ABSTRACT

Although studies of major life events continue to dominate the stress literature, such events have not been shown to be strong predictors of future illness. The present study examined the relationship of both major life events and daily hassles—the repeated or chronic strains of everyday life—to somatic health. In multiple regression analysis it was found that hassles scores were more strongly associated with somatic health than were life events scores. Hassles shared most of the variance in health that could be accounted for by life events, and when the effects of life events were statistically removed, hassles and health remained significantly related. Daily uplifts made little contribution to health that was independent of hassles. The assessment of daily hassles appears to be a useful approach to the study of life stress and could be an important supplement to the life events approach which, by itself, is insufficient for full understanding and practical prediction of health outcomes.

The standard methodology for assessing the impact of stress on health is the measurement of major life changes (Byrne & Whyte, 1980; Dohrenwend &
Dohrenwend, 1974; Holmes & Rahe, 1967; McFarlane, Norman, Streiner, Roy, & Scott, 1980). This approach has recently received extensive criticism (Dohrenwend & Dohrenwend, 1978; Hough, Fairbank, & Garcia, 1976; Rabkin & Struening, 1976; Wershaw & Reinhart, 1974) which cover such issues as psychometric problems, the lack of representativeness of the sampled events among varying sociodemographic groups, and the absence of concern with psychological mediators such as the personal significance of events and the resources available for coping with them. From a practical standpoint, the most discouraging problem has been that the relationship between life events scores and health outcomes is extremely weak. As Rabkin and Struening (1976) point out, “In practical terms . . . life event scores have not been shown to be predictors of the probability of future illness” [p. 1015]. Those concerned with the impact of stress on health status must search for alternative and more promising ways of assessing stress and the processes mediating health outcomes.

One such alternative is to focus on the ongoing stresses and strains of daily living, what we refer to here as hassles. The few investigators who have examined these sources of stress have typically limited themselves to a particular stressor such as noise (Glass & Singer, 1972), commuting in rush hour traffic (Novaco, Stokols, Campbell, & Stokols, 1979), sex role conflicts (Pearlin, 1975), and work overload and underload (Frankenhaeuser & Gardell, 1976). Rarely have researchers made an effort to examine a broad spectrum of everyday stresses which might characterize persons or their life settings.

Our literature search revealed only three studies of this type (Cason, 1930; Kanner, Coyne, Schaefer, & Lazarus, 1981; Lewinsohn & Talkington, 1979). The first of these (Cason, 1930) provided descriptive data concerning “common annoyances,” but did not search for antecedents or consequences. More recently, Lewinsohn and Talkington (1979) found that the combination of frequency and subjective aversiveness of unpleasant events during the previous month was moderately related to depression. Likewise, Kanner et al. (1981) examined the relationship between a broad range of daily hassles over a nine-month period and found their frequency to be significantly related to psychological symptomatology.

The findings of Lewinsohn and Talkington (1979) and Kanner et al. (1981) point to a relationship between everyday stresses and psychopathology, but do not permit examination of daily hassles as a possible factor in somatic health. It cannot be assumed that psychopathology and somatic illness necessarily have the same antecedents. Much would be gained if we could extend the findings obtained with hassles and psychopathology to somatic health, for two reasons. First, it could be argued that the apparent relationship between hassles and psychological symptomatology might be due to a common underlying distress factor. Presumably, a person who is symptomatic is also distressed, as is a person
who is "hassled." Second, a major concern of behavioral medicine is the functional relationship between stress and somatic illness. Information indicating the nature of the relationship between daily stressors and health, over and above the relationship between life events and health, would be helpful in focusing research on those events that seem to make a difference in health and in encouraging investigation of the appraisal and coping processes that mediate the effects of such events.

The purpose of this study, therefore, is to examine the relationship between the hassles of daily living and somatic health, and to compare the usefulness of this approach to the life events methodology. We hypothesized that daily hassles would have a stronger relationship to health outcomes than do major life events because the former are proximal measures of stress, whereas the latter are distal. Jessor (Note 1) has recently revived this Lewinian distinction between an actor's immediate perception or experience of the social environment (a proximal variable) and environmental characteristics (distal variables) which may or may not be experienced by the actor as such.

