterized in psychological exploration as various ideas which are hypothetically and methodologically free of each other. There is little knowledge about the abstract insight of anhedonia, and it is very rarely focused on in treatment for psychological disorders. Anhedonia is a predictor of depression, but not every person who's depressed encounters anhedonia. Doctor prescribed drugs, particularly medications like antidepressants and antipsychotics used to treat depression, can cause anhedonia. Anhedonia may likewise happen because of sporting medication use or having a lot of pressure or tension. Anhedonia is viewed as a center element of major depressive disorder as, for instance, the Diagnostic and Statistical Manual of Mental Disorders, Fourth edition (DSM-IV) necessitates that either depressed mood or anhedonia be present to propose this conclusion. Besides, absence of reactivity and anhedonia are key analytics for the DSM-IV melancholic subtype of major depression and presence of anhedonia has been demonstrated to be prescient of reaction to antidepressants. The shortfall of diagnostic criteria particularity could be viewed as a restricting component when attempting to characterize anhedonia. Imaging research studies have shown that the seriousness of anhedonia is associated, in patients of depression, with a lack of movement of the ventral striatum (reflecting diminished capacity of the core accumbens, presumably as a primary event) and an abundance of activity of ventral part of the prefrontal cortex (concerning an expanded capacity of the VMPFC and the orbitofrontal cortex, most likely as an auxiliary marvel). It isn't yet conceivable to demonstrate that the shortages or overabundances of movement are essential or secondary, yet the investigations of anhedonic nonclinical subjects, nonanhedonic depressed patients, and depressed patients with different degrees of anhedonia appear to support this perspective. Anhedonia was characterized by Ribot

(1896) to allude to a lack in a person's ability to encounter positive affect in circumstances that ought to regularly incite it. Such side effects have since a long time ago been perceived in people experiencing mental health problems including major depression, schizophrenia, and substance abuse disorders. As of late, indicators of anhedonia have likewise been efficiently seen in people with Post Traumatic Stress Disorder which incorporates in diagnostic criteria as lessened joy in previously appreciated activities and a diminished capacity to feel feelings, especially those related with closeness, delicacy, and sexuality. In a study conducted by Ramirez et al. (2001) it was concluded that symptoms of emotional desensitizing might be especially identified with anhedonia. Neuroimaging studies propose that individual contrasts in anhedonic handling are somewhat addressed inside the ventromedial prefrontal cortex (VMPFC) during visual emotional processing (Harvey, Pruessner, Czechowska, and Lepage, 2007; Keedwell, Andrew, Williams, Brammer, and Phillips, 2005). Symptoms of anhedonia, or shortfalls in the capacity to encounter positive affect, are progressively perceived as a result of awful traumatic stress for people with PTSD. Sporting substance use can arise or deteriorate in the consequence of psychological trauma. Anhedonia is one justification for this hazardous substance use. Symptoms of posttraumatic stress disorder (PTSD) that address anhedonia (post-trauma anhedonia; PTA) have been reliably connected to substance use problems. In an investigation directed by Negar Fani et al. (2015) on post-trauma anhedonia is related with expanded substance use in affected individuals. 165 people were enlisted in the crisis division of a Level 1 emergency room. Clinical evaluations of PTSD and substance use were administered at three and six months post-trauma. Contrasted with members with negligible substance use at six months post-trauma, high substance use clients at six months post-trauma showed critical expansions in post traumatic anhedonia during the three to six months time span. This relationship was significant even subsequent to accounting for change related with different elements, including PTSD side effects, for example, re-encountering and hyperarousal.

## CHAPTER 2: REVIEW OF LITERATURE

Wani and Margoob (2006) conducted a family study of adult PTSD patients in south Asia: Experiences from Kashmir. It concluded that 62 percent of the family members had psychiatric morbidity, with PTSD being the common diagnosis (32.12%), followed by major depressive disorder MDD (19.45%) and generalized anxiety disorder (4.53%). Females and males were almost equally affected in PTSD group, when compared to the normal subjects. Most of the subjects with PTSD were running a chronic course (84%).

Chadda, Malhotra, Kaw, Singh, and Sethi (2007) conducted a study on mental Health Problems following the 2005 Earthquake in Kashmir. It was found that all patients seen in the clinics had their houses destroyed by the earthquake. Disorders diagnosed in these patients included adjustment disorders (39.6%), depressive episode (22.6%), and other stress disorders (21.8 %). Even though PTSD-like symptoms were reported by more than two-thirds of the patients, only 10 (3.3%) patients were found to suffer from posttraumatic stress disorder (PTSD).

In a two-stage cluster household survey conducted by Ford and de Jong (2008) in two districts of Kashmir (India) with the help of questionnaires administered in other conflict affected areas over one-third of respondents out of 510 were found to have symptoms of psychological distress, wherein women scored significantly higher. A third of respondents had contemplated suicide. The elevated psychological distress scores among males were associated with coerced displacement and physical dysfunction due to violence; for women, risk factors for psychological distress included relying on others for everyday living, being a witness of killing, and torture. Self-rated poor health and being unable to work were associated with mental distress.

