

Optimising Stress in Sub-Conventional Warfare

On an average we have been having about 100 suicide cases a year in the past four to five years, so this year has been the same. Mainly it is in insurgency-hit areas, but suicides are also happening in areas where there is no insurgency. Deployment in such environments has resulted in a number of stress related incidents and cases of suicides and fratricides, which is definitely a cause of serious concern. While measures initiated to arrest such trend have yielded some positive results, a holistic approach to arrest this trend is definitely required. In general, causative issues of counter insurgency stress are occupational factors like increased workload, lack of adequate sleep and rest and non grant of timely leave which were highlighted before pressure from family front coupled with host of personal factors in order of priority. As per report in the media, the officers considered personal causes as prominent precursors of suicide and fratricide, while personnel below officer rank considered occupational and familial factors as more important than personal ones.

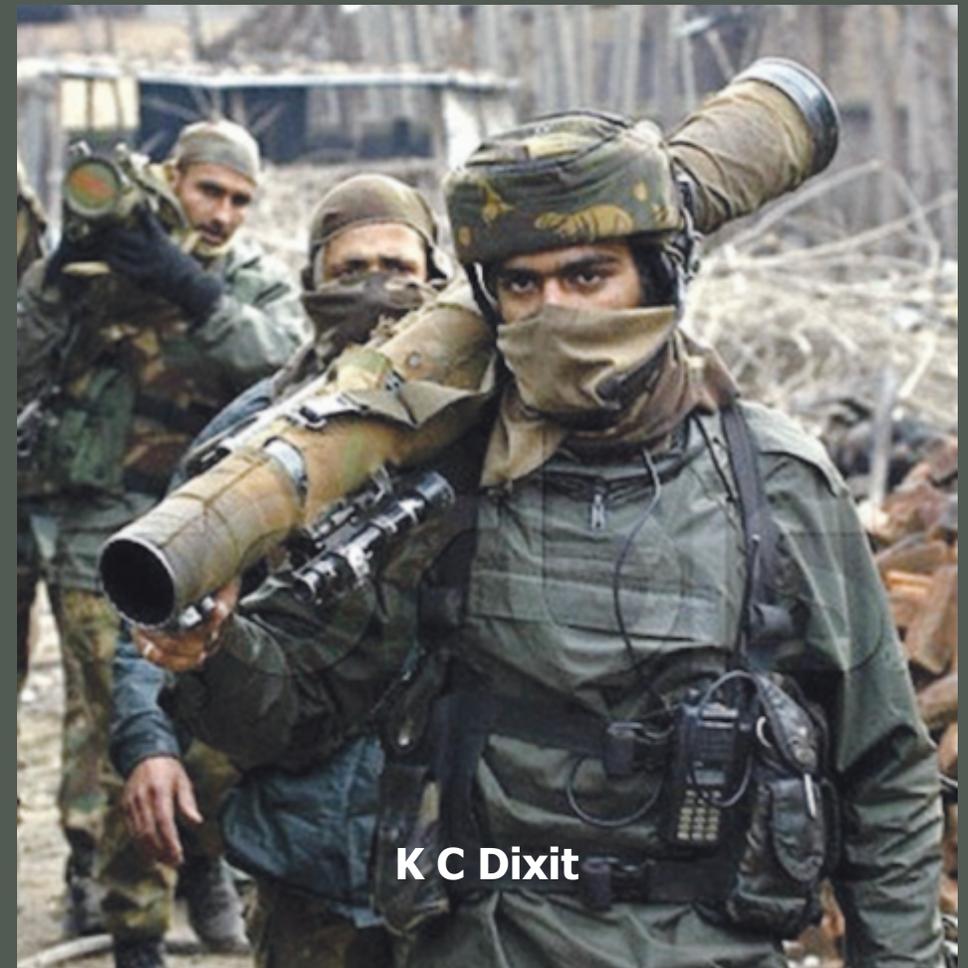


A Research Fellow at IDSA, Col. K. C. Dixit is an alumni of National Defence Academy. He was commissioned into the Army in 1983. He has commanded a Corps Operating Signal Regiment in Counter Insurgency Operations (OP RHINO) in the Eastern Theatre. He is an experienced communication planner and executor and was awarded the COAS Commendation Card for displaying exceptional devotion to duty and tact in handling men and resources and dealing with local population and civil administration in CI

environment.

He has planned and handled mobilization and subsequent administration of a division size force on western borders during OP PARAKRAM.

He was Director ISTT at Integrated HQ of MOD (Army) before joining IDSA, and was responsible for training and HRD of more than 90,000 personnel of Corps of Signals.



K C Dixit

Institute for Defence Studies and Analyses

No.1, Development Enclave, Rao Tula Ram Marg,
Delhi Cantt., New Delhi - 110 010
Tel. (91-11) 2671-7983 Fax.(91-11) 2615 4191
E-mail: idsa@vsnl.com Website: <http://www.idsa.in>



Institute for Defence Studies and Analyses, New Delhi

IDSA Occasional Paper No. 16

Optimising Stress in Sub-Conventional Warfare

K C Dixit



**Institute for Defence Studies and Analyses
New Delhi**

Institute for Defence Studies and Analyses, New Delhi.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photo-copying, recording or otherwise, without the prior permission of the Institute for Defence Studies and Analyses (IDSA).

ISBN: 81-86019-85-5
First Published: January 2011
Price: Rs 125/-
Published by: Institute for Defence Studies and Analyses
No.1, Development Enclave, Rao Tula Ram Marg,
Delhi Cantt., New Delhi - 110 010
Tel. (91-11) 2671-7983
Fax.(91-11) 2615 4191
E-mail: idsa@vsnl.com
Website: <http://www.idsa.in>

Cover Photograph

Courtesy: Rajat Bohemia. <http://www.flickr.com>

Cover &

Layout: Geeta Kumari

Printed at: M/s Printline
H-10, IInd Floor, NDSE-I
New Delhi - 110049
Tel: (91-11)24651060, 24643119
E-mail : printline2003@yahoo.co.in

Introduction

“Everybody knows what stress is, yet no body knows what it is.”¹

- 'Selye'

There is no denial that even a single case of suicide and fratricide in armed forces is a matter of concern for the Ministry of Defence despite the fact that the overall psychiatric morbidity is less than the national figures. The armed forces personnel could not be immune to influences of the environment at their home and the rising aspirations of the community as a whole. In view of this, it is essential to understand stress and its effect on the performance of security forces personnel deployed in sub-conventional warfare environment.

Security forces personnel deployed in low intensity conflict and counter insurgency operations experience a number of stressful events including operation stressors, domestic stressors, physical and situation attributes of operation zone and socio-political stressors.² Troops deployed in such an environment had significantly higher psychiatric morbidity, alcohol use, unfavourable response to task, diminished efficiency, frustration, maladjustment, tension, isolation etc.³ Stress is a part of day to day activities in all walks of life. However, the scope and dimension of physical and psychological stress in the army is relatively higher and peculiar due to the uniqueness of service conditions. Stress has a distinct connotation owing to the constant involvement of security forces personnel in counter-insurgency/ counter-terrorist operations, high altitude area

-
1. Selye, H., 'The Stress of Life', New York: McGraw-Hill, 1956, in definition of Stress.
 2. Asnani, V., 'Stress and Job Satisfaction among Soldiers Operating in Counter Insurgency Areas', Defence Institute of Psychological Research Note 2001; pp 3-13.
 3. Puri, S.K., Sharma, P.C., Naik, C.R.K., et al, 'Ecology of Combat Fatigue Among Troops Engaged in Counter Insurgency Operations', Armed Forces Medical Journal of India, 1999; pp. 315-318.

environment and long separation from their families. This creates a combination of domestic and operational environment related stresses. On November 06, 2009, at Fort Hood, Texas, the largest United States Army Base in the world, an army major (service psychiatrist) gunned down 20 people. He was going to be deployed in Iraq.⁴ General George Patton gained fame during World War II for his brilliant military strategy. He gained infamy for slapping a soldier suffering from shell-shock/ battle fatigue/ combat stress/ post-traumatic disorder.⁵ On an average we have been having about 100 suicide cases a year in the past four to five years, so this year has been the same. Mainly it is in insurgency-hit areas, but suicides are also happening in areas where there is no insurgency. Deployment in such environments has resulted in a number of stress related incidents and cases of suicides and fratricides, which is definitely a cause of serious concern. While measures initiated to arrest such trend have yielded some positive results, a holistic approach to arrest this trend is definitely required. In general, causative issues of counter insurgency stress are occupational factors like increased workload, lack of adequate sleep and rest and non grant of timely leave which were highlighted before pressure from family front coupled with host of personal factors in order of priority. As per report in the media, the officers considered personal causes as prominent precursors of suicide and fratricide, while personnel below officer rank considered occupational and familial factors as more important than personal ones.⁶

