CHAPTER II

REVIEW OF LITERATURE

This chapter covers the theoretical and empirical studies related to the present research. These studies are classified into three parts:

- **Part A**: covers the studies on stress, coping strategies and resilience.
- **Part B**: covers the studies on stress, coping strategies, resilience and intervention programs during training in different fields.
- **Part C**: covers the studies on stress, coping strategies, resilience and intervention programs in military setup and during military training.

**PART A: Studies on stress, coping strategies and resilience**

The concept of stress has gained popularity because of its bandwagon effects, as it is the root cause of several killer diseases and minor mental disturbances to prolonged mental illness. Stress is considered as a state where the well-being of the individual is endangered and he must act to protect himself from that state. Any action/behaviour directed to solve the stressful problem or protect from danger is called coping method. The capacity of an individual to adapt, cope to changing conditions, unexpected events and bounce back to normal physical and psychological state refers to as resilience.

Extensive investigation has proved that there exist a significant relationship among stress, coping strategies and resilience. To have better understanding of stressors faced by trainees in the defence academy and to understand the mind-set of trainees aged 17 ½ years to 19 years, who are in transition from adolescent period to young adulthood, the studies conducted on children, adolescents and adult population are considered in this part.

Kauten (2016) evaluated resilience and coping intervention (RCI) for children with a sample of 74 African American children aged between 7 years – 17 years, where 60% of them were 7 years – 11 years, 34 male, 38 female and 2 were
transgender. Two groups were considered per developmental stages. Academic performance and relationships with classmates and teachers were assessed as a measure of resiliency. Self-report questionnaires were used to measure coping strategies, strength, and difficulties with behaviours, emotions, and hope before and after the intervention (RCI) program. Intervention program consisted of five weekly one hour long group session conducted by a facilitator on past or present challenging events, coping strategies for the events and alternative strategies. Children coping strategies checklist (CCSC), child strength and difficulties questionnaire (CSDQ) and Hope Questionnaire (HQ) were administered and were coded and analysed quantitatively on pre and post intervention. Results showed that children were more resilient after the intervention RCI proving it is effective in developmental groups, middle childhood and adolescents.

Cohen and Mannarino (2008) proposed Trauma – Focused cognitive behavioural therapy (TF-CBT) for children and parents to treat children (3-17 years) experiencing sexual abuse, traumatic grief, disasters, terrorism, domestic violence and multiple traumas. Their model consisted the components of psycho education, parenting skills, relaxation skills, affective modulation skills, cognitive coping skills, trauma narrative and cognitive processing of the traumatic events. Their sessions focused on joint child-parent sessions, safety needs of child and future development of the children.

Nicholls et al (2016) tested the Model of Motivational Dynamics (MMD) proposed by Skinner and Pitzer (2012), that infers the link between peers influence on behavioural engagement levels and coping and resilience among an athletic population. Three hundred and fifty one athletes (Male –173, Female–178, Mean age–16.5 years) completed a questionnaire measuring resistance to peer influence, behavioural engagement and disaffection, coping and resilience. The results of the study proved the model. They found positive paths between resistance to peer influence and behavioural engagement, behavioural engagement and task-oriented coping, and task–oriented coping with resilience. They found positive path between resilience and resistance to peer influence, but a negative path from resistance to peer influence to behavioural disaffection. Study results highlighted the benefits of enhancing resistance to peer influence and behavioural
engagement, suggested researcher could develop sport specific interventions to maximise athlete’s score in these constructs.

Valerie and Baoxia (2016) reviewed literature on resilience, resiliency, personal resilience, coping and resilient coping. They found that coping referred to one’s purposeful actions to handle life situations. Coping techniques could be functional or dysfunctional and the situations one copes with may be acute or long term, severe or minor. Resilience referred to positive and functional handling of oneself and one’s life, ability to recover, recuperate, and regenerate after tragic events. Though coping and resilience are distinct concepts, positive coping techniques may contribute to resilience.

Burton et al (2016) in their study implemented psychosocial resilience training program Resilience and activity for every day (READY) to test its impact in work place setting on promoting psychosocial well-being. Resilience enhancement strategies adopted Acceptance and Commitment therapy (ACT) processes and cognitive behaviour therapy strategies. Sessions included psycho education, discussions, experiential exercises and home assignments. Sixteen participants completed eleven group sessions of two hours each over 13 weeks. Baseline and post intervention assessment included self-administered questionnaires, pedometer step counts, and physical and haematological measures. Data was analysed using standardised mean differences and paired t tests. There was a significant improvement between baseline and post intervention scores on measures of mastery, positive emotions, personal growth, mindfulness, acceptance, and stress, self-acceptance, valued living, autonomy and total cholesterol. Participants rated the program and materials very highly. These results indicated the effectiveness of the READY (Resilience and Activity for every day) group training program in a work place setting to promote psychosocial well-being.

Dr. Haase and colleagues as reported by Reynolds (2016) recruited 48 healthy adults and administered a standard questionnaire about their self-perceived emotional and physical resilience. Based on the scores, the group was divided into 3 groups having high, average or low resilience. Their brains were scanned for the brain activity. It was found that people who were highly resilient displayed brain activity very similar to the athletes and soldiers who were trained
to develop resilience. But the brains of those people with low resilience behaved in the opposite way. Their brain showed high activation in parts of the brain that increases physiological arousal.

Panicker and Chelliah (2015) in their study on 82 children and adolescents with specific learning disability found that the 75% of the sample were low on resilience and were under severe stress (16.6%) severe depression (14.2%) and severe anxiety (23.8%)

In the study on the data available for 2,37,980 Swedish men, eligible for military conscription who were assessed for the risk of CHD (Coronary Heart Disease) from 1987 to 2010, it was found that Low-stress resilience in adolescence was associated with increased risk of CHD in middle age and may diminish the benefit of physical fitness.

Building Resilience: The American Psychological Association (2010) suggested ten ways to build resilience, which are

- To maintain good relationships with close family members, friends and others
- To avoid seeing crises or stressful events as unbearable problems
- To accept circumstances that cannot be changed
- To develop realistic goals and move towards them
- To take decisive actions in adverse situations
- To look for opportunities of self-discovery after a struggle with loss
- To develop self-confidence
- To keep a long-term perspective and consider the stressful event in a broader context.
- To maintain a hopeful outlook, expecting good things and visualizing what is wished.
- To take care of one’s mind and body, exercising regularly, paying attention to one’s own needs and feelings.