Ford, Kam and Jong (2008) conducted a study on Conflict in the Indian Kashmir Valley I: exposure to violence. 510 interviews were completed. It was found that the subjects had frequent direct exposure to violence since the beginning of the conflict, including exposure to crossfire (85.7%), round up raids (82.7%), the witnessing of torture (66.9%), rape (13.3%), and self-experience of forced labor (33.7%), arrests/kidnapping (16.9%), torture (12.9%), and sexual violence (11.6%). Males reported significantly higher frequency of exposure to violence than females, and had a higher probability of directly experiencing physical maltreatment, violation of their modesty and injury.

Amin and Khan (2009) conducted a study on Characteristics of Depression in Kashmir in which it was concluded that due to continuing conflict in Kashmir during the last 18 years, psychiatric morbidity has seen an astounding increase. The prevalence of depression was found to be 55.72%. In the 15 to 25 years age group, it is highest (66.67%), followed by 65.33% in the 26 to 35 years age group. There was found to be a significant difference in the prevalence of depression among males and females. The prevalence of depression is high among women (93.10 %) as compared to males (6.8%).

Asima Hassan and Aneesa Shafi (2013) conducted a study on Impact of Conflict Situation on Mental Health in Srinagar and it was found that respondents have faced multiple psychological problems in which 90.5 percent of the respondents reported having become fearful, while 87 percent respondents suffered sleeping disorders. 86 percent respondents reported experiencing psychological distress and symptoms of depression. 66 percent respondents have lost interest in their life, 59.5 percent respondents were feeling the re-experience of the situation, 31.5 percent respondents reported having nightmares, 38.5 percent respondents showed aggressive behavior while 27 percent respondents had suicidal thoughts.

Hassan (2012) conducted a study on impact of the conflict situation on education in Kashmir. The study concluded that in reality, every aspect and every section of the society in Kashmir suffers on the individual as well as group level. Education was the main causality as a consequence of the conflict. The actual reason leading to the decreasing working days was incidents of violence and crumbling of the entire system of governance. This paper aims to focus on the impact of the conflict situation on education of youth in Kashmir. The study has been limited to youth enrolled in various degree colleges covering the faculties of general science, social science, Humanities, Business/commerce and computer science. The respondents were selected from the colleges of six districts of Kashmir province of Jammu and Kashmir.

A study conducted by Bhat and Rangaiah (2015) examined the effect of social support and conflict exposure on posttraumatic growth (PTG) among the young adults who have been exposed to stressful experiences regarding the armed conflict in Kashmir. It was found that the young adults who have been exposed to stressful experiences had relatively high levels of PTG and social support. The increase in PTG was associated with conflict exposure and total perceived social support. Adapting and formulating strategies to sensitize individuals living in

conflict zones on the importance of posttraumatic growth and the social support required in the process can help lessen psychological distress increase their ability to withstand adversities and help them move towards personal growth.

Bhat and Rangaiah (2015) carried out a study to investigate the relationship between armed conflict and posttraumatic stress disorder (PTSD) symptoms. It was explored in a sample of 797 young adults from Kashmir in India. 49.81% respondents were found to have symptoms of PTSD. The risk factors associated with these symptoms of PTSD were conflict- related events. It was found through regression analysis that a family member threatened or being dead and missing, witnessing disturbing media portrayal of conflict, a feeling of living in the conflict, and an elevated level of direct exposure to conflict and violence were the risk factors associated with PTSD symptomatology.

Dar, Hussain, Qadri and Fatima (2015) carried out a study on prevalence and pattern of psychiatric morbidity among children living in orphanages of Kashmir. The study concluded that the prevalence of psychiatric morbidity was 40.52 % among the study sample with Separation Anxiety disorder (12.93%) being the most common followed by Depression (7.76%), Obsessive Compulsive Disorder (6.90%), Attention Deficit Hyperactivity Disorder (4.31%), Specific Phobia (4.31%), Social Phobia (1.72%), Panic disorder (0.86%), and Post Traumatic Stress Disorder (0.86%) contributing to the overall burden of psychiatric morbidity.

Ganie and Din (2015) carried out a study on impact of insurgency on education in Kashmir. It concluded that J&K is the only state in India that has made education free to all its citizens at all levels. However, the literacy rate at 54% is far below the level of nationwide 65%. The discrepancy is slightly larger from women (42% compared to the national figure of 54%) and for men (66% compared with a national level of 76%). The census figures on literacy show stark discrepancies within the state, except for Srinagar District, the valley of Kashmir has literacy rates of 41% and 47% on a par with Bihar, the least literate state in India. In these same districts, female literacy is below 30%. On the other hand Jammu district has a literacy rate of 77%, one of the highest in India.

Wani and Singh (2017) carried out a study to explore the Mental Health of the Cannabis Abusers and Non Abuser of Kashmir valley. A total of 100 males participated in the study; of these 50 were cannabis abusers and 50 non abusers were taken into the study. The study showed that there was a significant difference in the two groups on sub scales of mental health. Cannabis abusers were found to have higher level of anxiety, depression, and loss of behavioural/ emotional control, psychological distress, and have showed lower levels of life satisfaction and mental health index scores in comparison with non-cannabis abusers.