While declassifying the parliamentary report on suicides in armed forces, the Ministry of Defence stressed on the need of conducting

-
4. <http://news.rediff.com/report/2009/nov/06/soldier-guns-down-at-us-army-base.htm>, 'Soldier Guns Down at US Army Base'. It appears to be a case of nerves. Life in such dangerous places is indeed very stressful. Many people crack under extreme strain. The person in command should be a keen observer of individual behaviour and take remedial measures well in time. That probably has not happened in this case.
 5. <http://www.kidsnet.org/sfkc/sfkc20030425-1.html>, 'Stress Effects (April 25, 2003, One)'.
 6. Report published in daily newspaper *HINDU* on August 7, 2007, Delhi edition.

regular studies on the subject. The Defence Minister of India, Shri A.K. Antony while sharing his concern in the Parliament on July 13, 2009, over rising number of suicides and killing of fellow soldiers, mentioned that there were 520 cases of suicides and fratricides in the army since 2006, of which 495 were suicides alone.⁷ The Standing Parliamentary Committee on Defence, during its 32nd report, had noted that there were 635 cases of suicide and 67 fratricides in the armed forces between 2003 and 2006.⁸ There is no denial that even a single case of suicide and fratricide in armed forces is a matter of concern for the Ministry despite the fact that the overall psychiatric morbidity is less than the national figures. The armed forces personnel could not be immune to influences of the environment at their home and the rising aspirations of the community as a whole⁹.

In the light of above, it is essential to understand stress and its effect on the performance of security forces personnel deployed in sub-conventional warfare environment. This paper will attempt to bring out signs, symptoms, causes and effects of stress on performance of troops deployed in sub-conventional warfare environment and finally suggest measures to cope with it. This paper lays emphasis on the effects of increasing number and duration of soldier deployments on the expectations, experiences and attitudes towards life of soldiers. This paper may be of value to individuals interested in gaining a more detailed understanding of how stressors lead to stress, how stress affects performance and what can be done to mitigate these effects. In particular, army planners and senior officials may find this helpful in developing new training and support programmes that help service members deal with and adapt to stress both in barracks and on deployment.

7. News.outlookindia.com, "Mental Health Scheme Launched to Curb Army Suicides: Antony" of July 27, 2009 published on December 7, 2009, retrieved from <http://news.outlookindia.com/item.aspx?663430>

8. Ibid.

9. Ibid.

Understanding Stress

“Anguish of mind has driven thousands to suicide; anguish of body, none. This proves that the health of mind is of far more consequence to our happiness, than the health of the body, although both deserve much more attention than either of them receive.”¹⁰ Military life is full of hassles, deadlines, frustrations and demands. For many, stress is so common place that it has become a way of life. Stress is not always bad. In small doses, it can help you perform under pressure and motivate you to do your best. But when you are constantly running in emergency mode, your mind and body pay the price.¹¹ If one frequently finds himself feeling frazzled and overwhelmed, it is time to take action to bring one's nervous system back into balance. One can protect oneself by learning how to recognize the signs and symptoms of stress and taking steps to reduce its harmful effects.¹² Hans Selye, a pioneer of stress research, made a telling point when he stated that **'stress is a scientific concept which has suffered from the mixed blessing of being too well known and too little understood'**. Webster's Illustrated Encyclopaedic Dictionary (1990) defines stress as 'a mentally or emotionally disruptive or disquieting influence, or alternatively a state of tension or distress caused by such an influence'. Wolfgang Linden defines stress as **'a process in which stressors (demands) trigger and attempt at adaptation or resolution that results in individual distress if the organism is unsuccessful in satisfying the demand. Stress responding occurs at physiological, behavioural and cognitive levels. Stress is more than just acute subjective or physiological activation and has its potentially most deleterious health effects when it**

10. Charles Caleb Colton (1780-1832), English Sportsman.

11. http://www.helpguide.org/mental/stress_signs.htm, “Understanding Stress” accessed on February 10, 2010.

12. Ibid.

becomes chronic.¹³ Stress is also defined as 'a fairly predictable arousal of psychological (mind-body) system, which if prolonged, can fatigue or damage the system to the point of malfunction or disease'.¹⁴ A holistic definition of stress could be: **'stress consists of any event in which environmental demands, internal demands, or both, tax or exceed the adaptive resources of the individual, social system or tissue system'**.¹⁵ A layman's definition of stress is **'feeling bad due to troubles beyond our control'**. Many regard stress as something which puts increased pressure and forces to act and think more quickly or intensely than normal.

Dr Peter Tyrer opines that **'stress is the reaction of mind and body to change'**. If we adapt to change, stress is hardly noticed. If we do not adapt to change, the stress becomes distress and if it is permitted to persist, it eventually breaks down mental and physical health. Armed forces offer an ideal breeding ground for stress by virtue of being an organisation famous for initiating maximum changes viz change of unit location (often from a hot desert to snow bound mountains), change of officers/ colleagues/ subordinates, change of dwelling places, change of schools for children, change of job content etc. are just a few examples of routine changes. Thus stress is any condition that disturbs normal functioning.¹⁶

Stress Tolerance Level

Stress is a part of life and a certain degree of stress is necessary to make us live an active and productive life. It is only when it exceeds the optimum stress level or the individual stress tolerance threshold level that it affects our psycho-biological system, which, if left unattended, sooner or later manifests in the form of one or more multiple psycho-biological diseases.

13. Wolfgang Linden, 'Stress Management: Basic Science to Better Practice', Sage Publications, 2004

14. College of Defence Management, 'Stress Management', HRD Training Notes (CDM), Vol. II.

15. Aggarwal, Rita., 'Stress in Life and at Work', Response Books, 2001, pp. 28-30.

16. Kalia, H.L., Pai Satish, 'Stress Management', Himalaya Publishing House, 2001, p. 3.

The list of events and changes which can trigger stress is exhaustive and unpredictable. Any incident or event can induce stress in an individual depending on his/ her mental make up. Service personnel undergo more number of life events in a year and in total life span as compared to civilian counterparts.¹⁷ Stressful life events in service personnel in descending order of weightage are given at **Annexure-I** to this paper.¹⁸ However, the point to be noted is that given a common situation, the levels of stress experienced by individuals will vary depending on their individual personality traits and stress tolerance levels, which in turn modulate their perceptions and responses.

Stress is a non-specific response of the body to a stimulus or event or demand. When an individual experiences an event or stimulus (stressor), it leads to a physiological response, one that can be measured by several indicators such as elevated heart rate.¹⁹ The term stress is used to refer to this physiological response.²⁰ Stressors may vary in the form and can include extreme temperature or lighting, time pressure, lack of sleep and exposure to threat or danger, among others. All stressors, however, tend to produce similar physiological responses within the body.²¹ We are particularly interested in stressors related to deployment for counter insurgency and other low intensity conflict operations, including those related with extended family separation. Some of the most significant stressors associated with deployment for operations are uncertainty, long work hours, risk of death or disease, boredom and separation from family.²² However, the risk of death or

17. Raju, M.S.V.K., Srivastava, K., Chaudhury, S., Salujha, S.K., 'Quantification of Stressful Life Events in Service Personnel', *Indian Journal of Psychiatry*, 2001, 43(3), p. 215.

18. *Ibid*, p. 215

19. Selye, H., no. 1.

20. Selye, H., 'The History of Stress Concept', in L. Goldberger and S. Breznitz, eds., *The Handbook of Stress*, second edition, New York: The Free Press, 1993.