The proximal-distal dimension refers to the ordering of various environments according to their conceptual proximity "to experience, to perception, to interpretation, or to psychological response" (Jessor, Note 1, p. 6). The most distal environments are without specific functional significance for the person; they are generally described in nonpsychological language. The most proximal environments usually involve personal meanings. Geographic, biological and social environments, especially social institutions of the macro type, would be more distal, whereas the most proximal environment would be the perceived environment of immediate significance to the actor. From the cognitive phenomenological perspective on stress developed by Lazarus and his colleagues (Coyne & Lazarus, 1980; Lazarus, 1966, 1981; Lazarus, Averill, & Opton, 1970; Lazarus & Launier, 1978), the proximal environment consists of person-environment transactions that the person appraises as harmful, threatening or challenging, whether these are major life events or small, daily irritations. Jessor too argues that proximal variables predict human reactions better than distal ones because they express here-and-now pressures of living as these are sensed or appraised by the individual.

Life events scores can be considered distal because they do not describe the ongoing pressures of living they create, their divergent significance for individuals experiencing them, or the coping processes they require, all of which affect outcomes. On the other hand, endorsement of a hassle item is a more immediate indication of the person's perception and appraisal and the personal distress and disruption connected with them. Hassles should have a more direct impact on health, and may well mediate the effects of life events.

Along with hassles, Kanner et al. (1981) assessed uplifts, positive ex-
periences that are likely to occur in everyday life. They found a positive association between frequency of uplifts and psychological symptoms in women, but no relationship was found between uplifts and symptoms in men. Typically, studies of desirable major life events and adaptational outcomes (Mueller, Edwards, & Yarvis, 1977; Ross & Mirowsky, 1979; Vinokur & Selzer, 1975) have found little or no relationship between the two. Therefore, the question of the impact of these positive everyday experiences is important. Before drawing any conclusions regarding the findings of Kanner et al. (1981), it would be useful to see whether they can be replicated with another adaptational outcome measure.

In the present study we hypothesized that hassles and uplifts would be correlated with subsequent somatic health, and that, in multiple regression analysis, hassles and uplifts would improve upon the relationship of major life events to health. Specifically, it was hypothesized that: (1) consistent with past research, there would be a low order positive correlation between life events and somatic illness; (2) there would be a significant positive correlation between both the frequency and the intensity of hassles and illness; (3) in hierarchical multiple regression, hassles would add significantly to the relationship of life events to illness; and (4) when the effects due to life events were controlled, hassles would remain significantly related to illness.

Hypotheses concerning the relationship between uplifts and somatic health were made more tentative, considering the complex findings of other researchers (Kanner et al., 1981; Mueller, et al., 1977; Ross & Mirowsky, 1979; Vinokur & Selzer, 1975) regarding the relationship between desirable events and adaptational outcomes. It was hypothesized that (1) there would be a low order negative relationship between the frequency and intensity of uplifts and somatic illness, and (2) in hierarchical multiple regression, uplifts frequency and intensity would improve significantly upon the relationship of hassles to health, even when the effects due to life events were controlled.

METHOD

Sample

The respondents were 100 Alameda County residents obtained from a probability sample surveyed by the Human Population Laboratory (HPL) of the California State Health Department. HPL conducted the survey with 6928 adults in 1965, and again in 1974 with 4864 members of the 1965 cohort. Two hundred and sixteen of those included in the 1974 HPL cohort were asked to participate in the present study. Of those contacted, 109 agreed to participate. Nine respondents dropped out during the course of the year-long assessment. Participants received payment of $8 per month.
The present sample was limited to persons who were 45–64 years old, white, primarily Protestant or Catholic, who had at least an eighth-grade education, and an above marginal income (over $7000 in 1974). In addition we excluded from the study those who were bedridden at the time of the 1974 assessment. The present sample includes only those who were living in the San Francisco Bay Area in 1965, 1974 and 1977, and were willing to be studied at each of these times. Those who refused participation differed significantly from the final sample on the selection variable of education, with those refusing participation including more persons with high school educations or less ($x^2(3) = 11.21, p < .02$). The final sample is predominantly married (86%), well educated ($\bar{x} = 13.7$ years of education), and high-income (median = $20,000 and above).