Housen, Ariti and Lenglet (2017) conducted a research on the prevalence of PTSD, anxiety and depression in the Kashmir Valley. The results showed an estimated prevalence of mental distress in adults in the Kashmir Valley at 45%. They also identified 41% of adults with probable depression, 26% with probable anxiety and 19% with probable PTSD. The three disorders mentioned above were linked with the following characteristics: being a female participant, an age of over 55 years, having had no formal education, living in a rural area and being widowed/divorced or separated. A dose–response link was found between the number of traumatic events experienced or witnessed and all three mental disorders.

Bhat and Khan (2018) conducted a study on mental health issues in Kashmir valley: An overview. The study concluded that mental health issues are consistently increasing with an alarming sign. There is an excess increase in the number of individuals suffering from different mental disorders, which are very alarming as compared to other states of India. The budget kept for the improvement of mental health services in Kashmir by the government is very less than what is required. A number of other services should be available to fulfill the needs and support the habitants to a greater extent. It is needed that we enhance the mental health services in Kashmir so that it can reduce disability, the risk of several mental illnesses, and control premature death.

Ara, Shah and Housen (2019) conducted a study titled Dua Ti Dawa Ti in which they attempted to highlight the psychological distress in the various districts of Kashmir and the kind of mental health resources that are needed. The study concluded that usually recognized symptoms of psychological distress were similar to the symptoms that are present in the Hopkins Symptoms Checklist (HSCL-25) and the Harvard Trauma Questionnaire (HTQ). Access was highlighted as the main barrier in mental health help-seeking from traditional/spiritual healers and with

practitioners of western medicine. Individuals showed the need for investment in literacy of mental health to improve the community's ability to identify and support those people suffering from psychological distress.

Paul and Khan (2019) carried out a study on the prevalence of Childhood Mental Disorders Among School Children of Kashmir Valley. The study used a multi-stage sampling and multi-informant reporting of mental health issues in children. A total sample of 1000 school children was drawn from 12 schools of a district in Kashmir through systematic random sampling method. The most usually found mental illness was of anxiety (8.5%), which was followed by mood disorders (6.3%) and at last behavioural disorders (4.3%). The percentage of school attending children with mental disorders in Kashmir is way more than it is in other states of India. The lack of mental health facilities give rise to high prevalence rates of mental disorders and warrant our urgent attention.

Aehsan Ahmad Dar and Sibnath Deb (2020) carried out a study on mental Health in the Face of Armed Conflict. The essential objective of this exploration was to appraise the effect of armed conflict on emotional well-being among youthful grown-ups in Kashmir. An aggregate of 680 undergrad and postgraduate understudies finished the semi-organized poll covering regions like discernment about the contention, and its effect on wellbeing (mental and physical) and education. Results found that 99.7% of participants reported exposure to armed violence, 95.4 % went through psychological distress, 60.3% mentioned physical illnesses and complaints, and 91.2% found their own and the mental health of others being affected and 99.3% expressed that their education was severely affected as a consequence of the Kashmir conflict.

Ara and Ahad (2016) conducted a study on depression and suicidal ideation among older adults of Kashmir. The study was conducted to view the patterns of suicidal thoughts and depression among the elderly in Kashmir Valley. A total of 184 older adults (102 elderly males & 82 elderly females) taken from different districts of Kashmir participated in the study. The findings of the study concluded that there is no significant mean difference in the depression level of older adults with respect to various socio demographic variables. Further, the results of the study show that there is significant difference in the suicidal ideation of educated and uneducated elderly people. Furthermore, no significant difference was seen in suicidal ideation of females and males

(older adults). Results further concluded that depression has significant positive correlation with suicidal ideation indicating that depression acts as risk factor for suicidal ideation.

Deol and Ganai (2018) conducted a study on custodial violence in Kashmir by the Indian Security Forces. The study concluded that the intensity, nature and other variables of armed violence in Kashmir do not establish armed violence as merely an obvious and unavoidable result of the conflict. Rather, armed violence has been consistently pursued in Kashmir to kill, injure and threaten the residents.

Ganguly, Smetana, Abdullah and Karmazin (2019) carried out a study on India, Pakistan, and the Kashmir dispute: Unraveling the dynamics of a South Asian frozen conflict. The study lays out the key factors of the conflict or the redefined notion of armed violence and conflicts, situating the rivalry in the broader category of unresolved protracted conflicts with a looming threat of violence renewal. It concludes that despite of the small developments in the conflict dynamics, the improvement in casualties in the conflict transformation through any of the suggested pathways remains unlikely in the near future.

Kaul (2018) carried out a study India's Obsession with Kashmir: Democracy, Gender, Nationalism. This study focuses on understanding how the violence enacted upon Kashmiri bodies is connected to feminized understandings of the body of Kashmir in India's imagination of itself as a nation state. It argues that the gendered discourses of representation, cartography and possession are central to the way in which such nationalism works to legitimize and normalize the violence in Kashmir. It concludes with a few reflections on how Kashmir is a litmus test for the discourse on nationalism in contemporary India.

