

## Stress Contributing to Illness and Its Relationship with Resilience among Veterans of Indian Armed Forces

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### ABSTRACT

This is a pilot study to examine the common conception that veterans of the Indian Armed forces have higher than average exposure to events that contribute to stress or in other words may be categorised as Stressful Life Events. This study also aims to understand the factor of Psychological Resilience and its relationship with Stress. 89 participants answered the Brief Resilience Scale and the Holmes and Rahe Stress Scale. The participants are retired veteran officers of the Indian Army, Indian Navy, and Indian Airforce with an age range of 50-87 years. **Results:** Holmes and Rahe Stress Scale reported an average score of 433.4205 (High Risk of Illness due to stressful life events). For the Brief Resilience Scale, the interpretation indicate that the level of Resilience is within the Normal range in with an average score of 3.148 (3.00-4.30 Normal resilience).

**Keywords:** Stress, Stressful Life Events, Resilience, Contribution to Illness, Armed Forces

Distinguishing mental health disorders from normal distress requires the assessment of context and psychosocial adversity. We can stipulate that the exposure to psychosocial adversity among veterans of the Indian Armed Forces as well as around the world is relatively high. In a comprehensive psychiatric study of veteran psychological adjustment (RTI – VA study), Kulka, et al. evaluated a total of 3,016 Vietnam veterans and civilian controls. The prevalence of PTSD (Post Traumatic Stress Disorder) among veterans was 15% (21% for African Americans, 28% for Hispanics, and 9% for women). furthermore, 99% of PTSD veterans reached criteria for additional disorder present during the that time such as 73% for lifetime alcohol abuse or dependence, 31% met criteria for lifetime antisocial personality disorder, 26% for lifetime depressive episode, 21% for lifetime dysthymia, and 10% for lifetime obsessive-compulsive disorder. There are a variety of mechanisms through which the experience of stressful events may influence the onset of clinically defined psychological disorder or clinical disease progression. Mental health has always been centred on the individual coping styles of stress, problem solving, and facing adversity without breakdown, or in other words resilience.

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### ***Resilience***

Resilience is the stable trajectory of healthy functioning after a highly adverse event. (Bonanno, Westphal, & Mancini, 2011) Resilience may change over time as a function of development and one's interaction with the environment (Kim-Cohen & Turkewitz, 2012). The American Psychological Association (2014) defines Resilience positive adaptation, or the ability to maintain or regain mental health and functioning in day-to-day tasks, despite experiencing adversity. Resilience can help protect one from various mental health conditions, such as depression and anxiety. Resilience can also help offset factors that increase the risk of mental health conditions, such as being bullied or previous trauma. In other words, It is the ability to pick ourselves up after trauma or painful experience (Southwick, Douglas-Palumberi, & Pietrzak, (2014). 111 patients with diabetes completed surveys and had their glycosylated haemoglobin assessed at baseline and at 1-year follow-up. Resilience was defined by a factor score of Self-Esteem, Self-Efficacy, Self-Mastery, and Optimism. Diabetes-related distress and self-care behaviours were also assessed. Resilience, diabetes-related distress, and their interaction predicted physical health at 1 year. Patients with low, moderate, and high resilience were identified. Those with low or moderate resilience levels showed a strong association between rising distress and worsening glycosylated haemoglobin across time. However, those with high resilience scores did not show the same associations. Low resilience was also associated with fewer self-care behaviours when faced with increasing distress. In patients with diabetes, resilience resources predicted future, worsening glycosylated haemoglobin and self-care behaviours in the face of rising distress levels.

The levels of resiliency will change and develop throughout life. We often find that we do not cope as well as others, as well as surprising ourselves when we manage a difficult situation. In other words, resilience is just one of many psychological tools we implement to get us back to feeling normal again.

### ***Stress-Stressful Life Events***

Stress is a normal reaction to everyday pressures but can become unhealthy when it upsets your day-to-day functioning. Three perspectives for defining and studying psychological stress are their history, development, and status in terms of the emphasis each place on the setting, the individual, and the interaction between the individual and setting over time.

Stressful life events can manifest itself in the form of stressors of employment, family, and other daily responsibilities. Stress can be brought about by a sudden negative change, such as losing a job, divorce, and illness.

Traumatic stress (happens when you are in danger of being seriously hurt or killed) Examples include, a major accident, war, assault, or a natural disaster.