21. Selye, H., no. 1.

22. Halverson, CPT R., CPT P. Bliese, SGT R. Moore, CPT C. Castro., 'Psychological Well-Being and Physical Health Symptoms: Deployed for Operations TO Uphold Democracy', *A Summary of Human Dimension Research in Haiti*, Washington D.C., Water Reed, Army Institute for Research, 1995.

personal injury and threat of receiving effective hostile fire is much higher in counter insurgency and other low intensity conflict operations.²³ Importantly, there are significant stressors involved in military life like operations tempo or long work hours.²⁴ This is highly true during times of deployment when service members are expected to make sacrifices to support the mission.²⁵

It emerges from the above that stress is an individual phenomena and the status of an individual in relation to his environment determines the perception as well as response to stress. Stress is an inevitable part of life and is necessary in some amount for any performance or achievement. Stress is related to imbalance and discontinuity and if understood, it can be managed and controlled to prevent it from harmfully affecting an individual's life. As a result of many stressors faced by military personnel deployed in unconventional operations, it makes sense to look more closely at how stressors affect individual functioning and performance.

Signs/ Symptoms and Effects of Stress

“It is not so much what happens to you; it is how you react to it that matters”.²⁶ The negative manifestations of stress for the security forces personnel have had serious consequences and the media sensationalises the events even further. Let us first examine the effects of stress. **Psychological effects** of stress include increased heart rate, blood pressure, excessive sweating, dilation of pupils, difficulty in breathing, hot and cold spells, anger, anxiety and depression. These may also result in interpersonal conflicts and unsound human relations. **Cognitive effects** of stress include inability to make

23. Ibid.

24. Combell, Maj S., Ritzer, CPT D., Sgt J. Valentine, Col R. Gifford, 'Operation Joint Guard Bosnia: An Assessment of Operational Stress and Adaptive Coping Mechanisms of Soldiers', Washington D.C., Walter Reed Army Institute of Research, 1998.

25. Ibid.

26. Kalia, Dr. H.L., Pai, Dr. Satish, Ravishankar, Dr. S., Dhar, Dr. Upinder, 'Stress Management (Western and Indian Techniques)', Himalaya Publishing House, 2001.

decisions and concentrate, hypersensitivity to criticism, mental blocks and frequent forgetfulness etc. **Behavioural effects** of stress include under and over eating, sleepiness, heavy smoking, alcoholism, drug abuse, impulsive behaviour etc. which may be manifested by hardiness, absenteeism and turnover. **Health effects** of stress include coronary heart disease, diarrhoea, dizziness, insomnia, asthma, neck/ chest/ back/ body aches/ pains, impotency etc.

Relationship between Stress and Performance

Several authors point a negative linear relationship between stress and performance, other evidence suggests that the relationship is actually an inverted U-shape. The inverted U-shape hypothesis suggests that individual performance on a given task will be lower at high and low levels of stress and optimal at moderate levels of stress. At moderate levels of stress, performance is likely to be improved by the presence of enough stimuli to keep the individual vigilant and alert, but not enough to divert or absorb his energy and focus. At optimum stress levels feeling of well being gets aroused, confidence level gets enhanced, quick and effective thinking gets augmented, the area of interest making an individual socially acceptable widens and individual continues to remain motivated to bring out his best potential.²⁷ At low levels of stress, in contrast, activation and alertness may be too low to foster effective performance, while at high level of stress, arousal is too high to be conducive to task performance.²⁸ For military planners and policy makers, the fact that performance may be optimal at moderate levels of stress may be important. This also suggests that certain types of operations may benefit from the presence of moderate stressors and highlights danger of boredom to the completion of tasks.

Easterbrook suggests that when an individual comes under undue stress, his cognitive performance and decision-making may be adversely affected. Under conditions of stress, individuals are likely to screen out peripheral stimuli,²⁹ make decisions based on heuristics

27. Dr Chandra Patel, 'Stress Management', Macdonald Optima Publishing Ltd., 1989, p. 5.

28. Ibid.

29. Easterbrook, J.A., 'The Effect of Emotion on Cue Utilization and Organization of Behavior', *Psychological Review*, Vol. 66, 1959, pp. 183- 201.

(rules of thumb or guidelines),³⁰ suffer from performance rigidity or narrow thinking,³¹ lose their ability to analyse complicated situations, manipulate information,³² and task completion time may be increased while accuracy is reduced.³³

Stress Effects on Group Functioning

Apart from effects on individuals, stress has also shown negative effects on group functioning. When stressed, individuals are likely to yield control to their superiors and allow authority to become more concentrated in the upper levels of hierarchy and communication effectiveness may also be reduced.³⁴ Stress can also lead to 'groupthink', in which members of the group ignore important cues, force all members to a consensus decision—even an incorrect one—and rationalise poor decisions.³⁵

Even if some levels of stress may have a positive effect on performance as suggested by the U-hypothesis, extended exposure to stress or a single exposure to an extreme stressor can have severe negative impact on non-task performance dimensions.

Consequences of Prolonged Stress

While exposure to some level of stress may help individual performance, the prolonged exposure tends to have negative effects on the exposed individual. One potential result of an extended exposure

-
30. Klein, G., 'The Effects of Acute Stressors on Decision Making', in J. Driskell and E. Salas, eds., 'Stress and Human Performance', Hillsdale, N.J.: Lawrence Erlbaum Associates, 1996, pp. 49-88.
 31. Friedman, I.A., and L. Mann, 'Coping Patterns in Adolescent Decision Making: An Israeli - Australian Comparison', *Journal of Adolescence*, Vol. 16, 1993, pp.187-199.
 32. Larsen, R., 'Decision Making by Military Students under Extreme Stress', *Military Psychology*, Vol. 13, No. 2, 2001, pp. 89-92.
 33. Idzikowski, C., and A.D. Baddeley, 'Fear and Dangerous Environments', in R. Hockey, ed., 'Stress and Fatigue in Human Performance', Chichester, N.Y.: Wiley, 1983, pp. 123-144.
 34. Driskell, J., R. Carson, P. Moskal, 'Stress and Human Performance: Final Report', Orlando, Fla : Naval Training Systems Centre, August 15, 1988.
 35. Janis, I., L. Mann, 'Decision Making', New York, The Free Press, 1977.

to a single or multiple stressors is burnout to include exhaustion, feeling of cynicism and detachment, sense of ineffectiveness and lack of accomplishment.³⁶ Lee and Ashforth (1990) support the argument that high and consistent exposure to stress can lead to burnout.³⁷

Prolonged exposure to stressors can also have other negative effects. Long term exposure to high levels of stressors can lead to emotional exhaustion, which has been shown to degrade organisational commitment and enhance turnover intentions.³⁸ Chronic stress can also lead to physical problems, including cardiovascular disease, muscle pain, stomach and intestinal problems, decreased fertility and reduced immune system strength. Prolonged stress can also lead to feelings of anger, anxiety, fatigue, depression and sleep problems.³⁹ Long term exposure to high levels of stressors or a single exposure to a very demanding event can lead to post-traumatic stress disorder, a psychiatric illness that can interfere with life functioning with variety of symptoms including nightmares, flashbacks, difficulty in sleeping and social isolation. However, it is not necessary that all individuals who experience extreme stress will develop post-traumatic stress disorder. Factors that make individuals more or less susceptible to post-traumatic stress disorder include the type stressor experienced, genetics, lack of social support, or existence of other mental or physical diseases.⁴⁰ Combat experience is one of the types of stressors that can bring on Post-Traumatic Stress Disorder.⁴¹ A summary of stressors and their effects on individual and group functioning is given

36. Lee, R., and B. Ashforth, 'On the Meaning of Maslach's Three Dimensions of Burnout', *Journal of Applied Psychology*, Vol. 75, No. 6, 1990, pp. 743-747.

37. *Ibid.*

38. Cropanzano, R., D. Rapp, and Z. Byrne, 'The Relationship of Emotional Exhaustion to Work Attitudes, Job Performance, and Organizational Behaviors', *Journal of Applied Psychology*, Vol. 88, No. 1, February 2003, pp. 160-169.

39. Seymour, D.J., and K. Black, 'Stress in Primary Care Patients', in F. V. DeGruy III et al., eds., '20 Common Problems in Behavioral Health', New York: McGraw-Hill, 2002, pp. 65- 87.

40. Green, B. W., et al., 'Risk Factors for PTSD and Other Diagnoses in a General Sample of Vietnam Veterans', *American Journal of Psychiatry*, Vol. 147, 1990, pp. 729-733.