## **CHAPTER 3: RESEARCH GAP, OBJECTIVES, THEORETICAL BASIS AND HYPOTHESES**

### **3.1 Research gap**

Although it's currently firmly established that armed violence features an impact on the psychological state of those living in active conflict zones, it remains the case that we still understand remarkably very little regarding how totally different characteristics of armed violence result in specific forms of psychopathology and psychological impairment in civilians. This can be due to the fact that great majority of the research on the psychological consequences of armed conflict has been conducted on war veterans despite the fact that war results in a large burden on the civilian population as well. The literature has studies mostly on the level of symptoms present in Kashmiri locals, but not much research is done on the gender differences and effects of substance use on these internalizing mental health problems.

### **3.2 Objectives**

1. To assess nightmares, anhedonia, and somatic symptoms in individuals on the basis of exposure to armed violence.
2. To understand the relationship of substance use with nightmares, anhedonia, and somatic symptoms.
3. To investigate the gender differences in nightmares, anhedonia and somatic symptoms.

### **3.3 Theoretical basis**

Holly Foster and Jeanne Brook- Gunn draw on the stress process paradigm to forward an overall conceptual model of exposure to armed violence in childhood and adolescence. Around this conceptual model, they synthesize three dominant areas of the literature which are detailed but often disconnected including:

(1) The multilevel correlates and causes of exposure to violence (e.g., neighborhood characteristics including concentrated disadvantage; family characteristics including socio-economic status and family stressors).

(2) A range of consequences of exposure to violence (e.g., internalizing and externalizing mental health problems, role transitions, and academic outcomes).

(3) Multilevel and cross domain mediators and moderators of exposure to violence influences (e.g., school and community factors, family social support, and individual coping resources).

### **3.4 Hypotheses**

**H<sub>1</sub>**- Nightmares will be more prevalent in participants that have been exposed to armed violence.

Judith L. Evans (1996) conducted a study on children affected by armed violence in which he reported that because of the nature, intensity and duration of the armed violence in Rwanda in 1994, children were severely traumatized and experienced nightmares, difficulty in concentrating, depression and a sense of hopelessness about the future.

**H<sub>2</sub>**- Anhedonia will be more prevalent in participants that have been exposed to armed violence.

Andrew R. Scherff (2007) conducted a study on the impact of exposure to violence on internalizing symptomatology and adolescent suicidal ideation in which he examined the effects of exposure to violence on 170 adolescents' self-reported levels of depression (i.e., dysphoric mood, anhedonia, negative self-statements, somatic complaints). The results concluded that overall, 83.3% of the participants had been exposed to some form of community violence out of which 19% of the participants reported moderate to severe levels of anhedonia.

**H<sub>3</sub>**- Somatic symptoms will be more prevalent in participants who have been exposed to armed violence.

In a study conducted by Shayla L. Hart, Stacy C. Hodgkinson and Harolyn M. E. Belcher (2012) titled 'somatic symptoms, peer and school stress, and family and community violence exposure among urban elementary school children', it was reported that exposure to community violence was linked with higher chances of having borderline or clinically significant somatic problems. In a study conducted by Comellas (2015) on Patterns of somatic distress among conflict-affected persons in the Republic of Georgia reported high levels of somatic symptoms among returnees in Georgia, which are strongly associated with exposure to traumatic events and other mental disorders.

**H4-** Drug use will be positively related to anhedonia.

In an investigation directed by Negar Fani et al. (2015) on post-trauma anhedonia is related with expanded substance use in affected individuals. 165 people were enlisted in the crisis division of a Level 1 emergency room. Clinical evaluations of PTSD and substance use were administered at three and six months post-trauma. Contrasted with members with negligible substance use at six months post-trauma, high substance use clients at six months post-trauma showed critical expansions in post traumatic anhedonia during the three to six months time span. This relationship was significant even subsequent to accounting for change related with different elements, including PTSD side effects.

**H5-** Drug use will be positively related to somatic symptoms.

According to a study conducted Elia et al. (2001) on Finnish adolescents, among girls heavy drug use was associated with psychosomatic symptoms (such as pain, sleep disturbance, feelings of anxiety, depression, and tension) and a negative social self-image.

**H6-** There will be a positive relationship between substance use and nightmares.

**H7-** There is a significant difference between anhedonia in males and females.

Andrew R. Scherff (2007) conducted a study on the impact of exposure to violence on internalizing symptomatology and adolescent suicidal ideation in which he reported a significant gender differences with males reporting higher levels of anhedonia and hopelessness than females. Elevated levels of exposure to community violence were noted to significantly increase the odds of male participants being at-risk for suicidal ideation, anhedonia and hopelessness.

**H8-** There is a significant difference between somatic symptoms in males and females.

**H9-** There is no significant difference between nightmares in males and females.

## CHAPTER 4: METHODOLOGY

### 4.1 Sample

A total of 148 adults in the age range of 18 to 30 participated in the study. The sample consisted of 74 males and 74 females. Subjects were drawn from different districts of Kashmir Valley.

### 4.2 Design

The research followed a between subject design where exposure to violence, substance use and gender were the independent variables and nightmares, anhedonia and somatic symptoms were used as the dependent variables.