Instruments

The data reported here were obtained from four questionnaires: The Hassles Scale, Uplifts Scale, Recent Life Events Questionnaire, and Health Status Questionnaire.

The **Hassles Scale** (Kanner et al., 1981) is a 117-item questionnaire in which respondents are instructed to indicate the occurrence of any items which have "hassled" them in the past month. Participants rated each hassle on a 3-point scale as having been "somewhat," "moderately," or "extremely" severe. From this information, two scores were created: (1) a frequency score, which was a simple count of the number of items checked, and (2) an intensity score, which was the mean severity reported by the participant for all items checked. The questionnaire was administered in nine consecutive months, and the scores reported here reflect mean frequencies and intensities for this nine-month period. The scale has high test-retest reliability with an average correlation of .79 between adjacent months over a nine-month period for hassles frequency, and .48 for intensity.

Items on the scale reflect the content areas of work (e.g., don't like work duties), family (e.g., not enough time for family), social activities (e.g., unexpected company), the environment (e.g., pollution), practical considerations (e.g., misplacing or losing things), finances (e.g., someone owes you money), and health (e.g., not getting enough rest). There were five health-related items that overlapped with items on our Health Status Questionnaire. Because of our concern that these items would artifactually inflate relationships between hassles and health, we computed two sets of hassles scores, one set which included the health-related items and one which did not. The correlation between the full and altered scale was over .99.

Similarly, fifteen items were found to overlap with items on the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), a self-report inventory of psychological symptomatology commonly
used in behavioral medicine research. As in the case of the health-related items, we were concerned that these items might carry part or all of the relationship to our illness measures. However, the correlation between hassles scores containing the overlapping items and scores excluding those items was .99. Hence, analyses presented in this paper are for total hassles scores in order to facilitate comparison with other uses of the scale.

The Uplifts Scale (Kanner et al., 1981) was constructed and administered similarly to the Hassles Scale, but includes 135 items. Participants rated items they experienced as uplifts on a 3-point scale of having been "somewhat," "moderately," or "extremely" strong. As with the Hassles Scale, this information was used to create frequency and intensity scores, and mean scores were created based on nine consecutive monthly administrations. Average test-retest correlations over the nine administrations were high, .72 for uplifts frequency and .60 for intensity scores. Items on the scale reflect content areas comparable to the Hassles Scale: work (e.g., using skills well at work), family (e.g., children's accomplishments), activities (e.g., recreation), the environment (e.g., the weather), practical considerations (e.g., car running well), finances (e.g., saving money), and health (e.g., getting enough rest).

The Life Events Questionnaire used in this research was developed by Paul Berkman in 1974. Construction of the instrument was based on in-depth interviews of the recent life stresses reported by a random sample of 100 respondents from the HPL cohort. (This sample of 100 was not the sample reported on in this study). The questionnaire contained 24 items, none of which would ordinarily be considered a desirable event. Two health-related events, serious personal injury or illness, and sexual problems or difficulties, were eliminated for the purpose of these analyses, since they are clearly health-related, and were found to artifactually inflate relationships between life events and health.

Respondents were instructed to fill out the questionnaire to include all events occurring within the last 2-1/2-year period, indicating in which 6-month segment each event had occurred. The questionnaire was administered twice, and from information obtained we were able to construct two scores: one based on events occurring within a 10-month period which overlapped the period of administration of the Hassles and Uplifts Scales (study events), and a second based on events occurring in the 2-1/2-year period prior to the study (prestudy events). In addition, respondents rated each event for how disturbing it was on a 3-point scale ranging from not much to very much. Each respondent's ratings were totaled to yield perceived life events scores. Normatively weighted life events scores were also calculated for each respondent; items worded identically to those on the Social Readjustment Rating Scales (SRRS, Holmes & Rahe, 1967) were assigned weights associated with the SRRS item. For the items which were
not identical, normative weights were derived from ratings provided by graduate students in Epidemiology at the University of California, Berkeley. Consistent with past research (McFarlane et al., 1980), scoring method made no significant difference in the relationships between life events and other variables. The correlation between normatively weighted and self-rated life events scores was .92 ($p < .001$) in the present study; hence, only the conventional normatively weighted life events scores are reported here.

