J. of Psychometry
1997. Vol.10, No.2

DEVELOPMENT OF STRESSFUL LIFE EVENTS QUESTIONNAIRE

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ABSTRACT

This article describes the development of a questionnaire to assess the stressful life events which has potential relevance to stress management training programmes and also in stress research. The questionnaire taps the nature and frequency of life events considered stressful and perceived control over such situations in a sample of 346 adult subjects.

The questionnaire provides the scores in terms of total frequency of experiencing events and the varied nature of such experiences. The distribution of stressful events in a random sample of 346 adult males and females are discussed in relation to their clinical status

INTRODUCTION

Life events and pressures of everday life, have a forceful impact on health. Recent advances in mind-body medicine is an outcome of the empirical research on stress and is effects on body and mind. The need to identify these life events or the human environmental triggers have gained importance, as early detection can help in preventing major degenerative diseases.

Identifying or listing of events are not so simple. Stress is seldom caused by a single isolated event, but more typically it builds up over a series of what may appear as unrelated events. Life experiences are highly personal and to be perceived as stressful, depends on multiple extrinsic and intrinsic factors.

Stress researchers have used schedules, interview techniques to assess the stress levels of subjects. Schedule of Recent Experiences(SRE) was the first of this kind. SRE has undergone many modifications and variations. Homes and Rahe(1967) were able to quantify the effects of stressful events in terms of life change units.

This questionaire lists the life experiences, based on the amount of 'change' or adjustments' one has to make to life, rather than the undesirability of the events themselves. Kasl, (1983) critically evaluating these measures, argues that life events are intimately bound up with a person's life style, and also the stage in his life cycle. Some changes in life are normative, expected and planned. Generally, it is the unanticipated events, the uncertainty of which upsets the rhythm of life, leading to imbalance.

Lazarus and his colleagues (1984) have emphasised the role of 'controllability' in the appraisal and experience of events. It is the sense of control which can reduce the intensity of stressful impact of events.

The objective of the present study is to develop a tool to assess the frequency and nature of stressful events and the controllability over such situations, as perceived by the subjects.

ITEM PREPARATION :

The items for the present questionnarie were partially pooled from the presumptive stressful life events scale (Singh 1983), from interviews of a cross section of clinical patients and a review of stress literature.

STRUCTURE OF THE QUESTIONNAIRE :

Instead of grading the items on a scale based on its stressfulness for the individual, the events were arranged from mild to severe depending on its impact in disturbing the normal life and efficiency of the individual. Factors such as desirability, anticipation, controllability and also amount of adaptation required in light of such events were taken into consideration while arranging the statements of events.

The final format of the questionnaire involved 52 items, representing a statement of an event or situation in a person's life. The respondents were requested to either endorse a 'Yes' or 'No' according to the experience of the situation.

Against each 'Yes' response or experience of the situation, the respondent also recorded whether he/she had complete, partial or No control over such situations.

SCORING :

The questionnaire yielded not only the frequency of the stressful events but also an index of the nature of such events whether its impact could be characterised as mild, moderate or severe.

The control index was derived by giving a weightage of 'one' 'two' or 'three' marks against items scored as Complete Control, Partial Control, and No Control respectively.

PILOT STUDY :

The scale was tried out on a sample of 80 subjects. The item reliabilty value was 0.86. A test reliability on a sample of 30 subjects was found to be 0.96 ($P<0.01$). The content validity based on judges rating was 0.86. After initial trial of the questionnaire, the final format was structured with no major changes.

MAIN STUDY :

The stress questionnaire, involving 52 items was administered on a random sample of 346 subjects. The sample for the main study was selected in Madras city. Only literates and urban population were included in the study. The age ranged from 24 to 60 years. Married people belonging to both sexes were studied. The sample from a clinical population was also included.

These patients were hospitalised for specific medical disorders and were under medical supervision at the time of study.

The final sample of the study emerged as follows :

INSERT TABLE 1

TABLE 1 SHOWING THE CHARACTERISTICS OF THE SAMPLE

		Percentage	Mean Age	SD	't' Value
Sex	Male	48	46.43	11.04	
	Female	52	35.90	7.34	10.42
Non - clinical		65.60	36.52	8.49	6.4
Clinical		34.39	49.25	9.37	

THE SAMPLE DESCRIPTION :

The sample for the main study had a slightly higher representation of females (52%) than the males (48%). The former were significantly younger (Mean age 35.90 +7.34 years) compared to the males (Mean age 46.43 +11.04 years). There was equal representation of subjects in all the age groups.