### 4.3 Tools used

Substance use was measured by the means of Drug Abuse Screening Test- 10 (DAST- 10). This questionnaire was developed by Dr. Harvey A. Skinner at the Addiction Research Foundation, Toronto, Canada. The DAST-10 contains a total of 10 item which are answered in yes or no. It is a self-report measure that has been derived from the original DAST which consisted of 28 items. Each question answered with a “Yes” scores 1 point, except for Question 3, which scored in reverse, i.e. 1 point for “No”. All the items on this test assess drug use in general, without pointing to specific types of drugs. The words “drug use” and “drug abuse” used in the questionnaire indicates the use of any non-prescription drugs or the over use of any prescribed medications. The questionnaire does not include any items on alcohol or tobacco.

Anhedonia was measured using the 14-item Snaith–Hamilton Pleasure Scale. The SHAPS is a self-report questionnaire that is used to measure anhedonia or hedonic tone. Every item has four response categories--Definitely Agree, Agree, Disagree, and Strongly Disagree, with either of the Disagree. The SHAPS is scored as the sum of the 14 items so that total score ranges from 0 to 14. A higher total scores on SHAPS indicates higher levels of anhedonia.

Nightmares were measures using the Hamburg Nightmare Questionnaire. It measures five nightmare characteristics of Emotional Involvement, Psycho physiological Involvement, Replicativity of dream content, Reorientation after awakening and Dream Recall clarity) It is a 17- item questionnaire applying a 5-step Likert scale.

The Somatic Symptom Scale - 8 (SSS-8) was used to measure somatic symptoms. It is a brief self-administered questionnaire used to assess somatic symptoms in an individual. Participants rate how much they are bothered by common somatic symptoms within the last seven days on a five-point Likert Scale. Ratings are summed up to make a simple sum score which can vary between 0 and 32 points).

#### **4.4 Procedure**

The present study focused on the impact of drug use, exposure to armed violence and gender on nightmares, anhedonia and somatic symptoms in the Kashmiri population. The study was conducted online. Informed consent was obtained from each participant and the researcher assured the participants of the confidentiality of their response and that their response would be used only for research purposes. Each participant was presented with four questionnaires; DAST- 10, SHAPS, SSS- 8 and HNQ. Participants were given the following instructions: “You will be sent a Google form where you will have to indicate your response for 6 questionnaires. For all the questionnaires you will have to choose only the options you think describe your behaviour the best. The response descriptions for every questionnaire have been mentioned in the form and there are no right or wrong answers, so kindly select the options that accurately match your perceptions. The form will hardly take 10- 15 minutes for you to complete. Information collected from you will be kept strictly confidential.” The participants were asked to fill the questionnaire when they are comfortably seated with none or minimal external disturbance. The participants' responses were scored by the researcher and were entered into the computer for statistical analysis. The data was analyzed using the SPSS package.

## CHAPTER 5: RESULTS

**Table 1:** Mean and standard deviation of nightmares, anhedonia, somatic symptoms and drug use in Kashmiri locals

***Descriptive Statistics***

	N	Minimum	Maximum	Mean	Std. Deviation
Nightmares	148	19	53	35.87	8.989
Anhedonia	148	0	14	2.97	3.384
Somatic symptoms	148	6	31	13.32	6.837

Table 1 shows the mean scores of nightmares, somatic symptoms and anhedonia. The mean score for somatic symptoms is 13.32. The mean anhedonia score for the subjects is 2.97. The mean score for nightmares is 35.87.

**Table 2:** Mean, SD and t values of nightmares, somatic symptoms and anhedonia on the basis of exposure to armed violence

***T- test***

	Armed violence	N	Mean	SD	t	df	Sig. (2- tailed)
Nightmares	Yes	87	37.89	8.810	5.380	146	.001**
	No	61	29.84	9.169			
Somatic Symptoms	Yes	87	15.07	6.830	3.062	146	.003**
	No	61	11.57	6.845			
Anhedonia	Yes	87	2.52	3.888	1.356	146	.177
	No	61	1.77	2.880			

p<0.05\*, p<0.01\*\*, NS

Table 1 shows that the mean score of nightmares, somatic symptoms and anhedonia of people who have been exposed to crossfire is 37.89, 15.07 and 2.52 respectively. The mean score of nightmares, somatic symptoms and anhedonia of people who have not been exposed to crossfire is 29.84, 11.57 and 1.77 respectively. The t- value for nightmares is 5.380 which is significant at  $p < 0.001$ . The t- value for somatic symptoms is 3.062 which is significant at  $p < 0.01$ . The t- value for anhedonia is 1.356 which is not significant. Out of 148 participants, 87 have been exposed to crossfire at some point in their lives.

**Table 3:** Mean, SD and t values of nightmares, somatic symptoms and anhedonia on the basis of gender

*T- test*

	Gender	N	Mean	SD	t	df	Sig. (2- tailed)
Nightmares	Male	74	34.74	9.610	2.18	146	.828
	Female	74	34.39	9.997			
Somatic Symptoms	Male	74	11.73	6.736	-3.403	146	.001**
	Female	74	15.53	6.839			
Anhedonia	Male	74	2.77	3.802	2.556	146	.012*
	Female	74	1.39	2.658			

$p < 0.05^*$ ,  $p < 0.01^{**}$ , NS

As seen in table 2, the mean score of nightmares, somatic symptoms and anhedonia in males is 34.74, 11.73 and 2.77 respectively. The mean score of nightmares, somatic symptoms and anhedonia in females is 34.49, 15.53 and 1.39 respectively. The t- value for the nightmares is 2.18 which is not significant. The t- value for the somatic symptoms is -3.403 which is significant at  $p < 0.001$ . The t- value for the nightmares is 2.556 which is significant at  $p < 0.05$ .