The *Health Status Questionnaire* is a self-reported measure adopted with minimal modification from that used by HPL (Belloc & Breslow, 1972; Belloc, Breslow, & Hochstim, 1971). The scale includes questions on a wide variety of chronic conditions and specific somatic symptoms, as well as questions concerning disability in working, eating, dressing and being able to move around. There are also several questions assessing subjects' perceived energy levels. Meltzer and Hochstim (1970) found the questionnaire acceptably reliable and valid in comparison with medical records.

Each respondent received three scores based on information obtained from the questionnaire. The first score was an index of the respondent's overall health status (Belloc & Breslow, 1972; Belloc et al., 1971). Respondents were assigned to one of seven levels, according to their most serious health problem, with low scores indicating poor health. That is, a subject with both a chronic, diagnosed health problem (e.g., hypertension) and somatic symptoms (e.g., chest pain when exercising) would be classified with those having a chronic condition, as would a person with a chronic condition and no other health problems. The second score was the total number of somatic symptoms reported by the respondent. Symptoms included such health problems as chest pain, back trouble, headaches, and repeated stomach pain. A third score was based on the subject's reported energy level, and ranged from 0 to 12. Items included trouble sleeping, being worn out at the end of the day, and more or less energy than own age group. An attempt was made to create a fourth score based on number of chronic conditions, but the range of chronic conditions reported by our respondents was too limited to allow such scores to be useful. All analyses were performed on each of the three health indices. The Health Status Questionnaire was administered twice during the year-long study, once at the start (initial assessment) and once at the end (final assessment), with the Hassles and Uplifts Scales administered in the intervening months.

**RESULTS**

Results are described in the following order: The sample is described in terms of its health, and level of hassles, uplifts and life events; correlations
among hassles, uplifts, and life events are subsequently presented; last, Pearson correlation coefficients and hierarchical multiple regression analyses (Cohen & Cohen, 1975) are provided to assess the relationship of hassles, uplifts, and major life events to each of the three health indices.

Health of the Sample

As can be seen in Table 1, at both assessments the modal respondent’s most serious reported physical health problems were nonchronic symptoms.

Table 1
Overall Health Status.
Participants Assigned According to Most Serious Health Problem

<table>
<thead>
<tr>
<th>Health Level</th>
<th>Initial Assessment (Month 0) (n = 98) (%)</th>
<th>Final Assessment (Month 10) (n = 87) a(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious disability (e.g., unable to work)</td>
<td>6.1</td>
<td>9.2</td>
</tr>
<tr>
<td>Other disability (e.g., had to cut down hours worked)</td>
<td>1.0</td>
<td>3.4</td>
</tr>
<tr>
<td>2 or more chronic conditions (e.g., hypertension and asthma)</td>
<td>2.1</td>
<td>3.5</td>
</tr>
<tr>
<td>1 chronic condition (e.g., hypertension)</td>
<td>18.4</td>
<td>23.0</td>
</tr>
<tr>
<td>1 or more symptoms (e.g., repeated chest pains)</td>
<td>42.8</td>
<td>34.5</td>
</tr>
<tr>
<td>Low or moderate energy (and no health problems) (e.g., trouble sleeping, worn-out, tired)</td>
<td>22.5</td>
<td>16.1</td>
</tr>
<tr>
<td>High energy (and no health problems)</td>
<td>7.1</td>
<td>10.3</td>
</tr>
</tbody>
</table>

aN’s for the two assessment periods vary due to missing data.

No significant sex differences, age differences, or sex-age interaction effects were found at either assessment for overall health status, somatic symptomatology, or energy level. Means, standard deviations, and intercorrelations for the three health indices are reported in Table 2.

