

DEVELOPMENT AND INITIAL VALIDATION OF A LIFE EVENT SCALE FOR STUDENTS *

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Abstract

The present study represents a readaptation of the *Social Readjustment Rating Scale* for college and university students. Student-typical items were empirically derived and normative data on each item were collected from a sample of 176 students. An initial attempt to validate this new scale indicated significantly higher frequencies of medical illness, seeking of psychological help, and academic failures in individuals with above average life change.

Résumé

Cette étude vise à adapter le *Social Readjustment Rating Scale* à une population d'étudiants des niveaux collégial et universitaire. A partir d'événements typiques de la vie des étudiants, l'auteur présente des données normatives recueillies auprès de 176 sujets. Une première tentative en vue de valider cette nouvelle échelle de mesure révèle que les sujets qui obtiennent des scores plus élevés que la moyenne présentent aussi une fréquence plus élevée de maladies physiques, de recherche d'aide au plan psychologique et d'échecs de nature académique.

The notion that stress causes or contributes to illness appears widely accepted by mental health specialists and the population at large. An operational definition of stress however is difficult since stress is not a static quality of either a specific stimulus situation or a fixed characteristic of an individual. A more comprehensive conceptualization identi-

fies stress as a process which is comprised of a stressor or stimulus, an adaptive or coping attempt by the afflicted individual, and possibly, but not necessarily so, an ensuing stress response with measurable physiological arousal (Lazarus, 1978).

The complexity of the stress process has made it impossible to measure stress with an objective, all-encompassing instrument (Lazarus, 1978). While it is relatively easy to assess the physiological stress response with rating scales and standardized physiological measures, the assessment or even operationalization of "coping skills" is highly controversial and methodologically unresolved. On the other hand, many researchers concur that the quality of coping skills may be the most important component in the stress process and the best predictor for the presence or absence of an ensuing stress response (cf. Kobasa, 1979; Linden, 1984). Given these

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difficulties in operationalizing "coping" a great deal of attention has been directed at quantifiable environmental conditions which may stand at the onset of a stress process (Rahe & Arthur, 1978). In an early attempt to quantify the propensities of such stressors (or stress stimuli) Holmes and Rahe (1967) introduced the concept of "life events necessitating readjustment". Frequently occurring life events and/or events which may occur in nearly everybody's life were empirically derived and later evaluated by a large sample with respect to the readjustment that each of these events would necessitate. Thus, a list of life events with substantial normative data was made available and permitted the computation of "life change units." The resulting scale was called the "Social Readjustment Rating Scale" (SRRS) (Holmes & Rahe, 1967). A large number of subsequent studies have provided evidence for the utility of this approach in predicting a higher prevalence of physical disease and psychological problems in individuals with high life stress defined as 'life change units' (Myers, Lindenthal, & Pepper, 1972; Paykel, Prusoff, & Myers, 1975; Rahe, 1974; Selzer & Vinokur, 1974).

A content review of the particular items on the 'Social Readjustment Rating Scale' indicates item relevance primarily for adult individuals in the 25-60 year age range, presently active on the job market. Events related to house ownership (i.e., taking up a large mortgage) or children's education are pertinent only for a specific age group. Consequently, it appears that the assessment of life events in individuals younger or older than 25-60 years cannot be executed with optimal precision with the 'Social Readjustment Rating Scale' since many of the original items are not pertinent for other age groups.

The present study represents a revision of the Holmes and Rahe scale (1967) with newly developed items pertinent for college/university student populations; normative data on each item were collected. The second intention was to provide an initial validation of the scale by linking life events to psychological and health problems.

Study I – Method

In a first step, a list of life events was to be developed which possessed pertinence for a college student population. To this end 60 students, aged 18 to 23, enrolled in two different sections of an "Introduction to Psychology

II" course with emphasis on Health Psychology, participated in the development of the item list. First, they were introduced to the SRRS (Holmes & Rahe, 1967) and became thus familiar with the concept of life events and the type of item in this scale. Next, all students utilized brain-storming for a collection of events which had recently occurred in their lives and which appeared to possess a reasonable degree of representativeness for a student-typical lifestyle. All events which were noted independently by at least three students were accumulated into a new item list containing 36 events.

