

QUANTIFICATION OF STRESSFUL LIFE EVENTS IN SERVICE PERSONNEL

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ABSTRACT

The role of stressful life events in the etiology of various disorders has been of interest to investigators attempting to establish a link between stressful life events and disorders. None of the available scales are relevant to service personnel. In the present study an attempt was made to construct a scale to measure stressful life events in service personnel. In the first stage of study open-ended questions along with items generated by the expert group by consensus method were administered to 50 soldiers. During the second stage the scale comprising of 59 items was administered in group setting to 165 service personnel. Weightage was assigned on 0-100 range. Frequency of occurrence of life events within past one year and lifetime was also noted. Findings revealed that service personnel experience more number of life events within a year as well as in lifetime. Some general items, which are common to civilians are having consistency of weightage being assigned. There is a pattern of uniformity with the civilian counterparts along with differences in the items specific to service personnel.

Key words : Stressful life events, life change units, service personnel

Stress as conceptualized by Selye (1956) is a broad and general concept like anxiety describing the organisms total reaction to environmental demands. A large number of published reports attest to the association of life stress and wide range of disorders (Murthy, 1975). The purpose of life events research is to demonstrate a temporal association between the onset of illness and a recent increase in the number of stressful life events that require socially adaptive responses on the part of the individual. The underlying assumption is that such events serve as predisposing and precipitating factors for the subsequent illness episode.

The review of epidemiological studies of life events and psychiatric disorders has shown that 32% of the psychiatric cases (41% among females) can be attributed to stressful life events (Cooke and Hole, 1983). Saxena et al (1983) in

an outpatient psychiatric population reported life events (desirable and undesirable) from all areas of functioning occurred significantly more frequently in patients as compared to controls. Number of studies have suggested a positive relationship between stressful life events and subsequent illness (Pestonjee, 1992, Schnall et al, 1998, Srivastava and Sinha, 1989). A similar though less consistent relationship between the onset of psychiatric illness and life events has been reported (Canton and Francon, 1985; Kessler, 1997).

The life events questionnaire constructed by Holmes and Rahe (1967) and Paykel (1971) are the most commonly used instruments in the field. Due to cultural variations these are not valid for our country. In view of the limitations of the western scales. Dube (1983) developed a scale of 52 events and standardized it on 110 normal

people from Delhi. The Presumptive Stressful Life Events Scale (PSLES) developed by Singh et al (1984) is widely used in the Indian setting. This scale of 51 items was drawn after administering the Social Readjustment Rating Scale along with open-ended questions to a sample of 200 adult subjects from Punjab. The PSLES has limited utility for measuring stressful life events in service personnel who hail from various parts of the country. Moreover, some of the events like fighting against enemies, fighting against terrorists are unique to service personnel. Thus in respect of Armed Forces personnel there is no scale available to measure stressful life events. In view of the above the present study was undertaken to make available for the first time a suitable scale to quantify stressful life events in service personnel.

This study was conducted with an aim to develop a simple scale to quantify stressful life events in service personnel and following objective were studied.

1. To estimate the mean number of stressful life events experienced by service personnel in past one year and in life time.
2. To quantify various life events in terms of change units.

MATERIAL AND METHOD

The study was carried out in two stages. In the first stage, a pilot study was conducted on 50 soldiers. Items for construction of the scale were taken from consensus of experts in the same field. Face validity of items was taken into consideration and items were drawn from the common experience of service personnel. Initially such items were 87 in number. After initial analysis some items were excluded from the list. For example, some of the items of routine activities like physical training, order to come on duty, which are daily occurrences in the Armed Forces were excluded. Some items were grouped. For example death of father, death of mother, death of grand parents were combined to death of near and dear ones. The final version of the scale, which emerged contained 59 items. One item was

repeated for internal consistency of the item. In the second stage of the study this scale of 59 items was administered in group setting. Sample for the study comprised of 165 service personnel drawn from local garrison. The men belonging to various arms and services and different trades were randomly selected for the purpose of the study. The criteria for inclusion were minimum educational level of matriculation and no history of physical or mental illness in the past one-year. Standard instructions were given to the soldiers in Hindi and English. They were told that results would be confidential. To maintain the secrecy of the identity code numbers were assigned and the same numbers were written on the forms. Names of the personnel were not endorsed. Standard instructions to assign weightage to each item were given with suitable examples in the range of 0 to 100. Routine items involving no significant change will have weightage of zero. While an event, which is considered to be, having the highest change will have a weightage of 100. Each individual was asked to give his own assessment in respect of each event irrespective of having experienced the event or not. Next they were asked to mark the event whether it has occurred within a year or earlier in his lifetime. Data so generated was analyzed by appropriate statistical method.