86 undergraduates completed 5 subscales indexing Hardiness. Stress, Health Practices, and illness for the prior month were assessed at the time as well as 1 and 2 months later. In the 1st model, illness was measured by the severity of physical symptoms. In the 2nd model, it was measured by the number of symptoms reported. In both models, path analyses revealed that stress acted directly to affect illness as well as indirectly by changing health practices. Hardiness also had a direct effect on illness as well as an indirect effect through health practices. (Wiebe et al.,1986)

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Keeping all these facts into consideration, this pilot study aims to explore the levels of stressful life events that may contribute to illness, the levels of Resilience and the relationship of Stressful Life Events and Resilience.

### **METHODOLOGY**

#### ***Statement of Problem***

A study to determine the level of stress as indicated by life events and its relationship to resilience among veterans of Indian Armed Forces. It aims to study the levels of stressful life events that may contribute to illness and the level of Resilience among veterans of Indian Armed Forces.

#### ***Research Design***

##### **Research Questions**

- Is there a high level of stressful life events among veterans of Indian Armed Forces?
- What are the levels of resilience among veterans of Indian Armed Forces?
- Is there a relationship between level of stressful life events and resilience among veterans of Indian Armed Forces?

#### ***Objectives***

- To examine the level of stressful life events among veterans of Indian Armed Forces.
- To examine the levels of resilience among veterans of Indian Armed Forces.
- To find out the relationship between stressful life events and resilience among veterans of Indian Armed Forces.

#### ***Hypothesis***

**H<sub>01</sub>:** There will be no significant relationship between level of stressful life events and the levels of resilience among veterans of Indian Armed Forces.

**H<sub>02</sub>:** There will be no significant difference in the levels of stressful life events among veterans of Indian Armed Forces.

**H<sub>03</sub>:** There will be no significant difference in the level of resilience among veterans of Indian Armed Forces.

#### ***Design of the Study***

A descriptive non-experimental design was employed using quantitative approach to assess the relationship between level of stressful life events and the levels of resilience among veterans of Indian Armed Forces. Also, to examine levels of resilience and levels of stressful life events that may contribute to illness among veterans of Indian Armed Forces.

#### ***Sample***

The study comprised of 89 Retired Officers of Indian Army, Indian Navy, and Indian Airforce with age range of 50-87 years. Educational qualification ranges from graduate to PhD. Place of residence is throughout India. The sample was selected using nonprobability purposive sampling technique.

#### ***Inclusion Criteria***

*Veterans of the Indian Army, Indian Navy, and Indian Airforce, who have served for a minimum of 20 years.*

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## Tools

- 1. The Brief Resilience Scale:** to measure the perceived ability to bounce back or recover from stress. (BRS), Smith, B.W., Epstein, E.E., Oritz, J.A., Christopher, P.K., & Tooley, E.M. (2013) The scale was developed to assess a singular construct of resilience, including both positively and negatively worded items. It uses a 5-point Likert Scale i.e., Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5) to score each item. The possible score range on the BRS is from 1 (low resilience) to 5 (high resilience). Developed by Smith et al. In 2008. The BRS is reliable and is predictably related to personal characteristics, social relations, coping, and health in all samples.
- 2. Holmes and Rahe Stress Scale:** The Holmes and Rahe stress scale is a list of 43 stressful life events that can contribute to illness, Holmes TH, Rahe RH (1967). Rahe validated the scale in 1970 as a predictor of illness using 2500 US sailors rating scores of 'life events' The +0.118 correlation between stress scale scores and illness supported a link between life events and illness. A total of  $\leq 150$  is good, suggesting a low level of stress and a low probability of developing a stress-related disorder. If the score is  $\geq 300$ , statistically there is an almost 80% chance of getting ill in the next 2 years. If the score is  $\geq 150$  to  $\geq 299$ , the chances are about 50%.

## RESULTS

There were 89 participants, Male (N=89). Descriptive statistics were calculated, furthermore The Pearson product-moment correlation coefficient was used to determine the relationship between two variables. The results of the hypothesis are mentioned below.

*Table 1 Mean and Standard deviation of the variables Resilience and Stressful Life Events*

	N	M	SD
Resilience	89	3.1483	.35022
Stressful life Events	89	433.4205	193.31873

Table 1 showed the mean and SD of variables Resilience and Stress. The mean value was found to be 3.1483 and 433.4205 and standard deviation value was found to be .35022 and 193.31873 for variables Resilience and Stressful life events, respectively.