**Table 4: Correlations**

Variable	Drug use	Somatic Symptoms	Nightmares	Anhedonia
Drug use	1			
Somatic Symptoms	.171*	1		
Nightmares	.097	.578**	1	
Anhedonia	.347**	.190*	-.162	1

p<0.05\*, p<0.01\*\*, NS

From table 3, it is seen that there is a positive correlation of .171 between drug use and somatic symptoms. This correlation is significant at p< 0.05. There also exists a positive correlation of .097 between drug use and nightmares which is not significant. A positive correlation of .347 exists between drug use and anhedonia which is significant at p<0.01.

**Table 5: Regression Analysis: Drug use as predictor for somatic symptoms**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square
		B	Std. Error	Beta			
1	(Constant)	8.078	.402		20.098	.000	
	Drug Use	.337	.161	.171	2.095	.038	.115

a. Dependent Variable: Somatic symptoms

Regression analysis was carried out with drug use as the predictor variable for somatic symptoms. In table 4, it can be seen that drug use predicts 11.5% variance in somatic symptoms.

**Table 6: Regression Analysis: Drug use as predictor for anhedonia**

Model		Unstandardized		Standardized	t	Sig.	Adjusted R Square
		Coefficients		Coefficients			
		B	Std. Error	Beta			
1	(Constant)	1.037	.348		2.981	.000	.234
	Drug Use	.623	.139	.347	4.476	.003	

a. Dependent Variable: Anhedonia

Table 5 shows the regression analysis of drug use as the predictor variable for anhedonia. It can be seen that drug use predicts 23.4% variance in anhedonia.

## CHAPTER 6: DISCUSSION

The present study was conducted to study the impact of drug use, exposure to armed violence and gender on nightmares, anhedonia and somatic symptoms in the Kashmiri population. Nightmares, anhedonia, somatic symptoms, substance use and exposure to armed violence in Kashmiri locals were studied. The mean score for substance use was found to be at a level which lies under the category of moderate level of substance use. According to DAST- 10, the suggested action for a score this high is further investigation. The mean anhedonia score for the subjects was moderate. According to SHAPS, a cut-off score of 2 provides the best discrimination between normal and abnormal level of hedonic tone. In this case, the score represents a level of anhedonia higher than 2 in the subjects. Nine hypotheses were constructed in this study.

The first hypothesis stated that nightmares will be more prevalent in participants that have been exposed to armed violence. Out of 148 individuals who participated in this study, 87 responded with a yes when asked if they have ever been exposed to armed violence (directly or indirectly) at any point in their lives. The mean score of nightmares of subjects who have been exposed to armed violence was found to be different for both who have and have never been exposed to armed violence. This difference in means was significant at  $p < 0.001$  and thus, the hypothesis was accepted. In a study conducted by Asima Hassan and Aneesa Shafi (2013) on impact of conflict situation on mental health in Srinagar, it was found that about 31.5 percent respondents who witnessed nightmares were having dreams full of violence and horror. They were witnessing the anxiety provoking and scary dreams as they have the background where they witnessed the violent incidents. Almost 27 percent respondents were vulnerable to suicide. They didn't find their life worth living, they many times thought of suicide but afraid it is a sin, they stopped themselves. Many women in Kashmir who have experienced violent incidents also complain of nightmares and dreams full of blood and violence. The study also reported that the inability to cope with the distributing dreams full of violence and horrible experiences have become a common phenomenon among the masses in this trouble torn state. There number of patients complaining of anxiety-provoking dreams has seen a rise. There is a manifold increase in cases where people experience dreadful dreams. "Every day I treat a good number of patients complaining of sleep disorders. These nightmares are due to underlying distress," said Dr. Mushaq Margoob, a leading psychiatrist of valley.

The second hypothesis stated that anhedonia will be more prevalent in participants that have been exposed to armed violence. Even though the mean anhedonia score for the participants who have been exposed to armed violence was higher than that of participants who have never been exposed to armed violence, the hypothesis was rejected because the difference was not significant. It is important that the findings regarding the exposure to armed violence should be interpreted against the fact that only the exposure to violent events was measured - not the degree of intensity of the specific event. Furthermore, the specific area (home, school, community, etc) where the violence occurred, was also not investigated in this study. Andrew R. Scherff (2007) conducted a study on the impact of exposure to violence on internalizing symptomatology and adolescent suicidal ideation in which he examined the impact of exposure to violence on 170 adolescents' self-reported levels of depression (i.e., dysphoric mood, anhedonia, negative self-statements, somatic complaints). The results of this study concluded that, 83.3% of the participants had been exposed to some form of community violence out of which 19% of the participants reported moderate to severe levels of anhedonia.