RESULTS

The mean age of the sample is 30.87 ± 2.69 years. The mean length of service is 11.02 ± 2.70 years. Average educational standard of the sample is 11.95 ± 1.43 years. The mean number of life events (rounded off to the nearest whole number) experienced by service personnel in the past year is 7 ± 4.84 . In their lifetime the subjects in the present study reported a total of 17 ± 6.59 life events. Table 1 contains the description of the items of the scale along with the weighted score assigned to each item by service personnel in the descending order. The mean weighted scores of life events, which are common to the present scale along with the scores on PSLES. Holmes

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TABLE 1
STRESSFUL LIFE EVENTS IN SERVICE
PERSONNEL AND LIFE CHANGE UNIT SCORE

Item No.	Life event	Mean	SD	SEM
1	Wife/husband having illicit relations	82	23.74	1.848
2*	Court martial	80	27.70	2.156
3	Amputation of body parts	78	23.90	1.860
4	Divorce from wife	76	22.06	1.717
5	Going abroad on duty	73	21.72	1.691
6*	Receiving medal for bravery during war	71	28.58	2.225
7*	Fighting against enemies during war	68	23.37	1.819
8*	Loss of identity card while going on leave	68	30.41	2.367
9	Child getting a job	68	26.58	2.069
10	Getting married	67	25.09	1.953
11	Hospitalization due to serious illness	65	23.92	1.861
12	Winning a lottery	63	27.88	2.170
13	Constructing own house	63	27.34	2.128
14	Birth of child	62	28.64	2.230
15*	Going on posting within 48 hours	62	30.93	2.236
16*	Fighting against terrorist	60	26.12	2.033
17	Conflict with family members	59	27.12	2.111
18	Sex related problems	58	27.17	2.131
19	Death of a close relative	57	31.16	2.425
20	Sanctioned leave being cancelled	56	30.41	2.367
21	Demotion	56	29.41	2.289
22*	Red ink entry	54	32.08	2.497
23	Wife not conceiving for long duration	54	28.73	2.236
24	Getting release from service	53	33.93	2.567
25	Child leaving town for higher education	53	26.86	2.091
26	Child not getting admission in school	53	28.86	2.246
27	Spending tenure of high altitude posting	50	25.43	1.980

28	Arranging for a big loan	49	26.45	2.059
29	Completing a tenure in operational area	49	27.78	2.162
30	Marriage of daughter	49	27.45	2.136
31	Change of trade	49	24.89	1.937
32	Receiving medals in sports	47	29.72	2.313
33	Dowry related problems in family	47	28.28	2.201
34	Not receiving salary because of debit	46	28.34	2.206
35*	Completing a tenure of field posting	46	28.44	2.213
36	Shifting house many times in same station	46	28.55	2.222
37	Sanction of casual leave	44	23.92	1.681
38	Not getting government accommodation	43	32.04	2.493
39	Wife starting a job	42	23.09	1.797
40*	Pay fine	40	30.20	2.350
41	Difficulty with seniors	39	31.83	2.478
42	Annual leave not being sanctioned	39	27.11	2.110
43	Conflict with friends in unit	38	27.45	2.137
44	Passing the promotion cadre	38	25.96	2.020
45	Receiving highest marks in firing	38	28.08	2.185
46	Black ink entry	37	29.24	2.276
47	Participation in divisional exercises	37	25.44	1.980
48	Wife leaving the job	37	27.38	2.131
49	Lack of son	37	30.93	2.408
50	Passing the promotion cadre	36	27.08	2.108
51	Failing in promotion cadre	36	29.11	2.266
52	Sanction of annual leave	34	30.13	2.345
53	Having only females child	32	25.51	1.985
54	Going on ERE	28	20.03	1.559
55	Preparing for Annual Adm. Inspection	28	20.97	1.663
56	Participating in unit level exercise	24	21.92	1.706
57	Failing in BPET	24	28.39	2.210
58	Going on posting	23	22.25	1.731
59	Attending roll-call	2	2.11	0.164

and Rahe (1967) are shown in table 2.

DISCUSSION

Thoughts, feelings and behaviour affect our health and well being. Recognition of the importance of these influences on health as disease is consistent with evolving concept of mind and body and represents a significant change in medicine and the life sciences. Stress is a

* Life stress items unique to service personnel

particularly important mediator of health behaviour. The total number of stressful life events being experienced within past year and lifetime in the present study are different when compared to PSLES. Service personnel undergo more number of life events in past one year ($n=7$) and in total life span ($n=17$) as compared to civilian counterparts. The probable explanation may be that a number of items like sanction of casual

TABLE 2
SCALING OF COMMON STRESSFUL LIFE EVENTS IN LIFE CHANGE UNITS BY SERVICE
PERSONNEL COMPARED WITH OTHER STUDIES (INDIAN & WESTERN)

Life event	Scores in life change units			
	Service personnel	PSLES	Holmes & Rahe	Paykel*
Divorce from wife	76	77	73	16
Getting married	67	43	50	5.61
Suspension/court-martial	80	76	-	17.61
Sexual problems	58	51	39	-
Demotion	56	-	-	15.05
Death of close relative	57	66	63	17.21
Child leaving home for higher education	53	-	29	7.20
Lack of son	37	51	-	-
Marriage of daughter	49	49	-	-
Arranging for a big loan	49	49	30	12.64

* Life change units scored on a scale of 0-20

leave, annual administrative inspection being common occurrences could have influenced the score. Internal consistency is evident from the fact that item being repeated had similar mean life stress score.

