

Stress Resiliency and Fatigue in Commandos

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The purpose of the paper is to study the relationship between stress resiliency and fatigue among commandos. The study has been conducted on a sample of 120 commando trainees of Commando Training Centre, Fort Bahadurgarh-Patiala. Stress Resiliency Profile and Multidimensional Fatigue Inventory (MFI – 20) were used to measure resiliency and fatigue respectively. The findings suggest that commandos, who were high on fatigue, were less resilient to stress, which determine their success at personal and professional front. The predictors of stress resiliency included total fatigue, general fatigue and reduced activity. The paper stresses upon building resiliency among commandos from the physiological and psychological point of view.

Keywords: Commando, Fatigue, Stress Resiliency.

Stress is the subjective feeling that is produced by events that are perceived as overwhelming and beyond one's control stress is an adaptive reaction to circumstances that are perceived as threatening (Dougall, et.al. 2001). Stress may build up gradually, as the consequences of an ongoing unsatisfactory work or life situation or as the result of an upcoming life transition such as becoming a parent. Stress may also result from sudden catastrophes-for example, unexpected illness, earthquake and other traumatic life events caused by outside forces. Also, some professions are more prone to stress like commando trainees, armed forces, doctors, marketing people, etc. The term Commando means a specific kind of individual soldier. Every trainee has to pass certain courses to get enrolled. After the initial phase, trainees are taught the use of specialized weaponry, advanced martial arts, precision firing from moving vehicles, and survival skills. Coming from civilian society that elevates the individual, recruits are now in a world where the institutional value of the group is supreme. One has to be team player or risk ostracism. Trainees from other states

face unique cultural challenges. Worries over low pay, tough training, pressures to excel, family matters and high attrition rates are major concerns for trainees as well as mentors. The pressures are certainly stress-inducing. Energy expenditures of soldiers during combat training are reported to be significantly high depending upon training intensity and environmental conditions. The increased energy expenditure increases demand of protective micronutrients and antioxidants as exercise induces oxidative stress (Singh, et. al. 2007).

Lazarus and Folkman (1984) defined stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being". Thus, stress occurs when people perceive that events are placing excessive demands on them. The degree of stress experienced depends on one's perception. Perceptions in fact, determine whether a given situation is experienced as an "excessive demand" or an "opportunity". These perceptions depend on an individual's "interpretive habits" or some

specific thought patterns. Thus, interpretive habits or thought patterns cause stress and more the interpretive style is optimistic, more the individual is resilient to stress.

Resiliency is the process and outcome of successfully adapting to difficult or challenging life experiences, especially highly stressful or traumatic events and involves not only resisting failure under extreme circumstances, but also positively recovering from those experiences (O'Leary, 1998; O'Leary & Ickovics, 1995; Rutter, 1987). Resilient people bend rather than break, fight rather than flight. Being resilient does not mean that life and major hardships are not difficult or upsetting, instead it means that these events, though difficult and upsetting, are ultimately surmountable. Resilient people return to their previous level of psychological and social functioning following stressful circumstances. They have a tendency to see problems as opportunities and the capacity for seeing small windows of opportunities and making the most out of them. They have a wide comfort zone and can competently handle different kinds of situations. Each one of us is born with a renewable capability for resilience, how well one utilizes the same, depends. Three dimensions of stress resiliency are deficiency focussing, necessitating and low skill recognition (Thomas & Tymon, 1995).

The benefits of developing high stress resiliency are enormous. Resiliency not only helps in combating stress, but also helps in "reading" new realities rapidly, adapting to changed circumstances quickly, and promoting proficiency, sustaining good energy under constant pressure, coping well with crises as well as reducing mental and physical fatigue.

Fatigue is one of the most common complaints among commando trainees. It is a subjective phenomenon related to indicators of fatigue such as energy expenditure, sleep disturbances, attentional

deficits, decreased endurance, somatic complaints and weakness. The subjective experience impacts objective performance (Winningham et al, 1994).

The deleterious effects of stress, fatigue and sustained workload on human performance in complex systems are well-known (Hancock & Desmond, 2001). Kang et. al. (2003) studied the prevalence of post-traumatic stress disorder (PTSD) and illness resembling chronic fatigue syndrome (CFS) in the Gulf War and non-Gulf-War veterans and found that deployment-related stress could account for the higher risks of both PTSD and CFS. Maghout-Juratli et. al. (2010) observed that fatigue is closely related to stress, stress resiliency, and perceived health in primary care. Fatigue has also been associated with multiple sclerosis (Bakshi, 2003), acute myocardial infarction (Fennessy et al., 2010), sleep problems (Bamer et. al., 2010), hypertension and hypotension (Harbison, 2009), overall quality of life (Eddy & Cruz, 2007). Thus, these effects can be extensive enough that commando trainees' efficiency and safety can be seriously compromised. However, these devastating effects of fatigue can be mitigated to a great extent by enhancing stress resiliency of commandos.