Rasheed (2016) in his study on 36 adolescents (18 girls and 18 boys) explored and constructed resilience scale for adolescents (RSA): a list of 85 items that was converted into a self report measure. The principal component factor analysis
through varimax rotation yielded six factors solution, namely self regulation, self confidence, robustness, seeking support, sociability and vulnerability.

Miles and Huberman (1994) reported in their study on Filipino elderly with Residual Paralysis demonstrated major changes in self-concept, disposition and resilience, based on their self-concept, on their relationship with others, their expression of innate feelings and their resilience to accept and to cope with chronic effects of stroke.

Hayter and Dorstyn (2013) conducted a cross-sectional survey, on 97 adults with spina bifida to examine factors that enhance and promote resilience in adults with spina bifida. They collected demographic details and administered self-report measures of physical functioning, resilience scale, self-esteem scale, self-compassion scale and psychological distress (Depression Anxiety Stress Scale). Results showed that self-esteem and self-compassion correlate with resilience. Resilience demonstrated a stable healthy level of psychological and physical functioning.

Schneider et al (2013), found that emotional perception was a significant facilitator in lowering negative emotionality during stress. The emotional understanding facilitated resilience and reduced the effect of bullying.

Several studies have demonstrated the role of resilience in dealing with divorce, natural disaster and death of a family member (Booth and Amato 2001, UNESCAP funded research).

The above mentioned studies reflect the importance of the development of resilience among children and its impact throughout life. The study results have emphasized the crucial relation that resilience has with stress reactions, coping methods, anxiety, depression, learning ability, handling bullying, and development of self concept, physical fitness and physical illness. Some studies have shown the role of resilience in dealing with natural disaster, death of a family member and Divorce of parents.

The intricate relation among the concept like self-concept, coping, positive emotions, peer influence, family members relationship depicted in the above
studies have given indications about the trainee’s mental makeup. Results of the studies have provided relevant information in understanding the factors related to bullying and development of resilience. This would significantly contribute towards developing intervention program for the present study.

**PART B : Studies on stress, coping strategies, resilience and intervention program during training in different fields**

This study is aimed at development of stress management intervention program for defence trainees. Contributions of other studies in this field will throw light on relevant aspects that should be considered in the intervention program. The study of stress, coping strategies, resilience and intervention program used during training period in different fields like medical education, nursing, police, multinational companies and business organisations will immensely provide knowledge about the stressors to be handled and ways to handle in stress management program. An attempt is made to study some of the studies conducted in this direction to have deeper knowledge about the intervention studies and types of intervention, their advantages and limitations.

Sossah and Asiedu (2015) conducted a cross – sectional study to investigate the sources of stress, stress management strategies and resilience among 240 junior and senior nursing students at different nursing schools in Ghana. The findings of the study revealed that nursing students were exposed to different sources of stress, but fear of performance in the clinical setting was the greatest source of stress. Emotional and spiritual support was very important along with physical activities. Physical resilience was found to be lower than general clinical resilience among nursing students.

Police work produces lot of occupational challenges that contribute to physical and psychological stress. Evidence suggests that development of resilience has a moderate effect on stress. Coping style and social cohesion could cognitively integrate the stressful experiences (Violanti 2014)

Stoica and Buicu (2010), on basis of their study on occupational stress, presented stress management strategies
a) Development of stress management skills and behaviour—developing assertiveness, positive communication, learning art of saying no, identifying and solving conflicts, problem solving, decision making and relaxation.

b) Development of a healthy lifestyle – maintaining normal weight, healthy eating behaviour, regular exercise, giving up smoking and alcohol consumption.

c) Establishing and maintaining social support – maintaining relationships and friendship.

d) Developing confidence in one’s forces – priorities, developing capacity, setting personal limits and realistic goals.

e) Time management – reviewing goals, breaks between activities, time allotted to each activity.

Momayyezi et al (2015) conducted descriptive analysis on clinical education stressors. This study of stressors in Yazd University of medical science was based on a sample of 170 medical students. Data was collected on four components: interpersonal relationship, educational environment, clinical experience and the unpleasant emotions. The results showed that the highest source of stressor was the domain of interpersonal relationship followed by the domains of unpleasant emotions. The lowest source of clinical education stress was the domain of educational environment. The interpersonal relationship domain scores were more in women than men (P < 0.05).

Weltman et al (2010) studied the impact of an innovative self-regulation and resilience building program delivered via an ipad (Apple Inc. Cupertino, California) app and personal mentoring. This stress resilience training system (SRTS) app included training on stress and its effects, a series of self-regulation techniques. 12 police officers and 2 dispatchers, 10 men and 4 women from San Diego (California) police department underwent SRTS intervention of one introductory 2 hour training session, 6 weeks of individualized learning and practice with the SRTS app, and four 1 hour telephone mentoring sessions by experienced mentors over a period of four weeks. Post SRTS assessment was made on personal and organisational quality assessment (POQA) survey, the mentor’s reports of their observations, records of participant’s comments from the
mentoring sessions. The POQA results were found to be overwhelmingly positive. All four main scales showed improvements. Emotional vitality improved by 25% (P=0.05) and Physical stress improved by 24% (P = 0.01). Eight of the nine subscales showed improvement with the stress subscales improved approximately 40% (P = 0.06). Participant’s responses were also positive and enthusiastic. Individual participants reported improvements in both on –the – job performance and personal and financial situations. The results supported the efficacy of the program to build stress resilience and improving workplace wellness by providing practical self-regulation skills for better management of emotional energy.

Stress inoculation training (SIT) has been applied in various medical problems: medical patients with acute and chronic pain disorders, breast cancer, hypertension, burn patients, ulcer patients, rheumatoid arthritis and psychiatric patients with PTSD; anger – control problems and aggressive behaviours. The SIT has been applied in varied forms. Langer et al (1975), provided coping skills training for the duration of 20 minutes to medical patients prior to their surgeries and Peterson (1980) used a similar multi-faced coping skill program that contained relaxation training, calming self-talk, and guided imagery to dental patients.

Jay and Elliott (1990) developed an SIT audiovisual film for parents of paediatric leukaemia aged between 3 years to 12 years. Results showed the experience of less anxiety and better coping skills by the parents. Another stress management program that has many features of SIT is cognitive – behavioural stress management (CBSM) which was most successfully used with female early stage breast cancer patients.

Boston university psychologists (Tori De Angelis 2008) have shown the evidence of effective treatment by exposure therapies, like prolonged-exposure therapy, cognitive and processing therapy, stress exposure therapy in case of PTSD treatment cases.

Nekzada and Tekeste (2013) conducted a qualitative descriptive and exploratory case study and found that stressors at (MNC) work place ranged from personal
problems, work overload, physical working environment, work situation and conflicts among colleagues and conflict with superiors. They found uncertainties and severe impairments on health and performance. They identified the most successful stress management mechanism as time management, sharing of feeling and leisure activities for employees.