In a second step this list of events entitled 'Life Event Scale for Students' (LESS) was presented to a random sample of 176 college students for evaluation. The average age for this sample was 19 years, ranging from 17 to 25. There were 84 female and 81 male respondents in first and second year college representing the natural sciences, health sciences and social science majors offered by the college. The large sample size promised high generalizability. Each subject was presented the LESS containing 36 items (see Table 1) which had been ordered at random except for the item, 1) "Death of a parent" which was assigned a value of '100' to function as an anchor value since the initial group of 60 students had indicated this to be the event in their lives which would necessitate the most extensive readjustment. Subjects were asked to assign a number between '1' and '100' to each event depending on how much readjustment each event would demand. Specifically, they were told: "Each event on this scale requires some adjustment and this may be stressful for the individual. Please rate on a scale from '1' (very low) to '100' (extremely high) how much stress you would feel in adjusting to these life events."

Study I – Results

The resulting mean values and standard deviations are displayed in Table 1 and represent an initial normative data set for a college population.

Study II – Method

The second intention of this study was to provide some initial validation for the utility of this scale by elucidating the impact of previous life events on physical illness, psychological problems, and academic failure.

Table 1
Normative data for anticipated impact of 36 life events^a

Event	Mean	<u>SD</u>	Event	Mean	<u>SD</u>
1) Death of parent	100	—	19) Failing a course	53	25.8
2) Death of your best or very good friend	87	10.3	20) Beginning an undergraduate or graduate program in university	52	24.2
3) Jail term (self)	78	20.8	21) Seeking psychological or psychiatric consultation	52	25.7
4) Breakup of parents' marriage/divorce	74	22.8	22) Major argument with parents	51	26.5
5) Getting kicked out of school	72	19.3	23) Major argument with boy/girlfriend	49	23.9
6) Major car accident (car wrecked, people injured)	71	21.7	24) Sex difficulties with boy/girlfriend	49	25.8
7) Pregnancy (either yourself or being the father)	68	13.7	25) Establishing new steady relationship with partner	44	25.5
8) Failing a number of courses	67	24.1	26) Minor car accident	43	20.4
9) Parent losing a job	66	23.0	27) Minor financial problems	41	23.2
10) Major personal injury or illness	65	23.8	28) Losing a part-time job	40	24.6
11) Losing a good friend	65	23.2	29) Getting your own car	38	27.2
12) Major change of health in close family member	63	21.1	30) Finding a part-time job	37	24.0
13) Breakup with boy/girlfriend	62	22.9	31) Change of job	35	23.6
14) Major and/or chronic financial problems	60	22.3	32) Minor violation of the law (i.e., speeding ticket)	34	23.4
15) Moving out to town with parents	58	24.7	33) Switch in program within same college or university	33	23.4
16) Seriously thinking about dropping school	57	27.8	34) Family get-togethers	30	27.3
17) Getting an unjustified low mark on a test	55	26.3	35) Vacation with parents	29	24.4
18) Moving out from home	54	24.5	36) Vacation alone/with friends	24	23.4

^aBased on N=176.

In this second phase of the study 88 students (randomly selected from the original sample by choosing every second subject) were additionally requested to indicate which of the events on the LESS had actually occurred within the previous six months.

A 6-month period was chosen since many of the students were in the second semester of their first year of college whereas a 12-month period (as provided in Holmes & Rahe's work, 1967) would have comprised a portion of the individual's exposure to a high school environ-

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ment which was not represented in the LESS items.

Total life change units (LCU) for each individual were computed by adding the normative values derived from the LESS for those items which the 88 participants had described as recent life events for their specific cases. A participant for example whose parent lost a job, who had a minor car accident and failed a course during the preceding 6 months was given a total LCU score of 162 (66+43+53) The median LCU for the total sample was found to be 434, with extreme values ranging from 209 to 858. Subjects were grouped into above and below median scores with respect to their individual number of LCU's and it was determined how many subjects in each half had responded to the three criterion items:

- 1) Major personal injury or illness.
- 2) Seeking psychological or psychiatric consultation.
- 3) Failing a number of courses.