The 34% of the total sample included clinical patients who had a diagnosis of essential hypertension, coronary heart disease or neurotic disorders. The 65% of the sample had no clinical diagnosis and were outside the medical suspension, and were also free from any regular medication.

Within the clincal group, the representation was significantly in favour of Men (79%) than women (21%), as the clinical sample included, mainly patients of coronary heart disease, which epidemiological studies have proved to be more prevalent among men than women (National Health and Nutrition Survey 1980, U.S.A). Thus, higher frequency of males in specific clinical conditions is noted. Further, it was also noticed, that the mean age of the clinical patients (49.24 + 9.37 years) was significantly higher than the non-clinical group (36.32 + 8.49 years). Age and sex of the subjects are very important risk factors in the onset of cardio-vascular diseases. Typically, 40 years is considered to be the most susceptible period among males for cardio-vascular dysfunctions (Survey of Joint National Committee, USA 1984).

FREQUENCY OF STRESSFUL EVENTS :

The number of life events and the intensity of such events were analysed for the group. An average of 12 life situations or events in a span of one year are reported by the respondents in this study. The findings show significantly ($P>0.01$) higher number of stressors than reported by presumptive Life Events Scale (Singh, Kaur and Kaur, 1983). Mean life events of 7.24 reported by hypertensives and 10.32 events by Emergency patients in powers and the Jalewiec study (1981) is comparable to the findings in this study.

Keeping in view, the nature of the sample, time frame and locale of the study, possibility of increase in frequencies, over the years can be attributed to the changes in the life styles in recent years. And stressors are always mounting and multiplying and its numbers cannot be reduced. And all stress research reports emphasise this fact.

Examining the distribution of scores, 25% of the sample have a score of 7 and below, 25% of the total sample have a score above 16 and they are considered to have a higher load of stressful experiences, which can have a strong impact on the psychological and physical well being of an individual(fig.1) The distribution of events is comparable to earlier findings by Jalewiecetal '1981) where 64% of the hypertensives had stressful life events of 16 and above.

TABLE - II SHOWING MEAN STRESSFUL EVENTS EXPERIENCED FOR ADULT SAMPLE

Nature of Stressors	Mean frequency	T
Mild	6.15	4.34
Moderate	3.49	3.01
Severe	2.79	2.49
Stressors	12.41	6.74

INSERT TABLE 2

Mild annoyance in the nature of "lack of holiday", rest, lack of domestic help, work load, and change in sleeping habits were found to be averaging around 6 events. But an average of 2-3 severe events such as bereavement, job change, depression are experienced in a year. It is the mild day to-day hassles which are supposed to affect the psychophysiological status of an individual. Stress does not have to be earth shatering. Daily events such as completion of an assignment, a disagreement with a neighbour and dealing with a maid servant can be considered as a series of mild annoyances. Elliot(1994) states "Squandering doses of mundane episodes like standing in a grocery line, running out of fuel, waiting in a traffic-jam can also be irritants for people"

As stated earlier, the severe life events are of an average of 2.79 + 2.49. This is significantly higher than the frequency 1.90+ 2.62 reported by Singh et al (1983). Thus, experiencing 2-3 events in a year which involves a severe disruption in normal life are more common. Having more than five events could be highly stressful which disrupts in normal day-to-day efficiency and can have an impact on health.

The experiences of stressful life events are significantly higher among females than males. ($P>0.01$) Females had an average life situation of 13.37+ 6.09 events. Though the frequency reported in this study is much higher than the average score reported by Singh (1983) for females 2.46+ 3.34, it confirms their findings that females report more problems than males. Though there

was no sex differentiation in frequency of mild events, females definitely reported a higher frequency of moderate to severe events such as illness of family member, time pressure, arguments with spouse, alcoholism in family, marital conflicts etc. But males in the same age group reported fewer number of stressful episodes in the severe category than females(Fig.2)

In a study on working women and non-working women, Devaki Rubal(1993) reported the number of mild events were on an average of 7+ 2.76 for working women and 4.6+ 2.51 for non-working women. Time pressure, lack of holiday and heavy responsibilities were frequent sources of stressors for women in work force. It was also found that lack of domestic help, conflicts and academic pressure of children were common sources of stressors for females who were not gainfully employed. According to Elliot(1994) women face intense social and personal pressure to be competent and caring and these self imposed pressures can be hazardous to health. The findings confirm the reports of Pines and Kafry (1981) that women experience more stress than men because of the burden of two full time job, home and career.

TABLE III

The Mean frequency of Stressful events among Males and Female Adults.