A descriptive cross-sectional study was conducted by Shaban et al (2012) with 181 nursing students representative of second year undergraduate students from two universities in Jordan. Results showed that major stressors were assignment work and the clinical environment. The most common coping strategy used by students was problem – solving followed by optimism and diverting attention from stressful situations, while avoidance coping strategy was seldom used.

The above stated studies considered the stressors and intervention programmes in stressful occupations other than the military services, like nursing, medical, police department and multinational company. Some studies investigated the effectiveness of stress inoculation training in various medical problems and post-traumatic stress disorder and have proved success in reducing the stress.

The obtained information about the coping strategies used by trainees in other fields and effectiveness of different intervention programs is crucial for the present study as one of the objectives is to develop intervention program to handle stressors specific in military training. It is also beneficial in identifying the types of intervention that is more appropriate for handling stressors in basic military training.

PART C : Studies on stress, coping strategies, resilience and intervention programme in military set up and military training

Review of literature under this section revealed that, several studies have been conducted exploring stressors, developing resilience and coping strategies and testing the effectiveness of different types of stress management intervention programs. These studies have been classified into three parts

1. Studies implementing different types of intervention programs to handle stress in military context.
2. Studies implementing intervention program to handle stress in military basic training period.
3. Studies conducted on stress, coping strategies and intervention programme in Indian military context

Part 1:
Empirical studies considering stress, coping strategies and intervention programs in military set up were reviewed under this category.

Reivich, Seligman and McBride (2011), conducted Master resilience trainer (MRT) course, provided 10 days MRT course on non-commissioned officers (NCOs). Fundamental teaching skills were taught to NCOs. MRT training course was conducted in Philadelphia, Pennsylvania with 150 NCOs and 30 NCOs in Fort Jackson, South Carolina.

There were four modules and one concluding module in MRT. Module 1 & 2 each were covered in two half day sessions, Module 3 and 4 were each covered in one day, and concluding module was covered in one half day session.

Module 1 focused on contributing factors to resilience, misconception associated with resilience, and relation between resilience and effective leadership. The core competencies developed in this module were

a) Self awareness – identifying one’s thoughts, emotions and behaviours
b) Self – regulation – regulation of impulses, thinking, emotions and behaviour to achieve goals.
c) Optimism – noticing goodness in self and others.
d) Mental agility – thinking, flexibility and accurately.
e) Character strengths.
f) Connection- building strong relationships.

Module 2: In this module, Seligman et al (2011) adopted from the field of cognitive-behavioural therapy, and followed ABC model.

i. Soldier recognising activating event (A) Their beliefs (B)
   About the activating event, and the emotional and behavioural consequences of those thoughts (C)
ii. Explanatory styles and thinking traps were explained with reference to Army case studies.

iii. Icebergs (deeply held beliefs) were identified to deal with to contribute or undermine their effectiveness in the army.

iv. Energy management (including meditation, controlled breathing and progressive muscle relaxation).

v. Problem solving.

vi. Minimizing catastrophic thinking.

vii. Fighting back against counter, productive thoughts in real time (way to immediately challenge negative thoughts).

viii. Cultivating gratitude.

Module 3: Identifying character strengths.

Module 4: Strengthening relationships among soldiers and between soldiers and their family members. The last module of MRT sustainment component on 9th day of the course focused on reinforcing resilience skills and applying these skills in the military context. The enhancement component of the MRT course was delivered on the last day of the course. Some of the skills were provided by sports psychologists to enhance soldiers’ performance.

Harme et al (2013), reported in their review, that military jobs are ranked as the most stressful occupation in US for the year 2013, where stressors include physical danger, longer duration of deployment, physical demands, home sickness, separation from family, being in public eye and being responsible for others’ lives. Among U.K. forces, high rates of mental disorders (19.7%) and alcohol abuse (13%) were associated with combat deployment. U.S., Joint Mental Health Advisory Team (J-MHAT, 2011) reported 19.8% of American soldiers suffering from psychological problem due to acute trauma experienced in combat. Trauma severity, lengthy deployments and repeated combat tours determined the development of emotional problems and experience of PTSD symptoms in U.S. soldiers. Positive emotional mindset such as hope, optimism and grit mitigate the effects of combat trauma on soldier’s health. The authors noted that two personality characteristics – coping and hardiness were considered as most effective in military context. Coping styles like problem – focused coping and emotion focused coping were found to be having positive outcome. In a
longitudinal study of Israeli soldiers it was seen that decrease in PTSD was associated with emotion focused coping. (Solomon, Mikulincer and Avitzur, 1988). A similar study of Canadian force evidenced the enhanced effect of stressors on health symptoms due to the use of negative coping styles such as venting of emotions and disengagement. (Day and Livingstone, 2001). Lester, et al (2011) in their study on U.S. army soldiers, found the associations of lower suicide rate with positive coping styles and both positive and negative coping styles, being associated with illegal drug usage. Lower scores on negative coping styles predicted the selection of command positions.

The second concept Hardiness (Barton et al 2008) referred to was a strong sense of commitment to work, active engagement with surroundings, and having a belief of control over the situations and a propensity to enjoy new challenges (Barton et al 2008). They found in their research in American military populations, that hardiness is predictive of both health outcomes and emotional well-being.

Research studies were also conducted in the line of providing health interventions in the military setting aiming at improving mental health of serving soldiers. Battlemind interventions are of two types – training and debriefing. These two interventions have some similarities and some differences in goals, methods and content. Battlemind training adopts the general cognitive behavioural therapy (CBT) model, that combines both aspect of cognitive behaviour therapy and positive psychology and aims to develop mental fitness and self – confidence. In the beginning, it was developed to be used for post deployment transition phase. Battlemind training includes focus groups and survey feedback, needs of spouses and children. Battlemind debriefing is like stress management intervention implemented in alleviating soldier’s experience of traumatic events and conducted in groups, revolve around discussions.


Boot strap survival training for Navy Recruits was developed to reduce depression rate and increase psychological functioning and performance to reduce basic
training attrition rates among U.S. Naval recruits. (Williams et al 2004). The Boot strap program consisted of nine weekly class room session of 45 minutes each, in which recruits discuss about correcting faulty thinking patterns, developing a greater sense of belonging and strengthening peer relationships and assessing one’s emotional reactions and provide training in stress management skills. As a result of Boot strap training, U.S. Naval recruits reported greater level of group cohesion, positive coping strategies, perceived social support, problem solving, and lower levels of negative coping strategies.