### **H<sub>01</sub>: There will be no significant relationship between level of stressful life events and the levels of resilience among veterans of Indian Armed Forces.**

Since there was use of parametric tests made for inferential statistics, the researcher used Pearson Correlation Coefficient to find the significance of the relationship between the two variables Resilience and Stressful Life Events. Table 2 describes the correlation between the two variables Resilience and Stressful Life Events.

*Table 2 Significance of the relationship between Resilience and Stressful Life Events*

	N	M	SD	R	p
Resilience	89	3.1483	.35022	.021	.849
Stressful Life Events.	89	433.4205	193.31873		

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After referring to table 1, the mean for resilience was ( $M=3.148$ ) and that of Stressful Life Events was ( $M=433.4205$ ). After performing the Pearson correlation test, the  $r$  value was found out to be ( $r=.021$ ) which was found to be statically insignificant meaning there was negligible correlation between Resilience and Stressful life Events among Veterans of Indian Armed Forces. Hence the null hypothesis was accepted.

### **H<sub>0</sub>2: There will be no significant difference in the levels of stressful life events among veterans of Indian Armed Forces.**

It was found that the mean ( $M=433.4205$ ) was significantly higher than the interpretation of moderate levels of stress due to life events (**Score of 150-299**: risk of illness is Moderate.) The data indicates that the average score ( $M =433.4205$ ) has the interpretation of High levels of stress due to life events that contribute to illness (**Score of 300+**: At risk of illness). We therefore fail to reject the null hypothesis.

### **H<sub>0</sub>3: There will be no significant difference in the level of resilience among veterans of Indian Armed Forces.**

It was found that the average score ( $M=3.1483$ ) had the interpretation of Normal Resilience ( $BRS=3.00-4.30$  Normal resilience). The interpretation indicate that the level of Resilience is within the normal Range in that of the sample drawn. which means there is no significant difference in the level of resilience among veterans of Indian armed forces. Hence, we accept the null hypothesis.

## **DISCUSSION**

The present study aimed to understand the level of resilience and the level of Stress due to life events that may cause illness. The sample comprised of veterans who were part of the Indian Army, Indian Navy, and Indian Airforce. Serving throughout India. With age range of 50-87 years.

Stress is involved in the development, maintenance, or aggravation of several mental and physical health conditions, including asthma, rheumatoid arthritis, anxiety disorders, depression, cardiovascular disease. These effects have been studied most using self-report questionnaire to measure the exposure to Stress. The data indicates that the average score ( $M =433.4205$ ) has the interpretation of High levels of stress due to life events (Score of 300+: At risk of illness) that may contribute to Illness. In other words, High Risk of Illness due to stressful life events. Holmes and Rahe Stress Scale was used. The finding was consistent with previous study that showed high levels of Mental Illness along with high levels of Physical and Psychological Co-morbidity in the sample of 3,016 Vietnam veterans and civilian controls who were evaluated (RTI – VA study, Kulka, et al). The finding was consistent with previous study where stress acted directly to affect illness as well as indirectly by changing health practices (Wiebe et al.,1986). The present study is not without limitations here aspects such as Military Training, Support System, Work Environment and Work Hazards need further investigation along with its inference on Resilience and Stress.

The sample age range was 50-87 years which is a factor that could contribute to the high levels of stressful life events that may be a greater indicator than the possibility of adversity due to military service and its inference of Stress.

## SUMMARY AND CONCLUSION

The participants are retired veteran officers of the Indian Army, Indian Navy, and Indian Airforce with an age range of 50-87 years. Results: Holmes and Rahe stress scale reported an average score of 433.4205(High Risk of Illness) it should be noted that the age range is that of 50-87 Years which may be a contributing factor the High Average Score to the Holmes and Rahe stress scale. The interpretation indicate that the level of Resilience is within the normal Range in that of the sample drawn with an average score of 3.148 (3.00-4.30 Normal resilience) for the Brief Resilience Scale. The results revealed that the risk of illness due to Stressful Life events was High. The result of the resilience scale had Average score with no significant outliers. After performing the Pearson correlation test, the r value was found out to be ( $r=.021$ ) which was found to be statically insignificant meaning there was negligible correlation between Resilience and Stressful life Events among Veterans of Indian Armed Forces.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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