Sex	Stressors (Frequencies)	Categories Mild	Moderate	Severe
Males M	11.38	6.46	3.08	1.89
N = 164 T	7.25	5.18	3.27	1.94
Females M	13.37	5.87	3.87	3.61
N = 180 T	6.09	3.38	2.71	2.65
	2.74	1.25**	2.43*	6.96**

** Significant at 01 level

* Significant at .05 level

INSERT TABLE - 3

The Mean frequency of stressful events of older subjects was significantly lower than the younger groups. But stress is higher among older subjects with medical disorders (11.53), thus indicating the possibility of stress mediating the onset and progress of disorders. Younger subjects with their high achievement orientation, and yet to settle in their job and homelife, do experience more daily challenges and mild events compared to their older counterparts. Thus, the nature of the stress experiences seemed to vary with the stage of life and the age of the person.

STRESSORS AND CLINICAL STATUS :

An attempt was made to identify the stressful events experienced by clinical groups and nonclinical groups. The two groups did not differ significantly (12.87+ 7.34; 12.17+ 6.34) with

respect to the average number of life events experienced. However, the non clinical group subjects reported more number of severe life events (3.27+ 2.64) than the clincal group. (1.87 + 1.88) and also more number of mild daily irritants. Stressors are supposed to influence the health status of an individual, its impact can be mediated by number of intrinsic and extrinsic factors such as personality, coping styles, vulnerability, social support, and material support. The findings of this study does not show evidence for link between stressful events and cardiac events. It is contrary to Singh and Kashyap's (1993) finding which has shown significantly higher incidence of life change events which are stressful among cardiac cases, compared to control group.

TABLE IV

Mean Frequency of Stress Experiences in Relation to Age and Clinical Stress

	Non- Clinical Group			Clinical Group		
	N = 225			N. 119		
	Age					
Nature Stress (Frequencies)	**33-30 Years**	**31-40 Years**	**41 and above**	**23-30 Years**	**31-40 Years**	**41 and above**
Mean Stress Score	12.34	13.30	8.91	13.95	12.64	11.53
Mild Stress	5.5	5.3	4.37	8.2	8.5	6.4
Moderate Stress	3.9	3.9	2.7	3.2	2.7	3.2
Severe Stress	2.9	3.9	1.9	2.4	1.3	1.8

INSERT TABLE - 4

The findings in this study are comparable to the earlier study of stress among cardiac patients by Kurien(1992). The cardiac patients, in her study reported an average of 10.26+ 3.1 events and the matched non-clinical group reported an average of 10.50+ 5.8 events which is significantly lower. Considering the size of sample, time factors, the increase in the number of stressful events are quite predictable.

Even though stressors play a significant role in the onset of diseases and its progress, the present study being more a survey approach, has failed to show evidence of clinical groups experiencing more number of stressors than non-clinical groups. The difference in the life experiences

among medical group and healthy group is not only mediated by the health status, but is also influenced by many other external factors like socio economic status, education and marital status. The availability of material and social support can definitely lower the frequencies of negative situations in one's life.

Research evidence on 'Stress' has linked various life experiences to the onset of diseases like CHD, ulcer etc. In order to study the link between the presence of negative life events and the somatic symptoms, a sample of 140 subjects were investigated for their life events and somatic complaints through a health check list. Both the checklists were administered on the same day thus temporal closeness was maintained.

TABLE - V

Mean Stressor Frequency Score, and Frequency of Symptoms Reported

N - 140

Variable	Mean Frequency	SD	Correlation Coefficient
Age	45.96	11.75	
Stressors	15.41	10.93	0.40
Somatic Symptoms	13.22	9.28	

INSERT TABLE - 5

The Mean age of the sample was 45.95 years with a standard deviation of 11.75. The average number of life events experienced in this groups was 15.41 for the past 2 years with a SD of 10.93 symptoms were reported by the group which included breathlessness, aches, pains, tension, depression, palpitation, digestive problems etc.,

Analysis of the data on the two factors i.e life events and somatic complaints revealed a significant positive correlation of 0.40 ($P>0.01$). A multiple regression analysis of stress scores and age of the subject in predicting the symptom was also carried out. R^2 of 0.17395 showed that stressors and age significantly contributed to the variance symptom level in the group.

Even though health status is clinically determined, and is a function of multiple factors such as heredity, age, gender, life style etc, stress plays a significant role in the outset of various stress related symptoms. The questionnaire could positively relate to high scores on the symptoms checklist. However, follow up studies on the same population on these tools can establish the link between stress and physical health.