Comprehensive soldier and family fitness (CSF2) is primarily management of mental health and well-being program used by the U.S. army since 2011. This is the largest psychological health initiative implemented in U.S. military and this is aimed at developing psycho social resilience in soldier that is rooted in the principles of positive psychology and used as preventive measure. This program most closely model the Penn Resiliency program that was earlier used for adolescents and children (Gillham & Kim 2009).

Mental skills training (MST) consisted of enhancing mental and emotional components of psychological functioning that included mental rehearsal, positive imagery, goal setting and self talk (Martens 1987, Rushall 1992). The MST intervention was conducted for 20 minutes sessions, 3 to 4 times a week. Results showed the greater self-confidence and better performance on physical activities in the units.

Another widely used program unique to military setting is Training Risk Management (TRiM). This intervention program tries to identify soldiers who may develop mental health problems and provide them appropriate intervention. TRiM support practitioners were volunteer service members trained in traumatic risk assessment and trauma psychology. TRiM is widely used within U. K armed forces (Greenberg et al 2011).

Warriors prevails is another intervention program, which consists of a nine session – 30 to 45 minutes each, learning program aiming at mitigating mental health symptoms. This program, involves self assessment, peer support and
family program. Results from studies showed the reduction of stigma attached to mental health problems among soldiers (Hoge et al 2004).

Bakhurst, et al (2016), recommended some of the best practices for working with military couples, considering distinctive challenges of military lifestyle, and providing relationship education. Military couples have distinct strengths as well as challenges that influence their relationship adjustment. Their strength being stable employment, financial security and subsidized health and counseling services and challenges such as experience of long periods of separation and difficulties of emotional disconnect, trauma symptoms and reintegrating the family.

Hourani, et al (2016), developed two graphic novels as a new approach to mental health communication and coping strategies for the Navy and Marine corps. These novels intended to provide young audience, a realistic, principles of combat and operational stress control (COSC) using realistic real-life service members, accurate technical knowledge, teaching by COSC experts representing variety of jobs, ages, background and professional concerns of the real-life service members and designing accurately to the training objectives and psychological effects on readers.

Martins and Lopes (2013) conducted a cross-sectional study, on 506 military service personnel of Brazilian Army to examine the association of Rank, Job stress and psychological distress with physical activity. Results of their study showed the association of job stress and rank with higher levels of occupational physical activity. Job stress and psychological distress were associated with lower levels of physical activity in sports / physical exercises. They found physical activity and the psychosocial environment being related to health.

WRAIR surveyed unique sample of 385 military police (MP) soldiers supporting Homeland defence to identify stressors. The sample was composed of active duty soldiers (n=144) and Reserve and National Guard soldiers (n=241) who were deployed at two locations; Pentagon (n=220) and Fort Stewart (n = 165) Georgia. Most of the soldiers were Caucasian (60%), married (57%) male (82%). Findings identified unpredictability, work overload, and inter-group conflict as major stressors, and each of these stressors was found to be correlated with job
satisfaction perceived mission readiness and decisions to continue to serve in the Army.

WRAIR program on basis of extensive research work has identified military stressors in three major environments (a) Garrison (b) training exercises and (c) deployment. Many of these stressors are also found in civilian occupational set up but some are unique to military set up. Work stressors include work overload (24 hours, 7 days a week) unpredictability, role stressors and performance evaluation. Military specific stressors include, exposure to traumatizing events such as experiencing threats to one’s safety, being exposed to human suffering and death and perpetrating harm on others and stressors with deployment are austere living conditions, boredom and family separation.

Bouchard Mail, et al (2012), in their study on effectiveness of stress management skills in soldiers found advantages of practicing a stress management skill. 41 soldiers who had received basic stress management training and first aid training in combat were considered in their study. They were given a 15 minute refresher briefing and then randomly assigned to control and experimental groups. Control group did not receive any additional stress management training, whereas experimental group was exposed to 30 minute session, one session per day for three days of bio-feedback – assisted stress management training while watching a horror / first person shooter videogame. The training was conducted in dark enclosed environment using a 50 inch television with active stereoscopic display and loud speakers. At the end of the program all the 41 soldiers were subjected to a live simulated ambush with an improvised explosive device, where the soldiers had to provide first-aid to a wounded soldier. Stress levels were measured by two methods, salivary cortisol before and after the live simulation and heart rate at baseline and during live simulation. Results confirmed the advantages of practicing stress management training in reducing stress.

Martin E.P Seligman (2011) university of Pennsylvania, designed the comprehensive soldier Fitness (CSF) a historically unique approach program based on the principles of positive psychology, to increase psychological strength and positive performance and to reduce the incidence of maladaptive responses of (1.1 million members) entire large U.S. Army CSF covers four program elements:
(a) Assessment of emotional, social, family and spiritual fitness
(b) Individualised learning modules to improve fitness in these domains.
(c) Formal resilience training and
(d) training of Army Master resilience trainers (MRTs) to instil better thinking
skills and resilience in other subordinate soldiers.

Bouchard, et al (2012), opined after several research studies at university and at
Defence Research and development organisation, Canada, that virtual reality, can
be used as training tool to practice stress management techniques and in long run
reduce the occurrence of post-traumatic stress disorder.

Several studies were conducted using virtual reality to enhance stress management
techniques. Some of these studies are summarised by Bouchard, et al (2012),
First study was conducted on 90 U.S. Marine corps. They were made to navigate
a virtual shoot house for approximately 15 minutes and feedback was provided on
their performance after the immersion. The performance of these 90 participants
was compared on a variety of parameters with 120 marines who did not receive
any training at all. Results mostly based on subjective information suggested an
increase in efficiency of those who received prior VR training. Second study was
conducted with U.S Navy SEAL with 30 team members receiving VR training as
in first study and 90 team members were in control group. The qualitative
observations suggested the improvement. The third study was by Wiederhold
(2005) which was conducted with 30 U.S. Marine Corps. Marine Expeditionary
unit with no control group. Participants were made to visit, Board, search and
seize procedures on a ship. The VR training consisted of taking a virtual ship
under custody and search for hidden cargo and contraband within 10 minutes.
Results showed 14.2% of time reduction to search the ship. Fort study was
conducted with United States Coast guards pacific Tactical Law Enforcement
Detachment. 20 participants received VR training and 80 participants were in
control group. Results were encouraging on the basis of qualitative data. Last
study was conducted with 152 members of the Light Armoured Reconnaissance
battalion. VR training was on military operations in urban terrain and house
virtual reality and the training of military personnel to cope with Acute stressors,
117 members showed improvement in their physical performance.
Military Resilience Training Program (MRTTP) was developed by Routhier (2007) for Canadian Forces. This program is grounded in a cognitive – behavioural biopsychosocial approach and also includes a spiritual dimension. MRTTP had 13 modules that were delivered in workshops and lectures cumulating in 13 hours of training pre-deployment. The program was conducted even during mission in the form of peer support. In the post – deployment stage also additional sessions were delivered. SMT skills were taught over a period of six to nine months and the vocabulary adapted to the culture and attitude of military personnel towards stress and coping skills. Some coping strategies were addressed to primary appraisal of stressful stimuli (eg. self-talk, thought stopping) and some are realistic and reassuring secondary appraisal coping (autogenic training and meditation, visualization, listening to music, singing or reading, humour) and to sustain acute stress associated with objective like – threatening stressors (eg. listening to silence, focusing, breathing, de-identification). Author reported in his study that out of 640 respondents after the post-deployment survey, 58% opined that the training was useful and 85% considered the program was well adapted to the military reality.