With this, the purpose of the present study is to assess the relationship between stress resiliency and fatigue and to predict ways we can incorporate stress resiliency among commando trainees. The study verified the following hypotheses:

- (1) There would be positive relationship between dimensions of fatigue and deficiency focusing (DF).
- (2) The dimensions of fatigue would have positive relationship with necessitating (NC).
- (3) There would be negative relationship between dimensions of fatigue and skill recognition (SR).

(4) Stress resiliency would be significantly predicted by fatigue measures of commando trainees.

Method

Sample:

It consists of 120 male commando trainees pursuing Basic Commando Course in the Commando Training Centre, Fort Bahadurgarh-Patiala. Their age ranged from 19-25 years. The intermediates, graduates and postgraduates were 79.7, 18.3 and 1.8% respectively. The average experience of participants was 2.7 years. All of them belonged to West Bengal Police cadre.

Tools:

Stress Resiliency Profile: This component was measured by using English version of Stress Resiliency Profile (SRP) developed by Thomas and Tymon (1995). This is a self-scoring assessment tool and is used to identify three specific thought patterns or "interpretive habits" which influence stress as: Deficiency Focusing (DF), Necessitating (N), and Low Skill Recognition (LSR). The reliability of the subscales was found to be relatively high as: deficiency focusing (.87); necessitating (.74) and low skill recognition (.85).

Multidimensional Fatigue Inventory (MFI -20): The Multidimensional Fatigue Inventory (MFI -20), developed by Smets et. al. (1995), is a 20-item self-report instrument consisting of five scales: General Fatigue, Physical Fatigue, Reduced Activity, Reduced

Motivation, and Mental Fatigue. The English version of the inventory was used in the present study. Each scale contains four items rated on a scale of zero to 5 with the scale score of zero having the anchor of entirely true and the scale score of 5 having the anchor of no, not true. The five scales were identified through factor analysis and are assumed to measure different aspects of fatigue. The instrument was found to have good internal consistency, with an average Cronbach's alpha coefficient of 0.84 (Smets et. al., 1995).

Results and Discussion

Table 1: Descriptive Statistics of the Variables taken up in the Study (N = 120).

Variables	Mean	SD
Stress Resiliency		
Deficiency Focusing	28.93	4.90
Necessitating	30.07	4.36
Skill Recognition	27.65	5.49
Fatigue General Fatigue	13.57	2.28
Physical Fatigue	11.03	2.47
Reduced Motivation	11.06	2.31
Reduced Activity	11.06	2.06
Mental Fatigue	9.06	2.34
Total Fatigue	55.78	6.89

On analyzing Table1, it can be interpreted that the mean scores obtained for the dimensions of fatigue falls for high scores while the mean scores for the dimensions of stress resiliency falls for low stress resiliency scores, which signify that the commandos are more prone to fatigue and stress related disorders.

Table 2: Correlation between dimensions Fatigue and components of Stress Resiliency (N = 120).

Variables	Deficiency Focusing	Necessitating	Skill Recognition
General Fatigue	0.66**	0.68**	-0.57**
Physical Fatigue	0.44**	0.46**	-0.44**
Reduced Motivation	0.42**	0.46**	-0.43**
Reduced Activity	0.44**	0.42**	-0.38**
Mental Fatigue	0.39**	0.41**	-0.33**
Total Fatigue	0.78**	0.81**	-0.71**

* $p < .05$ ** $p < .01$

The first hypothesis was tested on the basis of correlation analysis (Table 2) and was hypothesized that there is positive relationship between dimensions of fatigue and deficiency focusing (DF). The results revealed that the relationship between fatigue and dimensions of deficiency focusing is significantly high with the calculated r values as: .66, .44, .42, .44, .39 and .78 (significant at .01 level) for general fatigue, physical fatigue, reduced motivation, reduced activity, mental fatigue and total fatigue respectively.

The second hypothesis was tested with the proposition that there is positive relationship between dimensions of fatigue and necessitating and was found that there is significant positive relationship between general fatigue, physical fatigue, reduced motivation, reduced activity, mental fatigue and total fatigue and necessitating, with the calculated r values as: .68, .46, .46, .42, .41 and .81 (significant at .01 level) (Table2).