Analysing the "Control" responses, each stressful event showed a great variance in the perceived control over events. Events to environmental stressors such as economic pressure, ecological disturbance were perceived as "Uncontrollable", Time pressure; uncertainty and need for rest were perceived by majority of subjects (28%) as partially controllable. This perceived

FIG 1. STRESS

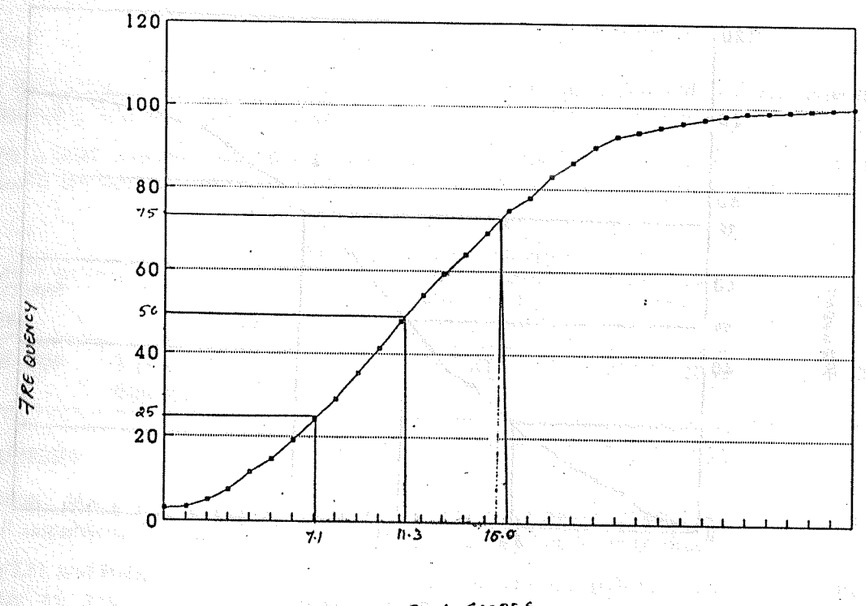


FIG 2. STRESS

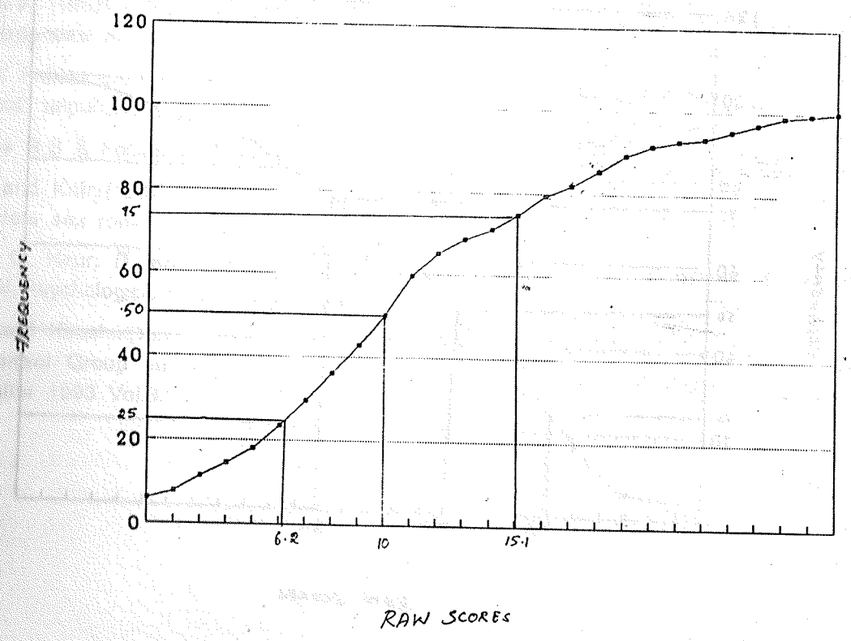


FIG 3. STRESS

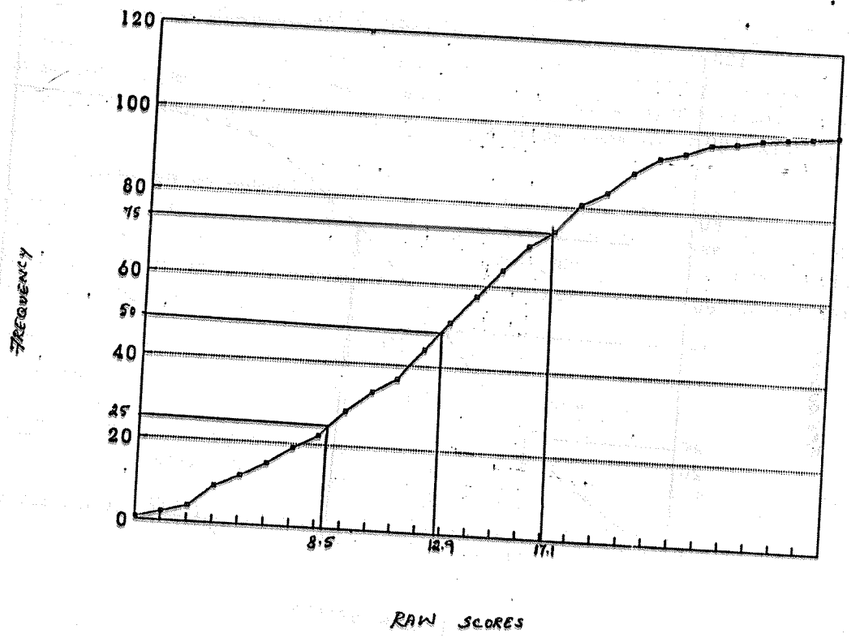
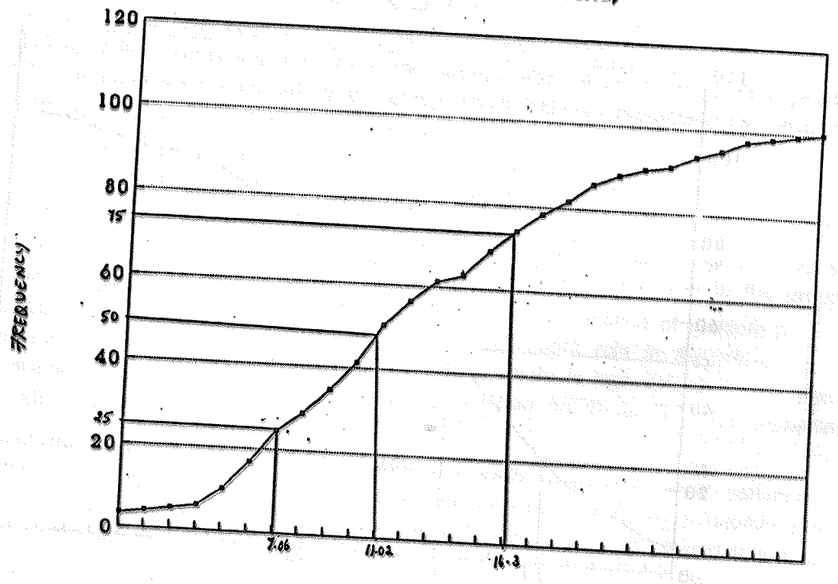


FIG 4. STRESS (CLINICAL)



control was found to be partially influenced by the nature of event and partially determined by the personality and coping style of the individuals.

As a brief screening tool, the questionnaire can provide basic information about the intensity of stressful life events and the nature of the stressors encountered by the subject.

TABLE - VI

Multiple Regression Analysis

Independent Variables	Predicted Variables	Multiple R	R2	Sig.
Stressor Age	Somatic Symptom level	41	0.17395	.00

REFERENCES :

Devakirubai, Malini (1983) "Family structure in relation to stress, coping and General Health of Women" unpublished M.Phil Dissertation submitted to University of Madras, Madras.