Henry et al (2012) indicated that operational stress (eg. negative energy balance, high-energy expenditure, sleep deprivation, environmental extremes, heavy load carriage) associated with rigorous training and negatively affects hormonal levels, lean muscle mass, physical performance and can cause musculoskeletal injuries.

The study conducted by cognitive neuroscientist Amishi Jha (2014) and Elizabeth A Stanley (2014) provided mindfitness training for the first time to U.S. Marines before deployment. The program covered relevant topics to the marines, such as integrating skills to manage stress reactions, increase their resilience, to future stressors and improve their unit’s mission effectiveness. Findings suggested the daily physical exercise led to physical fitness, and mind fullness. It safeguarded working memory against distraction and emotional reactivity. Stanley (2014) conducted a study that included two military cohorts of 48 male participants with mean age of 25 years recruited from marine reservists during high-stress pre-deployment interval and provided mindfulness training to experimental group of 31 and no training to control group of 17 marines, Working memory and positive
and negative affect were evaluated. Positive affect reflects a person’s enthusiasm, activeness and alertness. The negative affect reflects unpleasant mood, anger, disgust and fear. Results showed the degradation of working memory and increase of negative mood in control group.

Robson and Manacapilli (2006) conducted extensive literature review, interviewed Air force instructors from the Air Education and Training Command and formed focused groups with combat controllers and Para rescue men. In addition to this, the authors also reviewed key official training documents, training plans and instruction plans. Their findings revealed that adopting appropriate exposure to stressors during training was an effective method to handle stress. Individuals can develop the skills necessary to handle different levels of stress in the future. Individuals perform better under stress if educated and get skill training and exposure of relevant stressors of the job.

Taylor, et al (2007), studied the responsiveness of cortisol and dehydroepiandrosterone Sulfate (DHEAS) (endocrine reactivity), performance and psychological impact to stressful military training. They collected salivary cortisol samples and DHEAS samples of 19 Airmen at 0900 hrs. and 1930 hrs. in a free environment. Samples were subsequently taken at same corresponding time points during stressful captivity phase of training. Results were analysed using analysis of variance and paired ‘t’ tests, examined differences across time and conditions. Results indicated the increase of cortisol and DHEAS in response to all static load and human performance during stressful training and also in PTSD symptoms. Cortisol is the end product of hypothalamic pituitary – adrenal stimulation that is responsible for releasing blood glucose for energy and increase blood pressure as a stress response of physical as well as mental stress.

The operational demands and combat stress has resulted in mental stress and PTSD in most soldiers. There are instances where most soldiers who faced major challenges and deployment, combat stressors, do not develop mental health problems. They take their deployment as a positive experience, in which they learned a lot about themselves, made lifetime friends, found new understanding of values in life and priorities and have developed personal values. These positive effects outweigh the negative effects of the deployment in such cases. These
positive responses are attributed to resilience by professionals (Seligman 2011). There are internal capacities and external resources that enable the soldiers to develop resilience in case of combat stress and operational demands. The personal attributes that are linked with resilience are self-confidence, optimism and perceived control over the situations. These attributes enable soldiers to sustain stress positively reframe difficulties and cope with stress and recover from adversity. Interpersonal skills and physical fitness also play crucial roles for operational effectiveness and optimal performance. Psychosocial resources provide for the soldier’s resilience, like morale team aspects and unit cohesion, leadership, organizational culture and family support. Military organisations are developing preventive interventions, like comprehensive soldier fitness program in U.S. and Battle SMART (Self Management and Resilience Training) in Australia, Peer Support System (TRiM) by UK Army and in – theatre military leaders’ advice on resilience of the Dutch defence.

An attempt is made here to summarize some of the studies conducted to enhance resilience in military set up.

Deahl et al (2000) reported the study conducted in UK where post-operational psychological debriefing was administered to soldiers who returned from peace keeping deployment in Republic of Yugoslavia. Experimental group which received debriefing was compared with a control group who did not receive any debriefing. Both groups had pre-operational stress brief and results showed low rates of PTSD for both groups.

Sharpley et al (2008) in their study, provided pre-deployment operational stress education to approximately 4,062 personnel of Royal Naval and Royal Marine personnel deployed on operation. They utilized stress awareness, stress reduction and enhancing morale and accessing external resources. Stress brief was presented for 50 – 60 minutes using power point. This program covered definitions of stress, pressure and strain, types of stressors (Physical, social, occupational and traumatic); effects of stress, advices on reducing stress, morale, trust in leadership, confidence in skills, willingness to fight. Results did not show any effects.
Adler et al (2008) in a survey randomly assigned platoons of peace keepers to stress education and psychological debriefing sessions. Participants of psychological debriefing did not report any greater post intervention distress and expressed higher satisfaction with the intervention than participants of stress education. Participants of psychological debriefing who had experienced high levels of mission related stressors reported lower PTSD and aggression compared to participants of stress education. Participants of psychological debriefing reported more alcohol problems than participants of stress education. This study though had small effect size proved that psychological debriefing was useful.

Adler et al (2008) in another study conducted critical incident stress debriefing, using methods of stress awareness, adaptive coping strategies and fostering emotional sharing during deployment. Results showed the positive effects of the intervention only for soldiers with high stress exposure. This study also indicated that highly exposed individuals benefit from early intervention.

