University transition: major and minor life stressors, personality characteristics and mental health

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SYNOPSIS One hundred and two first-year students at an independent college in Taiwan participated in a questionnaire study. Measures of stressors (major life events, minor daily hassles and perceived university stress), personality ( locus of control, extraversion and neuroticism) and mental health (depression, anxiety and somatic symptoms) were taken. Using multivariate analyses, we found that: (1) life events predicted anxiety, while daily hassles predicted depression; (2) locus of control and extraversion correlated negatively, while neuroticism correlated positively with university stress; and (3) neuroticism had a main effect on symptom reportings across the board, while extraversion had a vulnerability effect on somatic symptoms. Relationships between life events and daily hassles, and the roles of personality in the stress process, are discussed.

INTRODUCTION

Transition to university is a major life change for the young. Fisher & Hood (1987) found that first-year students showed elevated psychological distress after the university transition. In a prospective study, Lu (1990) found that university transition along with cultural relocation was rather stressful in terms of emotional distress for a group of overseas Chinese students residing in the UK. While the university transition typically affects people in their late adolescence, it has many features comparable to other major life events affecting the general population. Hence, this study puts the university transition in the broader perspective of stressful life changes research, and sets out to investigate the relationships among major and minor life stressors, personality characteristics and mental health.

Life events, daily hassles and mental health

The history of research on stressful life events is a mixed blessing, with both accomplishments and inadequacies. Whatever its shortcomings, this line of research has demonstrated a reliable and meaningful connection between life stress and psychological distress (Dohrenwend & Dohrenwend, 1981; Kessler et al. 1985; Neufeld, 1989; Rice, 1992). However, this persistently observed relationship has also been rather modest. Part of this disappointment may be attributable to the almost exclusive focus on so-called major life events, hence neglecting some seemingly minor but more enduring or recurrent daily hassles. In some recent research, daily hassles have been found to be strong predictors of psychological distress in community surveys (DeLongis et al. 1988; Lu, 1991). In fact, in some cases, daily hassles are even more powerful predictors than major life events (Burks & Martin, 1985; Kowalski & Feiner, 1988).

However, life events and daily hassles are often inextricably linked. Pearlin’s (1989) concepts of ‘primary stressors’ and ‘secondary stressors’ may be relevant here. For example, university transition may well appear on standard life events checklists conceptualized as a discrete, major and acute life change. However, after scrutinizing the context of the event, we may feel it more appropriate to conceptualize the transition as a whole series of daily hassles or adjustment difficulties following the student’s physical move into the university. These daily hassles, such as residence problems, academic demands, social disruptions and initiations are actually the underlying stressors of the campus.

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life. Indeed, an earlier study (Lu, 1990) has shown that perceived social demands in university life alone accounted for 11% of variance in psychological distress in a prospective analysis.

Therefore, in this study both life events prior to the university transition and the ongoing daily hassles will be measured. Of course, measures that will also be taken to indicate the stress of university transition. Effects of all three indices of stressors will be examined in relation to mental health.

**Personality and mental health**

Another perspective on the problem of the weak relationship between life stress and psychological distress is to propose that the relationship varies with both personal and social characteristics (Rahkin & Struening, 1976; Dohrenwend & Dohrenwend, 1981; Cohen & Wills, 1985). This so-called vulnerability model conceptualizes stress as a multifactorial process, with personal dispositions and social situational variables influencing the stressors’ pathogenic effects. The vast majority of the existing research on stress buffering has focused on the possible moderating role of social resources, such as social support (e.g., Cohen & Wills, 1985; Catan & Argyle, 1991). Most research on personality has focused on direct effects of coping or mental health rather than stress buffering effects. Moreover, much of the existing evidence is difficult to interpret, because of (a) conceptual problems; (b) a lack of consistency of results across studies; and (c) inadequate numbers of independent replications.

Therefore, this study will explore both direct effects of stress buffering effects of personality characteristics, namely locus of control neuroticism and extraversion.

Research has generally suggested a linear relationship between locus of control and self-reported psychological distress (Joe, 1971; Levenson, 1973; Wallston & Wallston, 1982). Lu (1990) has also found that locus of control was directly related to mental health among students adjusting to university life. Several studies have also examined the moderating effects of locus of control (Lepoutre et al. 1981; Wheaton, 1982; Krause, 1985). In addition, the relationship between locus of control and psychopathology may be further affected by demographic variables such as sex. A sample of introductory psychology students, Horder & Levi (1985) found the expected correlation between sympto- 

Symptoms and Levenson's (1973) I, C, and P scales for female subjects. Males showed only a correlation between the C scale and increased symptom reporting.