Correlations among Hassles, Uplifts and Life Events

Table 3 provides Pearson correlation coefficients for relationships among hassles, uplifts and life events variables reported in this study. Means and standard deviations for these variables are also included.
Table 2
Means, Standard Deviations, and Intercorrelations for Health Outcome Measures\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>Overall Health Status</th>
<th>Somatic Symptoms</th>
<th>Energy Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Final</td>
<td>Initial</td>
</tr>
<tr>
<td>Overall Health Status</td>
<td>.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somatic Symptoms</td>
<td></td>
<td></td>
<td>-.30</td>
</tr>
<tr>
<td>Energy Level</td>
<td>.42</td>
<td>.43</td>
<td>-.30</td>
</tr>
</tbody>
</table>

| \(\bar{x}\) | 4.87 | 4.60 | 1.15  | 1.33  | 6.58   | 6.35  |
| S.D.       | 1.36 | 1.61 | 1.29  | 1.22  | 2.88   | 2.86  |

\(^a\)p < .01 for all correlations reported here.

Table 3
Means, Standard Deviations, and Intercorrelations for Hassles, Uplifts, and Life Events

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hassles frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Hassles intensity</td>
<td>.26**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Uplifts frequency</td>
<td>.66**</td>
<td>-.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Uplifts intensity</td>
<td>.12</td>
<td>.59**</td>
<td>.30**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Life events prior to study(^a)</td>
<td>.10</td>
<td>.19*</td>
<td>-.05</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Life events during study</td>
<td>.22*</td>
<td>.17</td>
<td>.03</td>
<td>.04</td>
<td>.06</td>
<td></td>
</tr>
</tbody>
</table>

| \(\bar{x}\) | 20.6 | 1.47 | 49.7 | 1.83 | 84.7 | 148.2 |
| S.D.       | 15.1 | .28  | 24.3 | .35  | 61.0 | 87.9  |

\(^a\)These life events scores represent the 2-1/2-year period prior to the study.

\(^*\)p < .05

\(^**\)p < .01

The mean frequency of hassles per month for the nine-month assessment period was 20.6 (S.D. = 15.1). The mean intensity reported for hassles during this period was 1.47 (S.D. = .28). The mean frequency of uplifts per month for the nine-month period was 49.7 (S.D. = 24.3), and the mean intensity for uplifts was 1.83 (S.D. = .35). Hassles frequency was highly cor-
related with uplifts frequency ($r = .66, p < .01$), as was hassles intensity with uplifts intensity ($r = .59, p < .01$). Uplifts frequency was related to intensity ($r = .30, p < .01$), as was hassles frequency and intensity ($r = .26, p < .01$).

The mean life events scores were 84.7 (S.D. = 61.0) for the ten-month study period and 148.22 (S.D. = 87.9) for the 2-1/2-year prestudy period. The number and type of events experienced by our sample was similar to that reported in a general population survey (Goldberg & Comstock, 1980).

**Hassles, Uplifts and Life Events with Overall Health Status**

Bivariate relationships of hassles, uplifts and life events with health status are reported in Table 4. As predicted, mean *intensity of hassles* was correlated with both initial ($r = -.38, p < .01$) and final health status ($r = -.29, p < .01$). High intensities of hassles were associated with poor overall health status. *Hassles frequency* was also correlated with both initial ($r = -.21, p < .05$) and final health status ($r = -.33, p < .01$) with more frequent hassles associated with poor overall health status.

<table>
<thead>
<tr>
<th></th>
<th>Overall Health Status</th>
<th>Somatic Symptoms</th>
<th>Energy Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Final</td>
<td>Initial</td>
</tr>
<tr>
<td>Hassles frequency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hassles intensity</td>
<td>-.38**</td>
<td>-.29**</td>
<td></td>
</tr>
<tr>
<td>Uplifts frequency</td>
<td>-.02</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>Uplifts intensity</td>
<td>-.20*</td>
<td>.03</td>
<td>-.00</td>
</tr>
<tr>
<td>Life events</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>prior to studya</td>
<td>-.12</td>
<td>-.26**</td>
<td>.07</td>
</tr>
<tr>
<td>during study</td>
<td>-.04</td>
<td>-.10</td>
<td>.10</td>
</tr>
</tbody>
</table>

*aThese life events scores represent the 2-1/2-year period prior to the study.