Alder et al (2009) conducted on active-duty US soldiers of Brigade Combat Team (BCT) returned from 12 month combat deployment to Iraq. 2,297 consented to participate in the study. Battlemind debriefing and stress education were conducted. The effects were measured on PTSD, Depression, sleep problems and stigma associated with seeking mental health care. Results indicated that Battlemind debriefing, both small and large group Battlemind training resulted in fewer symptoms of PTSD and depression symptoms than stress education condition, only for those with high levels of combat exposure. Battlemind debriefing and small group Battlemind training led to fewer sleep problems than did the stress education, but only for participants of high level of combat exposure. Participants with high levels of combat exposure showed lower stigma levels after large group Battlemind training than did stress education. Participants rated Battlemind debriefing and Battlemind training highly positive than stress education. Group based approach of Battlemind debriefing received high ratings for atmosphere and unit cohesion. Cognitive skills based approach of Battlemind training received higher ratings for teaching specific actions to support reintegration. In brief, Battlemind skills had positive effects for those participants
reporting high levels of combat. Battlemind debriefing was similar to most of the group psychological debriefing models.

Williams et al (2004) in his study at a U.S. Navy recruits establishment reported that recruits at risk of depression who had received stress management program had equivalent graduation rate than control group of risk recruits who did not receive intervention showed lower graduation rates.

Williams, et al (2010), during regular operational work, conducted internet-based self help training using stress awareness and stress reduction, healthy life style, positive reframing and adaptive coping strategies and interpersonal skills. Results clearly showed a decrease in stress.


Ellizabeth A Stanley (2014) after several years of research recommended Sweat therapy in which importance was given to physical fitness, sleep, activity and nutrition that are considered as performance triad for the enhancement of resilience.

Nash (2006) reported an innovative program in U.S. marine corps – called operational stress control and readiness (OSCAR) program where in, OSCAR mental health professionals were not only primarily clinical health care professionals, but they educate and keep continuous contact with marines in the field and in times of adversity before deployment, during deployment and after deployment. This program increased the awareness among war fighters of the principles adopted to control combat / operational stress, and provided effective care and reduced long term deployment related stress problems.

Thompson & McCreary (2006) conducted several stress exposure training programs in military populations and reported mixed results of the research on the effectiveness of SET. Dutch army has adopted SET during their training program and instructors have reported that SET is effective for some trainees, but some trainees refuse to share their experiences.
Aron, et al (2009), undertook pilot investigation to study the effectiveness of a combat stress control (CSC) unit treatment for deployed service persons. Thirty eight US military personnel underwent a two-day CSC unit program. The program incorporated both individual and group treatments to reduce the symptoms and signs of combat operational stress reactions and to improve coping strategies, interpersonal relationships and stress management skills. The CSC unit program supported the mission of military commanders, by enabling service members to return to their duty and restore exercises to demands of the mission at a higher functioning level.

Rickovic (2014) investigated the feelings associated with different phases of international peace keeping force. It was found that the nature of feelings varied from the beginning of deployment to the end of deployment. There was excitement in the beginning, increase in self confidence and self competence in the middle and at the end of deployment there was feelings of happiness and pride.

Friedland and Keinan (1992) examined effective performance in stressful situations using three approaches of training dealing with skills acquisition and exposure to stressors in three separate phases of the combat training. During these three phases, the stressors were introduced according to the trainee’s personality dispositions. Results showed phased training was most promising approach to training for effective performance in stressful situations.

Griffith and West (2013) examined the opinion of National Guard Soldiers and Civilians (N=441) who underwent Master Resilience Training. Ninety two percent of the sample reported improved resilience competencies and enhanced coping methods with stressful circumstances. 97% of the sample indicated they were competent in using resilience competencies in both military and civilian jobs. Results showed the improvement in resilience competencies, fewer behavioural health symptoms, connection with others, self-awareness, optimism and mental agility.
Laurel, et al (2016), designed and developed and evaluated a SIT preventive intervention to train deployed personnel to cope with combat stressors. Their training program had 3 training modules

a) Educational materials about combat / operational stress control

b) Coping skills training involving breathing exercise with bio feedback, focused and relaxation.

c) Video multimedia stressors environment to practice knowledge and skills learnt from first two modules.

Data was obtained from experimental group of 351 marines and control group of 259 marines. Findings showed the reduction in their physiological arousal and were protected against PTSD among marines without baseline mental health problems.

Mjelds, et al (2016), examined the performance of military teams who participated in complex military training exercises and team of 8 cadets was exposed to 4 hours simulator training exercises and a 48 hour live training exercise. Results showed significant relation between resilience and assessment in simulator training exercise and live training exercise. The relations were strongest when simulator training exercise depicted resilience factors that were embedded in the live exercise. The relation was weakest when the simulator scenario did not facilitate the task requirements in the live exercise.

Chester, et al (2013), trained Royal Australian Air force personnel for 15 days using Military Environment survival training (EST) to handle stressors of military personnel in preparation for combat like scenarios. Results showed significant increase in creatine kinase concentration from baseline, vertical jump and body mass were decreased from baseline and negative psychological responses like mood, depression, anxiety and stress were noticed.

Jarle Eid (2003) in his observations of military training accidents reported that early psychosocial intervention provided to accident victims, will significantly reduce the PTSD symptoms.

Role of sleep in the military was examined by Shattuck (2012). The investigator considered fatigue and sleep restrictions in different military settings, shifting the
timing of sleep like U.S. warships and submarines, Navy recruits, Army basic combat trainees and cadets at U.S. military academy. Data was collected from 237 Male, 211 Female and 244 were enlists 22 were officers, 20 were pilots, 25 Aircrew, 46 infantry male officers. Results showed the chronic and acute sleep disturbance, lapses in attention, micro sleeps, memory and judgement lapses, alterations in moods and faulty decision making.

Young (2014) in a study deliberately used recreation activities to cope with stress, along with physical exercise. Therapeutic recreation stress management intervention model was recommended for further testing in Botswana Defence Force.

Review of these studies, has brought out the importance and need for intervention at different stages of military service. Basically these intervention programs had their roots in cognitive behavioural therapy and positive psychology. Some intervention programs had combined both principles of cognitive behavioural techniques and positive psychology. These intervention programs focussed at stress management during combat operation stress, building behavioural strengths and developing resilience to handle stress.

**Part 2: Studies implementing intervention programs to handle stress in military basic training period**

Military training exposes trainees to considerable physical and psychological challenges. The training program includes mandatory physical training, dormitory or group living, peer pressure, competition and continuous assessment of the performance. During military training focus is on skill acquisition, development of technical proficiency, discipline, strength, endurance and teamwork. The new environment of current military operations are highly unpredictable and ambiguous (like terrorist attacks and peace keeping missions) placing heavy demands on the military personnel. Hence, the military training programs are required to be appropriate to train military personnel to cope with such stress.