41. *Ibid.*

at **Annexure II**. In general, the severity of stress response experienced by an individual appears to be related to the type, duration and magnitude of the stressor experienced. The soldiers who witness the casualties are more susceptible to severe stress and those who handled human remains tend to display more severe symptoms of stress as compared to those who did not.⁴²

Stressors among Army Personnel

Military operations encompass a range of different types of missions, including counter insurgency operations, encountering hostile fire, maintaining law and order in aid to civil authority, peacekeeping, humanitarian relief, executing of civic action programmes etc, each with its own distinct challenges and stressors. It is difficult to draw a dividing line between what constitutes an unconventional warfare stressor and what constitutes a conventional warfare stressor, because both kinds of operations may include elements and stressors of both, like lack of sleep, difficult living conditions, risk of diseases, long hours and boredom apart from risk of death or injury to oneself and colleagues. The demands of deployments often require tighter deadlines and heavier workloads for maintenance, training and logistics operations. In addition to stressors stemming directly from military operations, there are separation stressors that result from the fact that deployments force individuals to leave their families and friends for long and uncertain periods. This class of stressors affects not only the military personnel who are deployed but also the families left behind and the colleagues who have to deal with their emotions about not being deployed and with the additional work left by those who were. Separation stressors also include the worry associated with being forced to leave one's family alone, financial or safety concerns and the strain placed on a relationship when individuals are separated.

Sub-conventional operations share many stressors with more hostile

42. McCarroll, J., R. Ursano, and C. Fullertone, 'Symptoms of Posttraumatic Stress Disorder Following Recovery of War Dead', *American Journal of Psychiatry*, Vol. 150, 1993, pp.1875-1877.

conventional operations but may include a lower threat of enemy fire, death or personal injury. Certain stressors such as lack of clear definition of responsibilities, boredom, or lack of relevant training may be more problematic in sub-conventional operations including peacekeeping and humanitarian missions than on conventional operations. The most commonly reported stressors are being away from home and family, uncertainty of return date, sanitation, lack of privacy, lack of time off and long work hours, environmental stressors like excessive heat/ cold, insects nuisance etc, fear of diseases, lack of sleep, problems with spouse/ children, and financial problems at home.⁴³ Indifferent attitude of civil administration, civil police and society towards genuine demands of soldiers and their family members in resolving their land/ property disputes and various cases of wilful harassment, causes stress among soldiers.^{44,45}

In relatively more intense combat operations, the types of stressors that are unique to hostile missions include handling of human remains, dealing with casualties and threat of enemy fire.⁴⁶ Experiences of being ambushed, receiving hostile fire and knowing someone who was killed causes stress among security forces personnel.^{47,48}

Apart from stressors related to living conditions and work demands, main stressors experienced by security forces personnel are associated

43. Campbell, S., D. Ritzer, J. Valentine and R. Gifford, 'Operation Joint Guard, Bosnia : An Assessment of Operational Stress and Coping Mechanisms of Soldiers', Washington, D. C., Walter Reed Institute of Research, 1998.

44. Dixit, K.C., 'Stress in Sub-conventional Operations', Institute for Defence Studies and Analyses, New Delhi, December 22, 2009.

45. Badrinath, P. Major, 'Psychological Impact of Protracted Service in Low Intensity Conflict Operations on Armed Forces Personnel: Causes and Remedies', Journal of USI of India, Vol. CXXXIII, No. 551, January - March 2003, pp. 47 and 53.

46. Adler, A. B., M.A. Vaitkus and J.A. Martin, 'Combat Exposure and Posttraumatic Stress Symptomatology Among Soldiers Deployed to Gulf War', Military Psychology, Vol. 8, 1996, pp. 1-14.

47. Ibid, pp. 1-14.

48. Hoge, C. et al. , 'Combat Duty in Iraq and Afghanistan, Mental Health Problems and Barriers to Care', New England Journal of Medicine, Vol. 351, No. 1, July 2004, pp. 13-22.

with separation from families and friends. While family separation may be a significant source of stress or dissatisfaction, it may not have a large effect on performance.⁴⁹

It might not feel like it at the time, but arguments are good for the health.⁵⁰ A new study shows that getting things off your chest and tackling disagreements head-on is better for you. In contrast, avoiding conflict actually leads to greater stress.⁵¹ Tests showed that people who sidestepped arguments instead of confronting them experienced abnormal rises and falls of the stress hormone cortisol as a result. The study suggests we are happier and more relaxed when we tackle issues with our partner, superiors, or children at the time rather than letting resentments fester. Psychologists Dr Kira Birditt, who led the research said, “How we deal with problems affects our daily well-being”.⁵² However, it is to be applied with caution among armed forces personnel.

49. Hosek, J., and M.Totten, 'Serving Away from Home: How Deployment Influence Reenlistment, Santa Monica, California: RAND Corporation, MR-1594-OSD, 2002.

50. Daily Mail, 'Arguments Keep You Free of Stress', *Mail Today*, New Delhi, 18 August 2010, p. 11.

51. Ibid.

52. Ibid.

Coping / Moderating Stress

There are variables which either reduce the physiological response to the stressor or reduce the effect of stress on performance. These variables typically reduce the effect of one variable on the other and thus play a balancing role. These variables include personality traits, individual's anticipation to stressor, individual characteristics, individual's self efficacy and perception of control over environment, additional information, uncertainty or lack of control and training. These variables can also affect group performance under stress, particularly within security forces context.

Individual's personality is a significant variable which can affect his response to stress in several ways. Individuals who express higher levels of reactivity display more pronounced physical responses to stressors.⁵³ Low anxiety individuals are better able to deal with the physiological effects of external stressors and more likely to experience a performance improvement from the introduction of certain stressors like threat of an electric shock.⁵⁴

Individuals with Type 'A'⁵⁵ personality exhibit significant stress responses than those with Type 'B'⁵⁶ personality when confronted with identical stressors. For a given change in workload, individuals with Type 'A' personalities experience a larger increase in self-reported

53. Pearson, D. and R. Thackray, 'Consistency of Performance Change and Autonomic Response as a Function of Expressed Attitude towards a Specific Stress Situation', *Psychophysiology*, Vol. 6, No. 5, 1970, pp. 561-568.

54. Ibid, pp. 561-568.

55. Type 'A' personality is generally defined as being driven, persistent, involved in work, oriented towards leadership and achievement and having a sense of time urgency. These people are generally impatient, obsessed with success in terms of how much, are always walking, moving, eating fast and strive to do many things simultaneously.

56. Type 'B' personalities are opposite of Type 'A'. These people never suffer from sense of urgency, play for fun and relaxation without guilt and are generally satisfied in life.

anxiety than individuals with Type 'B' personalities.⁵⁷ Individual's perceptual outlook may also affect stress response since his experience of stress is based somewhat on his own appraisal of the event. The physiological stress response is the result of individual's interaction with the environment and interpretation of the event, based partly on learning and experience.⁵⁸

Individual's anticipation of the stressor is another significant variable which affects the relationship between the stressor and the stress response. The individual usually experiences the anticipation even before the occurrence of a particular stressor. Anticipation of a stressor increases the individual's physiological response to the stressor and can be responsible for the majority of the stress response. Merely thinking about the impending event is enough to cause a stress response amongst the individuals.⁵⁹

Additional individual characteristics intervene in the stressor-stress response relationship, including in lower military ranks and those from poorer socio-economic status. Such intervening variables actually increase the effect of stress on individual functioning and such lower ranking personnel are more likely to develop long-term mental health problems, including post trauma stress disorders.⁶⁰ This has interesting implications for military leaders. While it is not reasonable or practical to select individuals for sub-conventional operations based solely on these characteristics, it may be possible to pay particular attention to stress-related disorders among these populations of soldiers during

57. Caplan, R. and K. Jones, 'Effects of Workload, Role Ambiguity and Type A Personality on Anxiety, Depression and Heart Rate', *Journal of Applied Psychology*, Vol. 60, No. 6, 1975, pp. 17-37.

58. Lazarus, R. S. and S. Folkman, 'Stress Appraisal and Coping', New York: Springer, 1984 extracted from *Stress and Performance* by Jennifer Kavanagh ,RAND Corporation, 2005, pp. 30-31.