Extraversion, characteristic of an easy-going predisposition and heightened sociability, has consistently emerged as an enduring personality characteristic of the individual (McCrae & Costa, 1985; Kline, 1987). Although it has not usually entered the realm of stress research, there is some evidence suggesting that the extraversion–intversion dimension may mediate the response to a potential stressor and influence vulnerability. Extraversion measured by the EPQ-E (Eysenck & Eysenck, 1975) negatively correlated with psychological symp- toms (Lu & Argyle, 1991). Cooper & Pau (1987) have found that extraverts showed poorer job adjustment. The easy-going element has also been found to correlate with both depressive and psychosomatic symptoms (Holahan & Moos, 1985, 1986). Furthermore, in a different line of research, strong evidence suggests a reliable connection between extraversion and happiness measures, which in turn is negatively related to psychopathy (Costa & McCrae, 1980; Argyle & Lu, 1990a, b; Lu & Argyle, 1991). Further and more rigorous testing of the direct or interactive effect of extraversion on mental health may yield some meaningful results.

Like extraversion–intversion, neuroticism is another consistently found dimension in the structure of personality (Kline, 1987). Although there has been relatively little research on real- 

life behaviour of stable extraverts/introverts or neurotic extraverts/introverts, according to Eysenck (1967), neurotic introversion is associated with phobias, obsessive–compulsive rituals, anxiety states, neurotic depression, and hysterics. Extraverts are most susceptible to hysteria.

However, neuroticism has been largely conceptualized as a nuisance variable and needs to be controlled in stress research, because neurotics usually show a chronic negative affect and a tendency to report physical symptoms in the absence of actual illness (Smith et al. 1989). Research has also found that at a high level of neuroticism, extraversion is related to somatic symptoms, while introversion is related to psychological symptoms (Sutherland & Cooper, 1990). Looking at the neuroticism as a personality trait which may mediate people’s re- 

action to stress may be more helpful in understanding the process of stress. Lu & Argyle (1991) found a direct effect of neuroticism on mental health in a longitudinal multiple re- 

gression analysis. A further test of the interactive effect will answer the question whether neuro- 

ticism as a personality trait actually exacerbates the impact of life stress.

Given the value of integrating previous dis- 

crete strands of research, this study examines the relationships between major and minor life 

stressors and mental health. In addition, we also test both direct and stress-buffering effects of locus of control, extraversion and neuroticism.

**METHOD**

**Subjects and procedure**

One hundred and two first-year students at the Kaohsiung Medical College took part in this cross-sectional study. Although the college is an independent specialist establishment, it has a number of non-medical related faculties, such as psychology and chemistry. In other words, the campus life is not much different from that in other universities or independent colleges around the country. Subjects completed the questionnaires after they had been in the college for one month.

The sample was composed of 57 males (56%) and 45 females (44%). The subjects’ ages ranged from 17 to 24, with a mean age of 19 (S.D. = 1.4). All respondents were single, never married.

**The questionnaires**

**Stressors**

In this study, indices of stressors included life events, university transition and daily hassles. (a) Life events The Life Events scale was adopted from Holmes & Rahe (1967). Some events were obviously irrelevant to the current sample, such as marriage, and were omitted; some events are relevant to the youth life in Taiwan, such as military service; these were added in. Consequently the final version has 20 major discrete life events. Subjects were also asked to indicate the event’s severity, if it happened in the previous year, on a 3-point scale; an event severity score was then used in later analyses.

(b) University transition This stressor was measured by asking subjects to rate the change ‘going to university’ on an 11-point scale: ‘0’ indicated ‘almost not stressful’, ‘5’ indicated ‘moderately stressful’; while ‘10’ indicated ‘extremely stressful’.

(c) Daily hassles The Daily Hassles Scale was a shortened version of the Hassles Scale (Lu, 1991), adjusted for circumstantial differences of the current young students sample. The final 34 hassles represented minor mundane concerns, such as ‘Misplacing or losing things like books or keys’, ‘Arguments with boy-friend or girl- 

friend’, ‘Not getting on well with class-mates or room-mates’. Subjects were again asked to rate each hassle on a 5-point scale, if it happened in the previous month. A total hassles severity score was then used in later analyses.

**Personality**

(a) Locus of control This personality charac- 

teristic was measured by the Sphere of Control (Pauhlus & Christie, 1981), which gives a total control score. The higher the score, the more internal oriented a control the person is.

(b) Extraversion and neuroticism These personality variables were measured by the well- 

established E and N scales in the EPQ (Eysenck & Eysenck, 1975).

**Mental health**

This was assessed by the Chinese version of the SCL-90-R, named The Brief Symptom Rating Scale (Derogatis et al. 1976). In this study, we will only focus on three subscales, namely depression, anxiety and somatic symptoms.