Empirical data indicate that entering into army and military service are demanding for recruits due to mandatory physical and psychological requirements placed on
the trainees, particularly the military environment experienced as stressful in the initial stages that is, during the basic military training period.

The indoctrination process for transforming civilians into military service member begins in the beginning of the basic military training period. This period is aimed at development of loyalty, self-discipline, and physical fitness, self-confidence, pride in service and military values in new trainees. Different methods are used by the instructors at the military training academy, that includes academic and field instruction, physical training, inspections, teamwork, drill and parade practice and also intimidation and fear.

WRAIR (2003), in its series of studies, examined the stressors and it’s impact on health and performance of trainees. Based on their study conducted with Reserve Officer Training Corps (ROTC) cadets noted role stress, performance concerns and work load as key stressors of military training. Each of these stressors had negative relationship with well-being and performance i.e. greater the stress the poorer the well being and performance outcomes. Another unique stressor noted by WRAIR was within group conflict, referred to disagreements, differences or in-congruencies within groups. There was negative relationship reported between group conflict and well-being and performance.

Yuan, et al (2013), based on their study on Chinese female (n=470) and male (n=379) military officers undergoing intense military training, reported that the state and trait anxiety were highly correlated in both women and men, and female officers had higher levels of anxiety, greater negative coping tendencies and less perceived self-efficiency than male. Avoidance coping method was chosen by women more often than men. Most common positive coping style adopted by female officers was problem solving, whereas men adopted to help seeking coping mechanism. Comparatively they found, female officers made active cognitive changes in their coping styles than male officers during intense military training.

Boerman, et al (2011), in Netherlands organisation for applied scientific research developed the resilience XL training program based on cognitive-behavioural approach covering cognitive behavioural and interpersonal aspects of functioning. This program was integrated with Navy basic military training. The main ground
reason for quitting the basic Navy training was the difference between the actual basic training and expectations of the recruits. Recruits were shown a short video of previous recruits sharing their own experiences and support from personnel and other members. Group discussions on the topics like “coping with difficult situation” and “supporting group members”, “instructor responsibilities” and “recruit responsibilities” were conducted to enhance the social support. The recruits also participated in two “reinforce” sessions of 2 hours each, wherein, the recruits shared and discussed on their past experiences. Results evidenced the enhancement of resilience among the recruits.

Busko and Kulenovic (2000) conducted a study on a sample of 449 males. The researchers measured stressors of military service, cognitive appraisals and coping ways with stressors at two points of time, first within 7-12 days of their service and second time after five weeks (last but one week) of their military Basic Training. They identified 6 categories of stressors.

a. Housing
b. Relationships with other recruits
c. Military regime
d. Relationships with subordinates
e. Disconnection of civilian life and
f. Unclear situations during military service.

Results showed that trainees experienced disconnection of civilian life stressors more at second point of time (after five weeks) than in the beginning and reduced experience of stressors were noted in other five categories. Trainees experienced higher control over the occurrence and the outcome of stressful situations, lower level of threat and loss at the end of the basic training compared to the beginning. Avoidance and expression of emotions were the frequently used coping strategies compared to active accommodation, passivization and reinterpretation, at the end of the basic training than in the first measurement point.

Williams et al (2016) in their study assessed the development of unit cohesion during the 10 week basic combat training period (N=1,939) and its relation to stress, resilience and mental health measures and basic combat training outcomes like graduation, passing the army physical fitness test and final Basic Rifle,
Marksmanship scores. The sample was mainly male (62%) under age 25 (88%) and unmarried (88%). Results showed the negative relation between unit cohesion and psychological distress, sleep problems and tolerance of basic combat training stressors. Study also revealed the positive relation between unit cohesion and resilience. These results indicated the key role of unit cohesion on psychological health and performance among new soldiers. Cohesion led to lower psychological distress, higher resilience and confidence managing reactions to stress was indirectly associated with successful graduation and passing the army physical fitness test. Cohesion effects on the basic rifle marksmanship scores were mediated by tolerance of basic combat training stress and psychological distress.

Davis (2006) conducted a study of 155 soldiers during their basic combat training at Fort Jackson, South Carolina. Physiological stress was measured objectively by testing salivary amylase and perceived stress was measured by Multiple Affects Adjective Checklist Revised (MAACL – R). Results showed statistically significant positive relationship among perceived stress, hostility and depression levels. Participants who could modify their coping mechanism to handle physically and mentally demanding challenges of the basic combat training were found to be more confident in successfully completing training and did not receive any disciplinary action.

Novaco, and Cook (1983), used 35 minutes video tape for use with marine trainees during in processing phase of training. The video was aimed at normalizing trainee’s emotional reactions, provided information on the training environment, encouraged adaptive cognitive and successful coping techniques. 530 trainees were randomly assigned to the coping skills film condition. Others to a comparison film condition or no intervention. The coping skills movie increased the expectation for success in training compared with the other two conditions.

Another study conducted by Backer (1987) to study adaptation to marine basic military training. He randomly selected 84 new trainees and assigned them to three sessions of stress inoculation training, three session of a discussions group, or no treatment. Training performance indexes and self-report questionnaire were
the dependent measures. Results indicated that three groups did not differ from each other on any measures.

Cigrang, et al (2000), conducted study on 178 military trainees, who were referred for a psychological evaluation from Air force basic training. In their sample, there were 65 women and 113 men with age range of 17 to 31 with mean age of 20.1 years. 75% of the trainees were Caucasians. These trainees were randomly assigned to two groups, control group (84 trainees) and treatment group (94 trainees). The treatment group was taught, coping efforts in basic training. They were provided education and practice in problem solving, self-instructions skills and relaxation training as in Meichenbaume’s (1985) Stress inoculation training model. Results showed that 55% of the trainees graduated the training program and 45% of trainees were discharged due to their failure to graduate. Treatment group and control group trainees did not differ in graduation rate.

Gold and Friedman (2000) investigated the impact of stress on health systematically using an ethnographic technique and participant observation. They identified stressors and coping strategies among cadets aged between 18 to 21 undergoing cadet basic training. Sample constituted of 123 new cadets and 60 supervising upper class cadets from the U.S. Military Academy, through the 6 week cadet basic training in the summer of 1993. Field and interview notes were systematically analysed. Stressors that were emerged were anticipatory stress, time management pressures, sleep deprivation, performance evaluations, conflicts between team work and competitive grading and inexperience in the leadership role. Coping techniques identified were perceiving social support, humour and rationalization.