*p < .05

**p < .01

Except for the negative correlation between uplifts intensity and initial health ($r = -.20, p < .05$), correlations between uplifts and overall health
status were not significant. A part correlation analysis was performed between uplifts intensity and initial health status, controlling for hassles intensity. The result was nonsignificant, suggesting that the negative relationship between uplifts and health status may be a result of the overlapping variance of hassles, uplifts and health.

No relationship was found between life events during the study and health status. However, a significant relationship was found between prestudy life events and health status at the end of the study period ($r = -.26, p < .01$). Note that these life events were experienced from 10 to 36 months prior to the health assessment to which they were related.

Hierarchical multiple regression analyses of hassles, uplifts and life events on all three health indices are reported in Tables 5 and 6. The combination of hassles frequency and intensity accounted for 13% of the variance ($F (2,77) = 5.72, p < .01$) in subsequent health status, with neither uplifts ($F (2,75) = 1.76, p > .10$) nor life events ($F < 1.0$) adding significantly to this. When life events scores were entered first in the analysis, the combination of study and prestudy life events accounted for 7% of the variance ($F (2,77) = 3.06, p < .05$); hassles accounted for a significant additional 9% of the variance in health status ($F (2,75) = 3.76, p < .05$).

### Table 5
Hierarchical Multiple Regression Analyses: Life Events Entered Last

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Overall Health Status</th>
<th>Somatic Symptoms</th>
<th>Energy Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hassles: intensity</td>
<td>1</td>
<td>.19</td>
<td>.07</td>
</tr>
<tr>
<td>frequency</td>
<td>2</td>
<td>.12</td>
<td>-.00</td>
</tr>
<tr>
<td>Uplifts: intensity</td>
<td>3</td>
<td>.01</td>
<td>.02</td>
</tr>
<tr>
<td>frequency</td>
<td></td>
<td>.14*</td>
<td>.14*</td>
</tr>
</tbody>
</table>

**aStandardized regression coefficients**

**bAll dependent variable scores used in these regression analyses were based on health assessments obtained during the final month of the study.**

*p < .05

**p < .01
Table 6
Hierarchical Multiple Regression Analyses:
Life Events Entered First

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Step</th>
<th>Variables</th>
<th>Overall Health Status</th>
<th>Somatic Symptoms</th>
<th>Energy Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>B&lt;sup&gt;a&lt;/sup&gt;</td>
<td>R&lt;sup&gt;2&lt;/sup&gt;</td>
<td>B&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Life events:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>during study</td>
<td>1</td>
<td></td>
<td>-.07</td>
<td>.07*</td>
<td>.06</td>
</tr>
<tr>
<td>prior to study</td>
<td>2</td>
<td></td>
<td>-.26*</td>
<td>.00</td>
<td>.08</td>
</tr>
<tr>
<td>Hassles: intensity</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>-.00</td>
</tr>
<tr>
<td>frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.02</td>
</tr>
<tr>
<td>Uplifts: intensity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.02</td>
</tr>
<tr>
<td>frequency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.16</td>
</tr>
</tbody>
</table>

<sup>a</sup>Standardized regression coefficients

<sup>b</sup>All dependent variable scores used in these regression analyses were based on health assessments obtained during the final month of the study.

*p < .05

**p < .01

Hassles, Uplifts and Life Events with Somatic Symptoms

Hassles frequency, but not intensity, was significantly correlated with symptom levels, both initial (r = .27, p < .01) and final (r = .35, p < .01). Subjects with high frequencies of hassles were found to have relatively high levels of somatic symptoms. High frequencies of uplifts were also found to be significantly associated with high levels of symptoms at the final assessment (r = .25, p < .01). As with the relationship between uplifts intensity and overall health, the part correlation between uplifts frequency and symptoms controlling for hassles frequency was found to be nonsignificant. No significant relationships were found between life events and somatic symptoms.