59. Marshall, T. Pet al., 'A Randomized Controlled Trial of the Effect of Anticipation of a Blood Test on Blood Pressure', *Journal of Human Hypertension*, Vol. 16, 2002, pp. 621-625.

60. Green, B. W., et al., 'Risk Factors for PTSD and Other Diagnoses in a General Sample of Vietnam Veterans', *American Journal of Psychiatry*, Vol. 147, 1990, pp. 729-733.

and after deployment. Such targeted policy could reduce the number of stress-induced casualties and prevent long-term mental health disorders by focusing on the potentially most vulnerable groups. Based on the physical conditions of personnel, improvement of certain services like bathing facilities in operational areas, ensuring delivery of mail, improving living conditions and provisioning of good quality hot food and occasional drinks helps soldiers to deal with the stressors associated with operations.⁶¹

Improving the Stress-Performance Relationship

It is well understood by now that stress is part of life and soldier's life is no exception as also stress can not be vanquished but it can be moderated to reduced or optimum levels so as to act as stimulator for improved performance. For example, individual self efficacy and perception of control over environment can reduce the negative performance effects of stress.^{62, 63} Self efficacy beliefs moderate the negative effects of work overload and long work hours on organisational commitment and psychological strain and thus soldiers with high self efficacy are able to tackle work overload and long work hours with ease.⁶⁴

Additional information can reduce the influence of stress on performance by giving individuals a better base for their decisions and improving the accuracy of their expectations about what will be required for effective performance.⁶⁵ However, the role of additional information as a helpful moderator is sometimes disputed. For

61. Wright, K., D. Marlowe and R. Gifford, 'Deployment Stress and Operation Desert Shield: Preparation for War', in R. Ursano and A. Norwood, eds., *Emotional Aftermath of the Persian Gulf War*, Washington, D. C.: American Psychiatric Press, 1996, pp. 283-313.

62. Self-efficacy is defined as an individual's own judgement of his ability to complete a certain task or achieve a certain level of performance.

63. Bandura, A., 'Self-Efficacy', in V. S. Ramachandran, ed., *Encyclopedia of Human Behavior*, Vol. 4, New York: Academic Press, 1994, pp. 71-81.

64. Jex, S. and P. Bliese, 'Efficacy as a Moderator of the Impact of Work-Related Stressors: A Multilevel Study', *Journal of Applied Psychology*, Vol. 84, No. 3, 1999, pp. 349-361.

65. Glass, D. and J. Singer, 'Experimental Studies of Uncontrollable and Unpredictable Noise', *Representative Research in Social Psychology*, Vol. 4, No. 1, January 1973, pp. 165-183.

example, research by Miller and Mangan suggests that too much information can lead to increased anxiety and performance rigidity.⁶⁶ It could also be the case that information acts as a positive moderator up to a certain point, after which it begins to degrade performance. Military personnel believe that receiving more information would reduce the effect of stress on their morale. However, some authors note that this is particularly true for information relating to the end date of a deployment and information about the strength of the enemy.⁶⁷

Lack of control or uncertainty can be a negative moderator, one that increases the negative effects of stress on performance. Uncertainty can increase the negative effects of stress on performance in several ways. First, the presence of uncertainty requires that the individual spend additional time thinking about the appropriate response and even preparing for a range of possible outcomes. This can lead to a delay in action and even additional physiological response to stress as the body is forced to 'stand-by'. As discussed earlier, uncertainty is a primary stressor for military personnel. Furthermore, uncertainty can lead to disaster or worst-case scenario thinking that can distract the individual from the task at hand.⁶⁸

Training as a Stress Moderator

One of the most effective variables which can reduce the effects of stress is **training**. Training is a moderator which can be developed, altered and controlled fairly easily. Training can intervene either before (immediately following the stressor) or after the individual stress response occurs. Training in this context is the training related to stress

66. Miller, S. M. and C. E. Mangan, 'Interesting Effects of Information and Coping Style in Adapting to Stress: Should a Doctor Tell All?', *Journal of Personality and Social Psychology*, Vol. 45, 1983, pp.223-236.

67. Wright, K., D. Marlowe and R. Gifford, 'Deployment Stress and Operation Desert Shield : Preparation for War', in R. Ursano and A. Norwood eds., *Emotional Aftermath of the Persian Gulf War*, Washington D. C. , American Psychiatric Press, 1996, pp. 283-313.

68. Leitch, M., 'A New Approach to Stress Management: Why Uncertainty Causes Stress and How to Stop It', February 13, 2003, www.managedluck.co.uk/stress/ as on January 2, 2010.

exposure. In stress exposure training, the individual is repeatedly exposed to a certain stressor and asked to perform a target task under the stressor. The use of stress exposure training—for example, subjecting an individual to extreme heat or lighting—can gradually lessen the individual's physiological response to stimuli by reducing its novelty.⁶⁹ Such training can also build coping strategies that help the individual to moderate the effects of the stressor, even once a stress response has begun⁷⁰ by reducing the physiological response of the individual to the stressor.

Training is able to intervene in the stress-performance relationship in several ways. First, stress exposure training allows individuals to practice performing complex tasks while being confronted with an external stressor. This can lead to task mastery and can allow individuals to build strategies to maintain performance under stress. In addition, stress exposure training can reduce some of the uncertainty involved in stressful situations by allowing individuals to form more accurate expectations about the effects that stressors and stress will have on their bodies and performance. Through training, individuals may also learn how to manage uncertainty and maintain high levels of performance despite its presence. **Annexure-III** outlines the objectives and structure of recommended stress exposure training.

Both the skill building and the stress combating aspects of the training appear to be important in the role of training as a stress moderator. However, it is to note that stress-exposure training be carried out in a phased manner.^{71,72} It has been suggested that when combined, skill

69. Driskell, J. and J. Johnston, 'Stress Exposure Training', in Cannon-Bowers and E. Salas, eds., *Making Decisions Under Stress*, Washington, D. C. : American Psychological Association, 1998, pp. 191-227.

70. Ibid, pp. 191-227.

71. Johnston, J. and J. Cannon-Bowers, 'Training for Stress Exposure', in James Driskell and Eduardo Salas, eds., *Stress and Human Performance*, Hillsdale, N. J.: Lawrence Erlbaum Associates, 1996, p. 227.

72. Friedland, N. and G. Keinan, 'Training Effective Performance in Stressful Situations: Three Approaches and Implications for Combat Training', *Military Psychology*, Vol. 4, No. 3, 1992, pp. 157-174.

practice and practice under stressors can contribute to improved performance under stress by building problem solving skills, increasing self-efficacy and improving control and coping skills.⁷³ Furthermore, simulated training that mimics the work environment is effective in mediating the effect of the stress response on decision making processes.⁷⁴ Kozlowski adopts a naturalistic decision making model in which individuals make decisions based on their previous experiences and learning. As a result, by practicing in actual environment, individuals may gain heuristics and tools that will prepare them for performance in future challenging situation. Individuals are able to develop adaptive capability through training, which implies that individuals can gain ability to apply knowledge and skills acquired through training or experience to more complex and challenging situations.⁷⁵ The notion of training adaptive capability has important implications for military trainers and planners, given the frequently uncertain and changing nature of deployment in sub-conventional operations. Security forces/military leaders should constantly try to build training exercises that emphasise adaptation and learning as well as task completion, to prepare personnel to deal with unknown or new circumstances as may be encountered in sub-conventional operations.

During a soldier's career, to help control his physiological as also psychological response to stressors and to maintain performance under stress, training can act at many points. Combat support arm and combat service personnel, when come under fire, are more susceptible to severe stress reactions as compared to infantry or troops from Special Forces. One possible explanation is that the additional combat-related training received by full-time infantry soldiers allows them to deal more effectively with the most difficult contingency-

73. Ibid, pp. 157-174.

74. Kozlowski, S, 'Training and Developing Adaptive Teams : Theory, Principles and Research', in Cannon-Bowers and E. Salas, eds., *Making Decisions Under Stress*, Washington, D.C: American Psychological Association, 1998, pp. 115-153.

75. Ibid, pp. 115-153.

related stressors than those personnel who do not receive rigorous combat training. However, it is also possible that individuals in sub-conventional or special operations are inherently less reactive to stress and therefore self-select into more intense operations.