Yuanjum, et al (2015) examined the impact of coping strategies, self-esteem and social support on stress among Chinese male Army recruits in basic military training. Results showed the significant relations among stress, coping strategies, self-esteem and social support. Passive coping strategies and self esteem significantly influenced stress, but social support and active coping strategies did not influence the stress.
Zheng, et al (2007), examined the mental health status of servicemen during basic military training reported that the men who had emotion disturbances before the training, had developed somatic symptoms after one month of training.

Can Nakkas et al (2016) studied the psychological distress and coping methods in 675 Swiss recruits in the beginning of basic training. They reported recruits who exhibited less psychological distress during basic training, socially exhibited socially conducive profile of distress and used more efficient and more pro-social coping strategies and were recommended for promotion. Results of this study confirmed the importance of the requirement of emotional stability and pro-social coping behaviour in successful leaders.

Col. Joseph et al (2012) conducted study using physical readiness training (PRT) in the preliminary stages of military training reported that training (PRT) reduces the incidence of injuries and attrition.

Drehner et al (2000), investigated the death rate and causes of Air force basic trainees from 1956 to 1996. They reported total 85 deaths during this period. 81% of death cases, were due to natural reasons, 13% were of suicidal cases, 4% were accidental deaths, 2% were unclassified. Out of 85 deaths 94% of recruits were male, 60% were in the age group of 17 to 19 years. Average death rate was 2.8 / 1,00,000. This finding provides indication of stress during the training though the causes for suicides were not established.

These studies have clearly provided the essential knowledge about the difficulties from physical activities, emotional disturbances, psychological distress coping and effectiveness of the physical and mental readiness training.

Most of the studies found in literature study focused on analysing stressors and coping strategies using different medium of measurements, like physiological measures, self reported questionnaire and scales and observation and ethnographic methods. Positive contribution of social support in handling stress and improving performance in the basic training period was highlighted in the literature. Effectiveness of the different types of intervention programs like virtual reality films, sessions drawing basic concepts from positive psychology, stress inoculation training and cognitive behavioural therapy, in enhancing trainee’s
performance in basic training were evaluated. This part of literature review suggests that there is need for a thorough analysis of factors behind the trainee’s dropout rate in military training and introduction of psychological intervention programme in the early stages of military training to support new trainees in the military set up to tolerate the stress and enhance their performance in the training.

**Part 3: Studies conducted on stress, coping strategies and intervention programme in Indian Military context**

Literature survey on military service in India evidenced that there is lack of empirical research on the Indian army. Sakshi Sharma (2015) reported that her study is probably the first empirical study that focused on Indian army apart from studies conducted by the defence institutions. The author investigated the occupational stressors that created severe negative influence on Indian soldiers psychological well being and forcing them to take extreme step like suicide. The sample of the study were randomly selected 415 Indian army soldiers below the rank of commissioned officer working in one of the most sensitive regions of the nation and represented combat arms (Infantry and Armoured), Combat support arms (Engineering and Artillery) and services (EME – Electrical and Mechanical Engineers and ASC – Army Service Corps). The author identified nine factor connected with the occupational stress experienced by the soldiers. Ineffective leadership style, unsupportive colleagues, indifferent organisational attitude, inadequate training, inadequate awareness about profession, work load and job pressure, lack of control at work, role ambiguity and role conflict. This study can be considered as first empirical study that focused on occupational stressors in the Indian army. The data was obtained from the sensitive area of the nation that reported majority of suicidal and fratricidal cases. The author reported that bullying and harassment by the seniors was the prime source of stress for almost all the soldiers and second being the isolation and emotional disturbance due to operational deployment. The author suggested specific code of ethics should be framed to avoid harassment in the army units and to make sahaja yoga as a routine mental exercise in every army unit as it is the most beneficial stress coping strategy.
Overall the review of literature has contributed immensely in terms of understanding, the stressors, stress reactions and the coping strategies in different stressful environments, different civilian stressful occupations, police department, and military organisations. These studies have indicated the directions for the present study.

D. Need for the study

Much research has been conducted on stress in training in different types of organizations and in military training in other countries. Not much research has been done on stress training and stress management during initial training in defence in Indian set up.

The need for the present study is driven by two purposes,

(a) There is a lacuna of study in this field of military training addressing stressors of training and stress management program to alleviate stress and enhance trainees performance in the training.

(b) Need for stress management intervention program in the beginning and during basic military training of the new trainees.

1. Need for the study

Any transition from one culture to another is stressful and requires commitment. This transition will be a complex situation from emotional and behavioural point of view, more so during young adulthood characterised by identity crisis. Transition from civilian life to military life tends to be a very stressful and anxiety provoking situation. The transition may accompany a sense of loss (personal control) and disappointment (difference between reality and expectations).

Literature survey has evidenced that about 30% of trainees are discharged from military service on the grounds of mental health problems, low stress tolerance and adjustmental problems in training. Majority of trainees are disturbed by the demands of the military training and are under confident to cope with stress. Due to several societal and environmental changes, even in civilian occupational settings, a need has arisen for stress management interventions.
Much research has been conducted on stress in training in different types of organizations and in military training in other countries. Not much research has been done on stress in training and stress management during initial training in Indian defence set up. From the previous follow-up studies conducted by the investigator and her colleagues in training academies, it has been found that the trainees do really undergo a lot of stress during training and their performance gets affected by that. The instructors and the head of the training academies opined that some psychological intervention is definitely required to alleviate the training stress among trainees and enhance their performance so as to contribute to the organization to a greater extent. Thus there is need to identify stressors in Indian military training academy and study the stress reactions of the trainees. Subsequently develop and evaluate the effectiveness of the stress management training program in defence trainees.

2. **Stress management intervention program in basic military training:**

There are several evidences from police officers and Air force security personnel strongly recommended self-regulation training at the boot camp / academy level. Several studies that employed virtual battle training suggested that stress threshold should be elevated with physical fitness training program, and combat stressor should be inoculated in soldiers with extensive situational training. Even police recruit training in U.S. adopted a stress-based military orientation training in academies.

Occupational stress or organisational stress is considered as risk factor for health disorders, is prime cause for the theory of preventive stress management. It has been well established fact that high-strain job like military service is characterised by uncertainty, insecurity, injuries that bring long run physical wear and tear. Soldiers require stress management programs to contribute constructively to the organisation.

Male and female differ in their physiological response to stress. (Taylor et al 2000) and females out-perform male under stressful conditions and outlive males by five to seven years. This fact created strong basis for the need of stress management program for young male trainees in military training. Character
strength building is instrumental in coping with stress. This is also another ground for the need for stress management program.

The stress management program is suggested to be implemented as a preventive measure during the military basic training period to make cadets capable to counter the combat/operational stress in future military career.