The third hypothesis stated that somatic symptoms will be more prevalent in participants who have been exposed to armed violence. The mean score for somatic symptoms reported by the participants who have been exposed to armed violence was found to be much higher than the mean score reported by other participants. The difference between these two scores was found to be significant at  $p < 0.01$  and thus the hypothesis was accepted. The existing literature supports these findings. In a study conducted by Hart, Hodgkinson and Belcher (2012) titled 'somatic symptoms, peer and school stress, and family and community violence exposure among urban elementary school children', it was reported that exposure to community violence was associated with an increased odds of having borderline or clinically significant somatic complaints. A study conducted by Comellas (2015) on Patterns of somatic distress among conflict-affected persons in the Republic of Georgia revealed high levels of somatic symptoms among returnees in Georgia, which was strongly associated with exposure to traumatic events and other mental disorders.

The fourth hypothesis stated that anhedonia is positively related to drug use. A positive correlation of .347 was found between drug use and anhedonia. This correlation was significant

at  $p < 0.01$  because of which the hypothesis was accepted. Further, regression analysis showed that drug use predicts 23.4% variance in anhedonia. In a study conducted by Hatzigiakoumis, Martinotti, Giannantonio and Janiri (2011) on anhedonia and drug dependence: clinical correlates and treatment options, it was found that anhedonia is an important factor related to relapse and also in the transition from recreational use to excessive drug intake. In particular, anhedonia was found to be a common symptom in alcoholics and addicted patients during withdrawal and in cocaine, stimulant, and cannabis users. Additionally, in subjects with a substance dependence disorder, there was a significant correlation between anhedonia, withdrawal symptoms, intensity of craving, and psychosocial and personality characteristics.

The fifth hypothesis stated that drug use will be positively related to somatic symptoms. A positive correlation was found between drug use and somatic symptoms. This correlation was significant at  $p < 0.05$  because of which the hypothesis was accepted. Through regression analysis it was found that drug use predicts a moderate percentage of variance in somatic symptoms. A study conducted Elia et al. (2001) on Finnish adolescents supports the findings of our study. In the study conducted by Elia, among girls, heavy drug use was associated with psychosomatic symptoms (such as pain, sleep disturbance, feelings of anxiety, depression, and tension) and a negative social self-image. The sixth hypothesis stated that there will be a positive relationship between substance use and nightmares. The relationship found between these two variables was positive but not significant. Thus, this hypothesis was rejected.

The seventh hypothesis stated that there is a significant difference between anhedonia in males and females. The mean score for anhedonia reported by the male participants was found to be much higher than the mean score reported by female participants. The difference between these two scores was found to be significant at  $p < 0.05$  and thus the hypothesis was accepted. Andrew R. Scherff (2007) conducted a study on the impact of exposure to violence on internalizing symptomatology and adolescent suicidal ideation in which he reported a significant gender differences with males reporting higher levels of anhedonia and hopelessness than females. Increased levels of exposure to violence in the community were noted to significantly increase the odds of male participants being at-risk for suicidal ideation, anhedonia and hopelessness. In contrast to that, a study conducted by Martino, Santangelo, Moschella and Luana (2017) on

assessment of Snaith-Hamilton Pleasure Scale (SHAPS), in which one thousand six hundred ninety-seven consecutive healthy subjects (55% female) of different ages (age 18– 82 years) underwent SHAPS, it was found that there was no effect of age as well as of gender on SHAPS scores.

The eighth hypothesis stated that there is a significant difference between somatic symptoms in males and females. The level of somatic symptoms was found to be higher in females than in males. This difference was found to be significant at  $p < 0.001$  and thus the hypothesis was accepted. In a study conducted by Piccinelli and Simon (1997) titled ‘Gender and cross-cultural differences in somatic symptoms associated with emotional distress. An international study in primary care’, females reported higher levels of somatic symptoms and emotional distress than males. A strong correlation between somatic symptoms and emotional distress was found in both sexes, with females reporting more somatic symptoms at each level of emotional distress. Another study conducted by Delisle (2012) reported that female patients had somatic symptom scores on average 1.3 points higher than males ( $p < .001$ ).

The ninth hypothesis stated that there is no significant difference between nightmares in males and females. The difference between the mean scores of both the genders on nightmares was not significant, thus, the hypothesis was accepted. In a study conducted by Schredl (2011) it was found that girls tend to report nightmares more usually than boys but this gender difference was not found in adults and older persons. Starting with adolescence, the gender difference narrowed with increasing age.

## **CHAPTER 7: CONCLUSION, IMPLICATIONS, LIMITATIONS & SCOPE FOR FUTURE RESEARCH**

### **7.1 Conclusion**

The present study concludes that armed violence has severe impact on the internalizing mental health problems of the people living in Kashmir. The subjects with direct or indirect exposure to armed violence showed higher levels of somatic symptoms and nightmares. Significant gender differences were also found in somatic symptoms and anhedonia. The findings of the study indicate that the population in Kashmir is exposed to high levels of violence, as demonstrated by the high frequency of exposure to armed violence. The reported exposure may result in nightmares and other internalizing mental health problems. Another important finding suggests that anhedonia and somatic symptoms are positively related to substance use. The participants fall in the category of moderate level of substance use which calls for further investigation as an action plan. The study also concluded drug use as a predictor for anhedonia and somatic symptoms.