Even during peacekeeping deployments, individuals who undergo peacekeeping training prior to being deployed on a peacekeeping mission have more positive expectations and experiences.⁷⁶

Sleep Discipline Training

Before induction into combat operations, unit leaders must consider fatigue and sleep loss occurring during combat. The enforcement of work and rest schedules has to begin early in pre-induction training. During continuous operations, fatigue caused by lack of sleep is a major source of stress. Breaks in combat are irregular, infrequent and unscheduled. Extended sleep is unlikely. Sleep logistics is required to be emphasised such that sleep and rest are allocated or supplied like rations, water, equipment and ammunition. Sleep discipline training must address the following points:-

- A unit-specific work-rest-sleep plan should be developed and practiced.
- The unit leader or commanding officer must be included in the allocation of sleep and rest time, as lack of sleep will impair his judgment and decision-making skills as much as those of his subordinates.
- The plan should allow soldiers at least five hours of uninterrupted sleep, ideally between midnight (2359 hrs) and morning (0600 hrs), every 24 hours. Persons receiving only five hours per 24 hours over a period of several days will accumulate significant sleep debt.
- Sleep priority is assigned to those whose judgment and decision-making are critical to mission accomplishment.

76. Segal, D., T. Furukawa and J. Lindh, 'Light Infantry as Peacekeepers in the Sinai', *Armed Forces and Society*, Vol. 16, No. 3, Spring 1990, pp. 385-403.

- If received frequently, one hour of sleep or even 15-minute naps help, but 'slow mental starting' upon wake-up can result.
- Relaxation exercises complement sleep schedules. These exercises are used as an alternative to regular sleep or as an aid to help soldiers rest under difficult circumstances.

Task Allocation and Management

Overloading of soldiers with tasks or responsibilities is another major source of stress. Allocating tasks fairly among available soldiers improves unit effectiveness as well as decreases stress. The following should be ensured to achieve proper task allocation:-

- The right person is fitted to the right task according to the task requirement and individual's talents, abilities and training.
- Two soldiers are assigned to a critical task requiring mental alertness and complete accuracy.
- Each soldier is trained in a secondary duty position to ensure competently stepping into the position of another.
- Develop standard operating procedures, checklists or other mental aids to simplify critical tasks during periods of low alertness.

Develop Confidence in Equipments and Supply

If a soldier is adequately confident about his personal and support arms, uninterrupted ammunition supply during operations, serviceability state of combat equipments and adequacy of supplies, his stress levels remain at optimum levels. To ensure maintenance of confidence of troops these points must be ensured:-

- The unit should provide ample training in equipment maintenance and trouble shooting.
- The unit should display field testing of arms/ ammunition/ equipments under realistic conditions. For example, the soldiers should fire and maintain their weapons while wearing full combat gear or protective clothing.
- The unit should have sufficient ammunition, food, water and other essential supplies.

- The unit should have contingency plans for procuring and managing critical supplies if normal channels are disrupted.

Improving Group Performance

Group performance under stress can also be moderated. For example, characteristics of the group leadership such as effective communicative and motivational skills can significantly reduce negative effects of stress on group performance and thus contribute to unit morale and efficiency.⁷⁷ Leadership quality and involvement of the leader with his unit (being present and visible, hanging out with subordinates, concerned with the well-being of subordinates) are together able to significantly reduce stress-related performance decrements.⁷⁸ Military Planners should pay particular attention to developing senior and junior leaders who have the qualities needed to foster effective performance under stress and maintain high morale. Leadership development courses and mentoring may be effective ways to ensure that the new generation of military leaders has the skills and strengths needed to lead in the face of uncertain and changing combat situations.

Group level stress can also be effectively moderated by ensuring unit cohesion.^{79,80} Time spent together is one potential determinant of unit cohesion, but cohesion may not occur spontaneously. Training exercises that encourage group to work together and build mutual trust among members can also contribute to unit cohesion. In addition group cohesion can be fostered through the creation of shared experiences, the expectation of future interaction and a leadership style that encourages participation of all group members. Successful

77. Kirmeyer, S. and T. Dougherty, 'Work Load, Tension and Coping: Moderating Effects of Supervisor Support', *Personnel Psychology*, Vol. 41, No. 1, Spring, 1988, pp. 125-139.

78. Helmus, T. and R. Glenn, 'Steeling The Mind: Combat Stress Reactions and Their Implications for Urban Warfare', Santa Monica, Calif: RAND Corporation, MG-191-A, 2005.

79. Unit cohesion is defined as the strong affinity between members of a group and their commitment to each other. Other characteristics associated with increased unit cohesion include egalitarianism, sensitivity and helpfulness of members.

80. Griffith, J. , 'The Army's New Unit Personnel Replacement and Its Relationship to Unit Cohesion and Social Support', *Military Psychology*, Vol. 1, No. 1, 1989, pp. 17-34.

group performance can increase group cohesion and higher levels of unit cohesion are associated with more effective psychological coping and better performance under stress. It could be because a cohesive group is regarded as an optimal support system in a time of crisis ready to provide emotional support, information, instrumental help and companionship.⁸¹ Griffith (1989) also supports the relevance of unit cohesion as a stress moderator and mentions that units under unit replacement system have more cohesion vis-à-vis units under individual replacement system and there is increased reciprocal learning, higher personal morale and lower levels of overall reported stress. Units with high cohesion rates, good leadership and high morale are less likely to lose personnel for reasons relating to job stressors.

Finally, group performance under stress can be significantly improved by training. The most important aspect of group training is an emphasis on communication and the development of a shared mental model (when the whole group thinks of a problem in similar terms). Teams that have practiced together are better able to maintain performance levels under conditions of external stress.⁸² Team adaptation and coordination training can contribute to team performance, coordination and ability to perform under stress. To moderate the effects of stress on performance of troops, training should include instruction and feedback to help groups and individuals modify their actions as they become more used to various situations.⁸³ This is important for military planners because it implies that training exercises can increase team coordination and reduce stress among troops in a unit by contributing towards cohesion building.

81. Ibid.

82. Johnston, J., R. Poirier and K. S. Jentsch, 'Decision-Making Under Stress: Creating a Research Methodology', in J. Cannon-Bowers and E. Salas, eds., *Making Decisions Under Stress*, Washington, D. C. : American Psychological Association, 1998, pp. 39-59.

83. Serfaty, D., E. Entin and J. Johnston, 'Team Coordination Training', in J. Cannon-Bowers and E. Salas, eds., *Making Decisions Under Stress*, Washington, D. C. : American Psychological Association, 1998, pp. 221-245.

Reducing Effects of Stress through Treatment and Therapy

Effective treatment and therapy can help in reducing the effects of stressors on the individuals and their functioning. Debriefing and counselling can help to prevent symptoms of post trauma stress disorders. Debriefing tends to decrease post trauma stress disorders, decrease anxiety, depression and social dysfunction and leads to increase in family functioning.⁸⁴ Debriefing is intended to reduce short-term emotional or physical distress and diminishes the likelihood of long-term stress reactions that could evolve into post trauma stress disorder.⁸⁵ The debriefing should usually be done immediately following the event to maximise its effectiveness and be led by at least one military person and one trained mental health professional. The debriefing should focus on communicating to the individuals that they are not crazy, encourage them to talk about the facts and emotions of their experience and offer information about the typical stress reactions an individual can expect to have after a stressful event.

Effective and immediate treatment can be extremely important. In-field intervention programme can reduce the long-term effects of stress on the troops.⁸⁶ Such intervention programme should emphasise on four aspects. Firstly, proximity of treatment, which implies that treatment of stress casualty be ensured as close or as forward as possible in the unit. Secondly, immediacy, which implies that treatment of stress casualty be done as soon as symptoms occur. Thirdly, expectancy by stress casualty, which implies that affected

84. Ford, J. D., D. Shaw, S. Sennhauser, 'Coming Home for Good : Operation Desert Storm Veterans and Family Psychological Debriefing Project', in R. Rosenheck, A. S. Blank, Jr. and A. Farley, eds., *Returning Persian Gulf Troops: First Year Findings*, West Haven, Conn. : Department of Veterans Affairs, Northeast Program Evaluation Center, Evaluation Division of the National Center for PTSD, Veterans Affairs Medical Center, 1992, pp. 153-176.