Hierarchial multiple regression analyses of hassles, uplifts and life events on somatic symptoms parallel the findings reported for overall health status. Entered as the first step of the equation, hassles frequency and intensity accounted for a significant 13% of the variance (F (2,89) = 6.60, p < .01), with neither uplifts (F < 1.0) nor life events (F < 1.0) adding significantly to the prediction made by hassles. When life events were entered first in the equation, the combination of study and prestudy life events accounted for only .4% of the variance in symptoms. Hassles fre-
quency and intensity accounted for a significant additional 14% of the variance \((F(2,87) = 6.66, p < .01)\), with uplifts not adding significantly to this \((F < 1.0)\).

**Hassles, Uplifts and Life Events with Energy Level**

As predicted, the relationships between energy level and hassles tended to be significant, with higher frequencies and intensities of hassles associated with the reporting of lower energy levels. Uplifts were not significantly correlated with energy levels. Life events occurring in the 2-1/2-year period up to the initial health assessment were related to energy levels assessed both initially and ten months later in the final assessment, whereas life events occurring in the intervening ten-month period between health assessments were uncorrelated with energy levels at both times.

The findings of the hierarchical multiple regression analyses with final energy levels were as predicted for hassles and life events. However, hassles frequency and intensity accounted for less of the variance in energy \((R^2 = .08, p < .05)\) than they did for the other health indices reported here, and uplifts were found to add significantly to this \((F(2,86) = 5.01, p < .01)\). As the third step in the analysis, life events did not make a significant contribution \((F(2,84) = 2.15, p > .10)\). However, when life events were entered as the first step, the combination of prestudy and study life events accounted for a significant 7% of the variance \((p < .05)\). Hassles accounted for a significant additional 6% of the variance in energy level \((F(2,86) = 3.28, p < .05)\). As the third step, uplifts were again significant contributors to the prediction of energy level \((F(2,84) = 4.75, p < .05)\).

**DISCUSSION**

The results reported here confirm the hypotheses of this study. Specifically, a low order positive correlation between life events and somatic illness was confirmed; the frequency and intensity of hassles were positively correlated to degree of somatic illness, and this relationship was stronger than that obtained for life events; hassles added significantly to the relationship of life events and somatic illness; and when the effects of life events were removed statistically, hassles remained significantly related to somatic illness.

Consistent with past research (Faire & Theorell, 1977; Hinkle, 1974; Holroyd, 1979; Rabkin & Struening, 1976; Wershaw & Reinhart, 1974), the relationship between life events and health was weak. The only significant correlations between major life events and health were for events occurring 10 to 36 months prior to the assessment of health. These findings suggest that in the present sample life events have a limited impact on somatic
health, and that there is a considerable time lag in any effects they do have on health. Furthermore, these rather distal events had their impact primarily on reported energy levels. Of the three health outcome indices used in the present study, respondents' ratings of personal energy are the most subjective and most likely to be confounded with psychological well-being.

As predicted, both the frequency and perceived intensity of daily hassles, our proximal measure of stress, showed a significant relationship with overall health, one that was stronger than the relationship provided by major life events. Regression analyses for each of the health measures indicated that hassles frequency and intensity accounted for a significant proportion of the variance in health, with life events scores failing to add to this. When life events scores were entered first in the regression equation, the scores accounted for a significant proportion of the variance in predicting energy and overall health status, but not somatic symptoms. For each of the three health indices, hassles frequency and intensity scores improved upon the prediction made by the life events scores in these regression equations.

Although the overall findings of the present study with somatic health are similar to those of Kanner et al. (1981) for psychological symptoms, there were some differences, too. Kanner et al. found that hassles frequencies, but not intensities, were correlated with psychological symptoms. In the present study, both frequencies and intensities of hassles were related to illness. Since Kanner et al. utilized the same sample as the present study, further speculation regarding the meaning of such differences should probably await findings from additional samples.