The highest weightage (82) to life change units in the present study was assigned to item no.1 i.e. wife having illicit relations with other person. This finding concurs with the finding of PSLES (1983) as civilians in that study gave same weightage of 82. This is a very interesting observation. This further corresponds with the general matrix of relationships. For most of us marriage has the implications for continuity and stability. Of all the endeavors having influence on our lives quest for intimate relationship is the most longed for. Such relationships are recognized as a major source of need fulfillment, stress and challenge in our lives. Marital instability can be very traumatic for either of the partners (Coleman and Hammer, 1974). The findings confirm that the soldier is a son of the soil too.

Next highest life change score of 80 was assigned to court martial followed by amputation of body parts and divorce from wife (Table 1). Contrary to popular perception court martial is the most undesirable and rare event in the life of the service personnel. As punitive measure it is woven into the warp and woof of disciplined service life. Obviously its deterrent value has not blunted. Court

martial involves loss of face among the peer group and also loss of job. Some of the minor offences are summarily disposed off by the commanding officer. Court martial injures the self-esteem of the individual. The attractiveness of the calling of soldierhood is combined with soldiering as a means of livelihood is a powerful motive for joining services (Narain, 1979). If this need is thwarted this may lead to deleterious consequences. The comparison of the service personnel on items of divorce from wife, sexual problems, marriage of a daughter is very similar to each other in the PSLES and the present study (Table 2). Lack of son was given a mean stress. Probably more awareness of small family norms and equality of gender in respect of children are imbibed by them through monthly Sainik Sammelan (regular interactive meeting with the commanding officer), Baat Cheet (regular periodicals by Chief of Army Staff), Sainik Samachar and monthly family welfare meetings.

Another interesting observation is that trouble with seniors is again having a lesser mean score as compared to civil counterparts. Soldiers mean score on this item is 39 whereas in PSLES mean score is 52 (Table 2). In the Armed Forces 'Esprit de corps' is maintained. One for all and all for one is considered to be facilitating morale. The commanding officer has a role of guardian and a friend. That is why conflict is generally resolved within the members of the unit and within the

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consensually validated and accepted way of service life.

The item death of a close relative in the present study was given a mean stress score of 57. In the PSLES the item has a mean score of 66 which is on the higher side. Individuals vary widely in their subjective responses to similar stressful events depending on a number of factors including the individuals personality, support system and relation with person or institution (Cassel, 1975). For the serviceman the unit is his home. Sudden unexpected as well as expected deaths of comrades is not infrequent in a serviceman's life. This might have to a certain extent blunted the perception of change in relation to this item.

Child leaving home for higher education involves environmental or financial changes. This has more stress score as compared to western culture where the weightage assigned is only 27 (Table 2).

Surprisingly, service personnel and Indian civilians have assigned a weighted score of 49 to marriage of a daughter and arranging for big loan. On the contrary western population assigns lower weightage of 30. Probably financing is easier with the help of funding agencies in the west. Apart from this aspect, the individuals earnings are also more in the west.

Among the items having relevance for service personnel fighting against enemy during war has a weightage of 68. Greater stresses and strains mark combat situations. During combat death of self and comrades is a distinct possibility. In addition there is physical exhaustion. Despite this it is still ranked low which is a reflection of level of training of service personnel. The reasons for high mean scores are ofcourse self-explanatory. Loss of identity is also assigned a high mean score of 68. Loss of identity card has security implications as the enemy may misuse it. Apart from security aspect, it is viewed as negligence and loss of government property. Which is a serious offence, which attracts disciplinary action.

Fighting against terrorists has a mean score of 60. Servicemen have clubbed this with routine

items like going on posting and birth of child. This is a reflection of the difficult times we are passing through. The Indian soldier is quite frequently involved in counter-insurgency operations. Basic deprivations in combat situations include deprivations of food, rest and sleep. But such deprivations are a part of the combatant's "psychological contract" and hence the lower scores.

It is worth mentioning here that sanctioning of casual leave has a mean score of 44 while sanction of annual leave has a mean score of 34. The difference can be explained by the fact that annual leave is generally planned whereas casual leave is on the basis of requirement hence change units being perceived are more. Other routine items like going on extra-regimental employment, preparation for administrative inspection.

Participation in unit level exercises and even going on posting are not perceived as having much of change.

In the present study an attempt was made to quantify the stressful life events faced by service personnel. Sample comprised of only male army personnel. The future direction of the study is to include Air Force and Naval personnel of both sexes. Further the life change units can be correlated with psychiatric disorders and stress disorders. Desirable and undesirable events can further be studied as an extension of the study.

Thus we may state that the first general assumption that certain life events are common to service personnel and civilian counterparts is partly proved. Such items have shown concurrent validity with the scale available in India. The unique experiences of service personnel do differ and certain differences are also noted in common events. There is internal consistency in the scale with the routine items being rated very low.

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