85. Armsfield, F., 'Preventing Post-Traumatic Stress Disorder Resulting from Military Operations', *Military Medicine*, Vol. 159, 1994, p. 744.

86. Johnson, L. B., D. W. Cline, J. M. Marcum, et al. , 'Effectiveness of a Stress Recovery Unit During the Persian Gulf War' , *Hospital and Community Psychiatry*, Vol. 43, 1992, pp. 829-831.

soldier be made to believe that he will recover and return to unit. And lastly but not the least, simplicity which implies that stress casualty be offered required rest, nourishment and assistance. The intervention programme must make use of stress moderators discussed above, including group cohesion, expectations and anticipation and self-efficacy. The individuals who go through this type of intervention programme seem no more likely to display long-term stress disorders.

Leadership Actions and Interventions

It is important for military leaders to know something about the treatment of combat stress reactions. As most cases of initial combat stress symptoms do not require medical treatment, it has been found that military leaders are often quite adept in treating less severe cases of combat stress.⁸⁷ Dr T.R. John, Head of Department (HOD) of Psychiatry at 92 Base Hospital, was of the view that a lot of man-management cases get medicalised due to reduced threshold on the part of unit commanding officers. This is happening due to shortage of officers in the units to provide required counselling. The following statistics shows the details of cases referred for psychiatric evaluation to Srinagar-based Base Hospital:-

Details of Cases Referred for Psychiatric Evaluation

Details	2005	2006	2007	2008	2009 (up to 19 November 2009)
New Cases	196	151	258	314	242
Old Cases	221	354	209	222	213
Alcohol Dependency	44	56	56	83	72
Total	461	561	523	619	527

The details show that less than one-third personnel return to units

87. Interview with Dr (Lt Col) T.R. John, Head of Department of Psychiatry, 92 Base Hospital on November 20, 2010 during the field trip to operational areas in J & K.

after management and balance with residual symptoms continue to receive treatment. The HOD brought out that 60 per cent affected personnel return for operations, if handled in operational areas instead of sending to hospital. He suggested that units should apply a time restraint of at least 48 hours before referring a case to psychiatrist to avoid stigma associated with such referral since most persons become normal after rest and counselling at unit-level.⁸⁸

In most cases, debriefing the operational mission, including any traumatic events, coupled with rest, food and sleep is sufficient to alleviate the symptoms.⁸⁹ If the operational tempo permits the soldier to remain with his unit and he responds to simple reassurance (e.g. “you just need rest, you will be okay tomorrow”), he is not a casualty (by definition) and may not require further referral for specialized care. Military leaders in combat often make such decisions.⁹⁰ When a soldier requires medical attention to rule out a possible serious physical cause for his symptoms or because his inability to function endangers himself, the unit and the mission, he should be evacuated to nearest medical support facility.

Leadership actions and interventions at the sub-unit/ unit level include:-⁹¹

- If a soldier's behaviour endangers the mission, himself or others, the leader should take appropriate measures to control him.
- If a soldier is upset, let him talk about what is upsetting him, then try to reassure him.
- If a soldier's reliability becomes questionable:-
 - Unload his weapon.

88. Ibid.

89. Marine Corps Reference Publication 6-11 C, “Combat Stress”, HQ US Marine Corps, Washington D.C., June 23, 2000, p. 47.

90. Ibid.

91. Ibid.

- Remove the weapon if there is a serious concern.
- Physically restrain the soldier only when safety is a concern or during transport.
- Reassure unit personnel that signs are probably a normal combat fatigue reaction and will quickly improve.
- If combat stress reaction signs continue:-
 - Get the soldier to a safer place.
 - Do not leave the soldier alone. Keep someone he knows with him.
 - Notify the senior officer.
 - Have the soldier examined by medical person.
- If the tactical situation permits, give the soldier simple tasks to do when not sleeping, eating or resting.
- Assure the soldier that he will return to full duty as soon as possible.

Conclusion

This paper has attempted to understand stress, bring out signs, symptoms, causes and effects of stress on the performance of security forces personnel deployed in sub-conventional warfare environment and finally come out with measures to cope with stress. The paper has laid emphasis on the effects of increasing number and duration of deployments on the expectations, experiences and attitudes towards soldiers.

Troops engaged in offensive operations feel more in control of their destinies and hence experience lower levels of psychological stress. Hence troops must not become reactive in sub-conventional warfare environments. But the levels of ambiguity in such environments and the ever-present threat of being accused of Human Rights Violations and getting entangled in legal cases are the major causes of stress in troops. There is a painful dichotomy in the pressure to show results and the ever-present fear of being embroiled in legal cases stemming from death of civilians in cross-fire etc. It is noteworthy that the level of actual combat in J & K has gone down significantly since 2005 but the level of combat stress cases has shown upward trend due to pressure of the Human rights groups and a hostile media which tends to paint the troops as criminals. This hurts esteem and morale and deprives the soldier of the support he expects from civil society. It is increasingly proving to be a significant cause of stress in sub-conventional operations.

Stressors will almost certainly have a physiological effect on individual soldiers and will likely have at least some negative effect on their performance. Moderate levels of stress can actually contribute to heightened vigilance and improved performance. Military personnel clearly confront significant stressors while discharging their duties in sub-conventional warfare environment. Military personnel have proven themselves to be highly adaptable to constantly changing and uncertain circumstances, requirements and demands. This

adaptability allows them to deal with significant stressors and successfully accomplish their objectives in the face of stress. This adaptability comes not only from personal characteristics and flexibility but also from their military training and experience, including basic and advanced training, operational exercises, pre-induction training and day to day work-related challenges. The application of moderators, including training and provision of additional information, can help individuals to adapt successfully to challenging stressors and maintain high levels of performance.

The importance and potential of training appears as an important finding of this paper. Training is a chief contributor towards military effectiveness and performance in the hands of trainers and planners. Training can prepare individuals to cope with stressors by:-

- Helping soldiers in adapting to the stressor stimuli and reducing their physiological response to the stressor.
- Teaching strategies that allow soldiers to react more effectively to stressors and maintain performance under stress.
- Building task mastery and proficiency that can prevent performance degradations.
- Improving the accuracy of individual expectations.

Training can also improve the performance of a group under stress by:-

- Fostering more effective group communication and coordination.
- Alerting individuals to how other members in their group might react to stressful situations.

The importance of teamwork and group cooperation in army for successful completion of operations needs no emphasis. Because of this dependence, army's use of group-based training seems particularly important. It is worth considering since it will help soldiers perform in sub-conventional warfare environment with more experience and certainty. Accepting that training can dilute the effects

of most of the stressors, if properly targeted, identification of the primary stressors in sub-conventional warfare environment could facilitate the extension of training to address new situations and challenges.

Inculcating sleep discipline brings down the stress levels among ranks and files. Therefore, military leaders must pay due importance to this requirement. Selecting right person for the right job, duplicating the critical tasks, training the soldiers in secondary tasks and developing performance support systems like standard operating procedures/ checklists to simplify critical tasks during periods of low alertness is bound to bring down the stress levels during operations.

The organisation should leave no stone unturned to ensure development and retention of confidence of soldiers in their leaders, arms/ ammunition and equipments. This effort will keep the stress levels at the desired levels. The unit should never allow its soldiers to believe that there is ever going to be any break in critical supplies. This can be best ensured through contingency plans for procuring and managing critical supplies if normal channels get disrupted.

Acceptance of mistakes and displaying tolerance to arguments put forth by the subordinates need to be encouraged and welcomed by the organisation to create a happy environment. This happy environment will act as a catalyst to keep stress at bay and thus improve performance of individuals as also combat outfit as a group.

In combat scenario, any behavioural change is combat fatigue. If managed properly by the leaders in situation by satisfying needs of affected soldiers through rest, sleep and refreshments/ food, it will help conserving precious combat manpower. There is, therefore, a need to enhance the threshold level of referrals by military leaders. The tendency to medicalise man-management cases needs to be curbed/ minimised. Considering the stigma attached to psychiatric treatment in the society, applying restraint of about 48 hours in most cases before referring a case for specialised psychiatrist care, might prove to be beneficial.

Sensitisation of civil administration and civil police towards redress of

genuine issues pertaining to welfare of soldiers in their home towns through policy directives to district magistrates and police authorities needs immediate consideration. This will take care of their domestic front more effectively. There is also a need for ensuring respect and sanctity of uniform worn by the soldiers. Towards this end, the armed forces should also carry out a sincere in-house introspection.