The third hypothesis was tested with the proposition that there is significant negative relationship between fatigue and low skill

recognition. The relationship has been found to be significant for dimensions of fatigue and low skill recognition with the calculated r value as -.57, -.44, -.43, -.38, -.33 and -.71 (Table 2). Thus, it has been observed that higher is fatigue, the lower is the stress resiliency. These results are in line with previous researches. Zainal and Dasen (1999) found that there is high association between fatigue and psychological stress. We can say that low deficiency focusing, necessitating and high skill recognition can reduce high stress levels, while making commandos resilient to stress and decreasing fatigue.

On the basis of Table 3, we can say that deficiency focusing has been predicted by total fatigue, general fatigue and reduced activity and jointly accounted for 65% of variance in predicting deficiency focusing. Total fatigue predicted deficiency focusing with the calculated R as .78 ($\hat{a} = .66, p < .01$) and general fatigue predicted deficiency focusing with calculated R as .80 ($\hat{a} = .27, p < .01$). Overall, total fatigue is the strongest predictor of deficiency focusing.

Table 3: Stepwise Multiple Regression representing the Prediction of Stress Resiliency as Dependent Variable and Fatigue as Independent Variable (N=120).

Dependent Variable	Predictors	R	R ²	Adjusted R ²	df	F-value	Std. Beta Coefficient
Deficiency Focusing	Total Fatigue	0.78	0.61	0.61	1, 118	183.03**	0.66**
	General Fatigue	0.80	0.64	0.04	1, 117	13.44**	0.27**
	Reduced Activity	0.78	0.65	0.005	1, 116	1.77	-0.09
Necessitating	Total Fatigue	0.81	0.66	0.66	1, 118	226.98**	0.72**
	General Fatigue	0.83	0.70	0.04	1, 117	15.86**	0.28**
	Reduced Activity	0.84	0.71	0.01	1, 116	6.14*	-0.16*
Skill Recognition	Total Fatigue	0.71	0.51	0.51	1, 118	123.49**	-0.66**
	General Fatigue	0.73	0.53	0.02	1, 117	4.79*	-0.19*
	Reduced Activity	0.74	0.54	0.01	1, 116	2.27	-0.12

*p<.05; **p<.01

Necessitating has been jointly predicted by total fatigue, general fatigue and reduced activity and jointly accounted for 71% of variance in predicting necessitating. Total fatigue predicted necessitating with the calculated R as: .81 ($\hat{\alpha} = .72, p < .01$). General fatigue predicted necessitating with the calculated R as: .83 ($\hat{\alpha} = .28, p < .01$) and reduced activity predicted necessitating with the calculated R as: .84 ($\hat{\alpha} = -.16, p < .05$). On the whole, we can say that total fatigue is the strongest predictor of necessitating.

Low skill recognition has been predicted by total fatigue, general fatigue and reduced activity and jointly accounted for 54% of variance in predicting low skill recognition. Total fatigue predicted low skill recognition with calculated R as: .71 ($\hat{\alpha} = -.66, p < .01$) and general fatigue predicted low skill recognition with the calculated R as: .73 ($\hat{\alpha} = -.19, p < .05$). Therefore, we can say that total fatigue is the strongest predictor of low skill recognition, while retaining fourth hypothesis at .01 levels.

Thus, fatigue plays a significant role in the prediction of stress resiliency of commandos. And on the other hand, being resilient to stress can be a "protective factor", which has the potential to mitigate many risk factors. It is imperative to note that high fatigue delineates the ability to recognize and reinforce those steps which can strengthen and enhance the stress resiliency in commandos. Fatigue has been conceptualized as a warning sign, indicating harmful accumulation of stress (Watanabe, 2008). Maghout-Juratli et. al. (2010) also found that fatigue played an important role in the relationship between stress and perceived health. It fully mediated this relationship, which could mean that stress may lead to poor health outcomes when it is significant enough to drain stress resiliency resources and manifest as fatigue. When stress is not related to fatigue there is no impact of stress on perceived health.

Stress and fatigue can influence training effectiveness, physical and cognitive performance, decision making capabilities, and the individual's physiological and psychological state. Taking the research findings of the present study into account, it has become imperative to acquaint commandos with the concept of resiliency for confronting difficult events and immunizing them for future challenges. This can be attained by reducing fatigue within commandos and has become mandatory in every sense. For vulnerable commandos, identifying needs and making support available can promote resilience. Involvement in creative activity and relaxation therapies may also enhance resilience. Cognitive-behavioural therapy can be used to identify resilient behaviour, coping strategies, automatic thoughts and underlying assumptions. Group work can provide an environment in which individuals can realise their own potential for self-healing, which can lead to enhanced autonomy and self-regard.

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