Study II – Results

The resulting frequency table is displayed in Table 2. Since the criterion items were based

Table 2
Medical, psychological and academic difficulties
as a function of life change units^a

LCU scores (Life change units)	N	Personal illness or injury		Sought psycho- logical help		Failed two or more courses	
		N	%	N	%	N	%
0-434 below median life change	44	2	5	1	2	8	18
435-858 above median life change	44	9	20	8	18	17	39

^aMedian for LCU was 434; data are based on N=88.

on the same normative data set used to predict their occurrence a bias was to be expected. It was controlled for by subtracting the normative value of the criterion item response from the individual's total LCU score. For example, an individual with a total LCU score of 500 including the occurrence of a major illness was considered as having a LCU score of only 435, since the criterion (the independent variable) could not serve simultaneously as a dependent variable. Similar adjustments were made for all subjects who had listed the particular criterion event. Chi-square values were computed to test the experimental prediction

that subjects with high LCU scores would also report more often personal injury or illness, the need for psychological help, or academic failure. Since chi-square tests are not applicable when expected probabilities of occurrence are low (Siegel, 1956) only the two subgroups of the total sample, i.e., below or above median LCU scores, were compared with each other. High LCU scorers were found significantly more often in the major personal illness or injury category ($\chi^2(1) = 6.65, p < .01$), had sought psychological/psychiatric help more often ($\chi^2(1) = 7.92, p = .01$), and had failed academic courses more often than low LCU-scorers ($\chi^2(1) = 5.59, p < .05$).

Discussion

The LESS is an empirically derived list of life events likely to be characteristic for college student populations. The relatively large size of the normative sample promises a reasonably high level of generalizability. The weights assigned to each event indicate that the different life events in this scale necessitate highly varying degrees of individual adjustment although inspection of the standard deviations points towards some interindividual differences in the assignment of these weights. A comparison of the weights assigned to particular life events by students when contrasted with scores from adult (in the 'Social Readjustment Rating Scale') indicates that students assigned significantly larger total scores to the events in the LESS than adults had assigned to the items in the Holmes and Rahe scale. For example, the lowest weighted life event in the student sample was 24 for 'vacation alone or with friends'. Subjects in the Holmes and Rahe study assigned generally lower scores with 14 items out of a total of 43 possessing a lower mean value than the lowest item in the LESS. One item ('minor violation of the law') was identical in both scales but was evaluated quite differentially: a score of '11' was assigned in the adult sample, but '34' in the student sample. It could be argued that the novelty of many life events to students (i.e., young adults) requires more intensive adjustment than in older adults and/or adults may have acquired better coping skills to control the potential impact of these life events. The experimental hypothesis associating high life change in students with illness/injury and psychological problems was found supported and concurs with similar findings in adult and adolescent populations (Myers et al., 1972; Paykel et al., 1975; Selzer & Vinokur, 1974). The observation of more frequent academic

failures as a function of life change units has not been made elsewhere.

The study of life events via the determination of life change units has been criticized on many grounds (Dohrenwend, 1974). In particular, it has been pointed out that life events can be desirable or undesirable thus necessitating possibly more or less adjustment; the likely frequency of occurrence tends to be high for low-level LCU events, while high-level LCU events (such as divorce, death of a spouse etc.) occur only infrequently, some never, in a person's life. Rahe and Arthur (1978) have later recognized the methodological shortcomings of the original life change research and have reviewed a number of studies which attempt to account for these weaknesses. The probably most notable conclusion from this review however, is that methodological refinements of life event research have not enhanced the predictive power of life events over and above findings derived with the original scale. This conclusion lends credence to the predictive validity of the original life event method for the prediction of illness. In this context however it should be underlined that the complexity of life event-illness outcome links can be understood fully only if individual coping efforts and their mediating effects are carefully attended to in future studies.

Further research could be directed at further investigating the scale's psychometric properties (i.e., test-retest reliability) and could determine its predictive validity by having students complete a LESS at the beginning of an academic year and then study their psychological and physical well-being and their academic success longitudinally. In addition, it would be worthwhile to determine the impact of variables like behavioral skill repertoire, social support and academic potential as potential mediators in the life event perceptual defense short-term arousal long-term maladaptation link (Rahe & Arthur, 1978). In essence, it appears that the LESS might become a useful tool in a larger assessment battery comprising life event and coping skill evaluations and may thus permit the identification of high risk student subpopulations.

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