### **7.2 Implications**

The current study suggests that effective evidence-based programs and policies should be available in Kashmir to promote mental health, enhance resilience, reduce risk factors, increase protective factors, and prevent mental and internalizing disorders. Innovative community-based health programmes which are culturally and gender appropriate and reaches out to all segments of the population need to be developed. Substantial and sustainable improvements can be achieved only when a comprehensive strategy for mental health which incorporates both prevention and care elements is adopted.

### **7.3 Limitations**

The biggest limitation of the study was that it was conducted during the lockdown situation and, hence, required participants to respond to the questionnaires using a Google form. Convenient sampling rather than random sampling was used. This may have reduced generalizability. Subjects may not have been honest with their responses about usage of drugs.

#### **7.4 Scope for future research**

Future researchers could look into a larger sample for exposure to traumatic events, its intensity, characteristics and the effects it has on mental health. Other problems such as somatoform disorders, eating disorders, phobias etc. could be studied. Inclusion of wider range of ages may also be worth exploring. Studying about the functioning and efficiency of already existing mental health programs and coping strategies could be beneficial.

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## **APPENDICES**

### **APPENDIX A: Consent Form**

You are invited to participate in a web-based online survey on the impact of armed violence and drug use on internalizing mental health problems in Kashmir. This is a research project being conducted by Supriya, a student at Thapar Institute of Engineering and Technology. It should take approximately 5 to 7 minutes to complete this survey.

### **PARTICIPATION**

Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty.

### **BENEFITS**

You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about the impacts of armed violence and drug use.

### **RISKS**

There are no foreseeable risks involved in participating in this study.

### **CONFIDENTIALITY**

Your survey answers will be sent to an excel sheet where data will be stored in a password protected electronic format. Google forms do not collect identifying information such as your name, e-mail address, or IP address. Therefore, your responses will remain anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

### **CONTACT**

If you have questions at any time about the study or the procedures, you may contact my research supervisor, Professor Sohinee Ganguly via e-mail at [sohineeg@gmail.com](mailto:sohineeg@gmail.com).

### **ELECTRONIC CONSENT:**

Please select your choice below. You may print a copy of this consent form for your records.

Clicking on the “Agree” button indicates that

You have read the above information

You voluntarily agree to participate

You are 18 years of age or older

## APPENDIX B: Questionnaires

### 1. DAST - 10

These questions refer to the past 12 months. No Yes

1. Have you used drugs other than those required for medical reasons?
2. Do you abuse more than one drug at a time?
3. Are you always able to stop using drugs when you want to?
4. Have you had "blackouts" or "flashbacks" as a result of drug use?
5. Do you ever feel bad or guilty about your drug use? If never use drugs, choose “No.”
6. Does your spouse (or parents) ever complain about your involvement with drugs?
7. Have you neglected your family because of your use of drugs?
8. Have you engaged in illegal activities in order to obtain drugs?
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?

### 2. HNQ

		1 strongly disagree	2 disagree	3 neither agree nor disagree	4 agree	5 strongly agree
1.	The memories of my nightmares scare me.	o	o	o	o	o

2.	I wake up sweat-drenched from the nightmare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	The nightmares remind me of stressful situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	I feel like I am delivered to my dreams.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	I wake up with my heart racing from the nightmare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	I experience a past situation in the nightmare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	My nightmares torment me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	I wake up from the nightmare and am out of breath.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	I did not experience the nightmare situations in reality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	I am afraid of my nightmares.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	The events in my nightmares did not really happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3. SHAPS

1. I would enjoy my favorite television or radio program
2. I would enjoy being with family or close friends
3. I would find pleasure in my hobbies and pastimes
4. I would be able to enjoy my favorite meal.
5. I would enjoy a warm bath or refreshing shower

6. I would find pleasure in the scent of flowers or the smell of a fresh sea breeze or freshly baked bread.
7. I would enjoy seeing other people's smiling faces.
8. I would enjoy looking smart when I have made an effort with my appearance.
9. I would enjoy reading a book, magazine or newspaper.
10. I would enjoy a cup of tea or coffee or my favorite drink.
11. I would find pleasure in small things; e.g., bright sunny day, a telephone call from a friend
12. I would be able to enjoy a beautiful landscape or view.
13. I would get pleasure from helping others
14. I would feel pleasure when I receive praise from other people

#### 4. Somatic Symptom Scale – 8 (SSS-8)

<b>During the <u>past 7 days</u>, how much have you been bothered by any of the following problems?</b>					
	Not at all	A little bit	Somewhat	Quite a bit	Very much
Stomach or bowel problems	0	1	2	3	4
Back pain	0	1	2	3	4
Pain in your arms, legs, or joints	0	1	2	3	4
Headaches	0	1	2	3	4
Chest pain or shortness of breath	0	1	2	3	4
Dizziness	0	1	2	3	4
Feeling tired or having low energy	0	1	2	3	4
Trouble sleeping	0	1	2	3	4