Some of the difficulties faced by the army personnel during operations which cause stress and need to be addressed include:-

- Fear of losing contact with their near and dear ones.
- The nature of job that demands strict discipline and every activity is guided. This leaves the soldier with the feeling of losing personal freedom.
- Living away from the family in difficult conditions makes a soldier feel lonelier.
- Adjustment problems that develop due to frustration when soldier starts comparing himself with his counterparts or is compared by others.
- Fear of death and getting wounded and the impairment or disability it will lead to keeps building up stress.
- Guilt feeling of killing a fellow human being. This happens due to control by sub-conscious mind even when a soldier knows that he has done so for the national cause.

Military leaders could use this paper to address new situations that are particularly difficult to adapt like living conditions, hostile population, hostile media, living of the land in hardship for prolonged duration, fighting the terrain and weather, working for long hours under tight deadlines. Fixing accountability for stress-related incidents in any outfit be ruthlessly ensured. There may be requirement of training, work allocation or force re-structuring strategies to help personnel in dealing with their increased workload and respond to the demands more effectively. Stress intervention programmes like proximity-immediacy-expectancy-simplicity are proving useful in management

of short-term psychological problems in troops and hence there is a need to try it for long term benefits. Considering better regimentation and cohesion by implementing unit replacement system instead of individual replacement system in respect of remaining supporting arms/ services will prove to be useful.

This paper may also be of interest to those who want to learn more about stress effects on performance of troops in sub-conventional warfare environment and wish to carry on with further research as also planners and officials who deal with developing new training and support programmes to help both soldiers and unit commanders in adapting to stress on deployment in sub-conventional warfare environment.

ANNEXURE I

Quantification of Stressful Life Events in Service Personnel⁹²

Item No.	Life Event	Weightage
1	Spouse having illicit relations	82
2	Court martial	80
3	Amputation of body parts	78
4	Divorce from spouse	76
5	Going abroad on duty	73
6	Receiving medal for bravery	71
7	Fighting against enemies in war	68
8	Loss of Identity Card during leave	68
9	Child getting a job	68
10	Getting married	67
11	Hospitalisation-serious illness	65
12	Winning a lottery	63
13	Constructing own house	63
14	Birth of a child	62
15	Posting forthwith	62
16	Fighting against terrorists	60
17	Conflict with family members	59
18	Sex related problems	58
19	Death of a close relative	57
20	Sanctioned leave cancelled	56
21	Demotion	56

92. Raju, M.S.V.K., Srivastava, K., Chaudhury, S., Salujha, S.K., 'Quantification of Stressful Life Events in Service Personnel', *Indian Journal of Psychiatry*, 2001, 43(3), p. 215.

Quantification of Stressful Life Events in Service Personnel (Continued/...)

Item No.	Life Event	Weightage
22	Red ink entry	54
23	Wife not conceiving since long	54
24	Being released from service	53
25	Child leaving for higher studies	53
26	Child denied school admission	53
27	Spending tenure in High Altitude Area	50
28	Arranging for a huge loan	49
29	Completing a tenure in op area	49
30	Marriage of daughter	49
31	Change of trade	49
32	Receiving medal in sports	47
33	Dowry related problem in family	47
34	Not receiving salary due to heavy debit balance	46
35	Completing a field tenure	46
36	Shifting house many times in same station	46
37	Sanction of casual leave	44
38	Not getting government married accommodation	43
39	Wife starting a job	42
40	Pay fine	40
41	Difficulty with seniors	39
42	Annual leave not being sanctioned	39
43	Conflict with friends in unit	38
44	Passing the promotion cadre	38
45	Securing highest marks in firing	38
46	Black ink entry	37
47	Participation in divisional level exercises	37

Quantification of Stressful Life Events in Service Personnel

(Continued/...)

Item No.	Life Event	Weightage
48	Wife leaving job	37
49	Lack of son/ daughter	37
50	Failing in promotion cadre	36
51	Sanction of annual leave	34
52	Having only male/female child	32
53	Going on ERE	28
54	Preparing for annual adm inspection	28
55	Participating in unit level exercise	24
56	Failing in BPET/PPT/ Firing	24
57	Going on posting	23
58	Attending roll call	02

ANNEXURE II

Summary : Stressors and their effects on functioning

Individual Functioning

Type of Stress	Effects Observed	Source
General Theory	Perceptual narrowing leading to incomplete decisions	Easterbrook (1959), Janis and Mann (1977), Staw, Sandelands and Dutton (1981)
	Increased time to complete tasks	Idzikowski and Baddeley (1983)
	Oversimplification during problem solving	Friedman and Mann (1993)
Time Pressures	Focusing on fewer cues	Wallsten (1980)
General Stressors	Lower-quality decisions and tendency to ignore alternatives	Keinan (1987)
Loud Noise	Increased heuristic use	Shaham, Singer and Schaeffer (1992)
Sleep Deprivation	Increase in decision errors	Larsen (2001)
Task Overload	Performance decrements	McLeod (1977) ⁹³
Moderate General Stress	Increases job satisfaction	Zivnuska, Kiewitz, and Hochwarter (2002) ⁹⁴
	Increase in organisational commitment	Milgram, Orenstein, Zafrir (1989) ⁹⁵
	Increase in morale and group cooperation	-do-
High General Stress	Morale and unit loyalty declines	-do-

93. McLeod, P, 'A Dual Task Modality Effect: Support for Multiprocessor Models of Attention', *Quarterly Journal of Experimental Psychology*, Vol. 29, No. 4, November 1977, pp. 651-667.

94. Zivnuska, S., C. Kiewitz, and W. Hochwarter, 'What is Too Much or Too Little? The Curvilinear Effects of Job Tension on Turnover Intent, Value Attainment and Job Satisfaction', *Journal of Applied Psychology*, Vol. 32, No. 7, July 2002, pp. 1334-1360.

95. Milgram, N., R. Orenstein, and E. Zafrir, 'Stressors, Personal Resources and Social Supports in Military Performance During Wartime', *Military Psychology*, Vol. 1, No. 4, 1989, pp. 185-199.

Summary : Stressors and their effects on functioning

(Continued/...)

Type of Stress	Effects Observed	Source
Long Term Exposure to Stress	Emotional exhaustion, burnout	Lee and Ashforth (1990) Cropanzano, Rapp and Bryne (2003)
	Cardiovascular disease, muscle pain, decreased fertility, stomach or intestinal problems	Seymour and Black (2002)

Group Functioning

Type of Stress	Effects Observed	Source
General Stress	Yield control to others or superiors	Driskell, Carson and Moskal (1988)
	Perceptual narrowing	Cannon-Bowers and Salas (1998)
	Groupthink	Janis and Mann (1977)
	Reduction in effective intra-group communication	Cannon-Bowers and Salas (1998)

ANNEXURE III

Objectives and Outcomes of Stress Exposure Training⁹⁶

	Phase-1: Presentation of Requisite Knowledge	Phase-2: Skill Practice with Feedback	Phase-3: Skill Practice with Stressors
Objectives	Knowledge of typical stressors and reactions to stressors	Develop meta-cognitive skills, positive coping behaviours, relaxation techniques	Use Phase-2 skills while exposed to stressors
Outcomes	<ol style="list-style-type: none"> 1. Increased perceived efficacy in dealing with stressors 2. Knowledge of effective strategies for coping with stress 	<ol style="list-style-type: none"> 1. Development of cognitive and problem solving skills 2. Reduced negative attitudes towards self and stressors 3. Reduced physiological effects of stress 4. Successful coping skill performance 	<ol style="list-style-type: none"> 1. Reduced anxiety 2. Increased efficacy 3. Improved performance and control under stress 4. Successful application of skills while exposed to stressors

Source: Johnston and Cannon-Bowers (1996), p. 227.

NOTE: Even though empirical evidence for the outcomes does not exist, these outcomes are supported by a wide body of research on the effect of training on the stress-performance relationship.

96. Johnston, J. and J. Cannon-Bowers, 'Training for Stress Exposure', in James Driskell and Eduardo Salas, eds., *Stress and Human Performance*, Hillsdale, N. J.: Lawrence Erlbaum Associates, 1996, p.227.