Holmes T.H. and Rahe, R.H (1967) "The Social Readjustment Rating Scale". Journal of Psychosomatic Research; 11, 213-18

Jalowiec, A and Powers, M.J. (1981) "Stress and coping Hypertensive and Emergency Room Patients" Nursing Research, January - February 1981, Vol.30, No.1, 10-15.

Kasl S.V. (1983) - "Pursuing the link between Stressful Life Experiences and Disease : A time for Reappraisal in Stress Research" Ed by Cary L. Cooper, John Wiley and Sons Limited, USA.

Kurian, Rabina (1992)"Stress, Type-A Behaviour and Anger Expression among cardiacs and Non Cardiacs" unpublished M.Phil, Dissertation submitted to University of Madras, Madras

Lazarus R.S & Folkman, S. (1984) Stress, Appraisal and Coping , New York, Springer.

Pines and Kafry(1981) "Tedicem in the Life and Work of Professional Women as compared to Incomplete sex roles, 7, 10, 963-977

Singh, G. Kaur, D. Kaur, H., (1983) - Handbook for Presumptive Stressful Life Events Scale, National Psychological Corporation, Agra,

Singh and Kaushik(1993) Chronic psychological Stressors and Life Change Events among case and Control Group patients of Coronary Heart Disease "Journal of Psychological Researches, September 1993 Vol.37 No.3 16 - 19