The obtained relationship of uplifts to somatic health was weak, as was true in the case of psychological symptoms in the Kanner et al. (1981) study. It was the variance shared with hassles that accounted for the association between uplifts and health outcomes, and when this shared variance was removed statistically in the present analysis, uplifts scores were not related to somatic health. Despite considerable theoretical speculation, and the intuitive appeal of the theme, there is at present little support for the notion that positive events in any form protect, enhance, restore or damage health.

In interpreting our results, it is important to consider what it means for a subject to endorse a hassle or uplift. If we follow the usual reasoning behind the life events checklists, we would treat hassles and uplifts scores as merely an inventory of what actually happened, or its subjective impact, during the period in question. Our own theoretical perspective, however, leads us in quite a different direction. We assume that what is endorsed by subjects is heavily weighted by appraisals of the meaning and significance of the transaction, based in part on existing commitments, beliefs, and expectations. Thus, when subjects check a hassle or uplift, we think they are indicating not only what happened, but how they felt about it. This is the meaning
behind our use of the term proximal, that is, the subjective environment or
the environment as cognitively appraised.

When a subject endorses a hassle or an uplift, its significance derives
from the background of the person's life as well as from what actually hap-
pened. For example, Lazarus and DeLongis (Note 2) found that older
adults checked uplifts such as feeling well, having a good night's rest, and
not having pain more often than middle-aged adults, presumably because
such states are less common among the former than the latter. Our present
approach to the measurement of hassles does not yet permit us to address
empirically this complex and difficult issue of meaning, though we believe it
is central to the measurement of life stress, and at the least it enters into and
colors the measures we have reported. Certainly the need to resolve this
issue is demonstrated by the unexpected positive relationship between
uplifts and hassles. Whether this reflects a response bias, common variance
due to differences in activity level, or, as noted by Lazarus and
DeLongis (Note 2), the effects of current concerns on self-monitoring and
evaluative processes, warrants further empirical study.

Somatic health is a long-term outcome rather than an evanescent state,
and it is likely that a stable pattern of stress is required to have an impact on
it. Such stability would have to depend either on constancies in the demands
our subjects faced or constancies in their appraisal and coping processes, or
both. Thus, the key assumption that must be made is that the stress and
stress-related processes measured by the Hassles Scale are representative for
any given subject over a considerable time period, otherwise they would not
affect health outcomes. In our data, the hassles scores are fairly consistent
over a nine-month period, and we increased the reliability of our estimate
by averaging the nine monthly assessments to obtain a single score (Epstein,
1979).

Nonetheless, we should be cautious about any simple causal statements
concerning the relationship of hassles and health. Whereas life events
researchers have treated these events as discrete singular occurrences, our
conception of hassles involves the notion of repeated occurrences. There is
likely to be at least some bidirectionality of influence, with changes in levels
of hassles affecting health, and vice versa. There is growing dissatisfaction
with the misuse of strategies such as cross-lag correlations to make simple
causal statements in such contexts (Rogosa, 1981). When we expect that
events seldom occur once, but persist, overlap, and recur, a circular model
is more appropriate than a linear causal one that artifically abstracts events
from the intricate sequences in which they occur (Coyne & Holroyd, in
press).

Despite these problems of interpretation, it seems useful to study daily
stress in proximal terms, as we have here, in seeking a better understanding
of stress factors in health or illness. Not only do our findings encourage us
in this reasoning, but from the intervention standpoint daily hassles also present a greater opportunity for stress management. Mechanic (1974) notes, for example, that medicine has generally discarded the life events approach and this "... stems less from its lack of plausibility than from its failures to provide the physician with a viable approach to the patient. Life situations are enormously difficult to modify even with the greatest of commitment ..." [p. 89]. More specifically, some life events such as the death of a spouse are all but impossible to avoid, and others such as divorce may be actively sought for reasons more compelling than to decrease the risk of illness. Daily hassles, on the other hand, hold more potential for modification through therapeutic or preventive interventions, since they are more likely than life events to represent personal meaning agendas or ineffectiveness in managing one's daily routine. Given this consideration, and the power of the paradigmatic theme of proximal versus distal, it is remarkable that, compared with the attention to major life changes, thus far so little formal research attention has been given to the "minor" stresses of daily life.

REFERENCE NOTES


REFERENCES

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