**RESULTS**

Pearson correlations were computed between demographic variables, stressors, personality characteristics and mental health indicators, the
Table 1. Pearson correlations between stressors, personality and mental health

<table>
<thead>
<tr>
<th>Variables</th>
<th>Def</th>
<th>Anx</th>
<th>Som</th>
<th>Univ</th>
<th>Events</th>
<th>Hassles</th>
</tr>
</thead>
</table>
| University | 0.16 | 0.27** | 0.18 | 0.03 | 0.00  | 0.00*
| Events    | 0.32** | 0.30** | 0.29** | 0.03 | 0.00  | 0.00** |
| Hassles   | 0.31** | 0.22** | 0.30** | 0.01 | 0.55*** | 0.00  |
| Control   | -0.27* | 0.14  | 0.01 | -0.31** | -0.09 | 0.05  |
| Extraversion | -0.13** | -0.13** | -0.21** | 0.04 | 0.02* | 0.12 |
| Neuroticism | 0.03** | 0.59*** | 0.21** | 0.36*** | 0.04  | 0.18  |

* P < 0.05; ** P < 0.01; *** P < 0.001

Table 2. Hierarchical regression predicting depression

<table>
<thead>
<tr>
<th>Variables</th>
<th>R²</th>
<th>R change</th>
<th>Beta</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Events</td>
<td>0.18*</td>
<td>0.18*</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Hassles</td>
<td>0.31**</td>
<td>0.31**</td>
<td>0.30**</td>
<td>0.30**</td>
</tr>
<tr>
<td>Control</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.24**</td>
<td>0.24**</td>
<td>0.24**</td>
<td>0.24**</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.54***</td>
<td>0.54***</td>
<td>0.54***</td>
<td>0.54***</td>
</tr>
</tbody>
</table>

† Indicates a new step in the hierarchical regression.

Table 3. Hierarchical regression predicting anxiety

<table>
<thead>
<tr>
<th>Variables</th>
<th>R²</th>
<th>R change</th>
<th>Beta</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>Events</td>
<td>0.18*</td>
<td>0.18*</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>Hassles</td>
<td>0.31**</td>
<td>0.31**</td>
<td>0.30**</td>
<td>0.30**</td>
</tr>
<tr>
<td>Control</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.24**</td>
<td>0.24**</td>
<td>0.24**</td>
<td>0.24**</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.54***</td>
<td>0.54***</td>
<td>0.54***</td>
<td>0.54***</td>
</tr>
</tbody>
</table>

† Indicates a new step in the hierarchical regression.

Table 4. Hierarchical regression predicting somatic symptoms

<table>
<thead>
<tr>
<th>Variables</th>
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<th>R change</th>
<th>Beta</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>0.06</td>
<td>0.06</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Events</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Hassles</td>
<td>0.13</td>
<td>0.13**</td>
<td>0.05</td>
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<tr>
<td>Control</td>
<td>-0.03</td>
<td>-0.03</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.18</td>
<td>0.18</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.28**</td>
<td>0.28**</td>
<td>0.28**</td>
<td>0.28**</td>
</tr>
<tr>
<td>Univ + Ext</td>
<td>0.27</td>
<td>0.27**</td>
<td>0.27**</td>
<td>0.27**</td>
</tr>
</tbody>
</table>

† Indicates a new step in the hierarchical regression.

DISCUSSION

Effects of stressors

In life stress research, there seems to be a recent trend to move away from life events, and to study daily hassles instead. Some investigators have even suggested that daily hassles are more powerful and useful predictors of mental health than life events. However, very few studies have actually compared directly the effects of the two measures (Burks & Martin, 1985; Rowlinson & Feiner, 1985). This study has incorporated three life stressor indices: major life events, daily hassles, and specific life change - university transition. The results actually supported the notion that different indices of life stressors may serve a compensatory role rather than competing with one another. Evidence came from two series of analyses.

First, intercorrelations among the three stressor indices showed that the university stressor was unrelated with either events or hassles. In other words, the experience of major life events or minor daily hassles did not contaminate students' overall perception of university transition stress. This guarantees the independence of the university stress measure, which makes further results interpretable. However, life events were found to correlate moderately with daily hassles. The correlation can be seen as an indicator that events and hassles are interwoven in the context of a person's life. One may further speculate on the exact mechanisms of this intricate connection. One possibility is that a major life event causes a whole string of daily hassles or difficulties. Another possibility is that a high level of ongoing or chronic hassles or difficulties may exacerbate the effects of an impending life event. Still another possibility is that accumulative daily hassles will eventually bring about a major life event.

Of course, the correlation between life events and daily hassles may also be caused by some inherent personal factors, such as inability to cope. Nobody can ignore the immense importance of coping in the stress process, and in effect there has been much excellent research demonstrating the effects of coping on mental health. Although coping was not empirically measured in this study, the author's working diary as a college tutor for the last 6 years and 4th-year students did provide case-study information. One student had recently been complaining about many daily hassles, especially academic-related difficulties. It did not take long to realize that his family had just suffered a sudden trauma, and he was finding it extremely difficult to get a grip on the situation. The aftermath of the trauma spilled over into his campus life, presumably because he was unable to cope with the precipitating life event. Personal factors, such as coping repertoire and coping effectiveness may determine whether a life event will transform into or create further minor daily hassles. This may be a fruitful line to explore in further research.

Secondly, in multiple regressions, daily hassles were found to be a significant predictor of depression, while life events were significant predictors of anxiety. The fact that university transition stress did not come out in the regression analyses is consistent with previous findings that university stress is more related to homesickness rather than mental symptoms (Lu, 1990). Here, we may have seen the stress-specificity hypothesis revisited; however, an inevitable conclusion to draw is that life events and daily hassles are both important in mental health, yet, their relative importance may be emerged significant. In other words, extraversion showed significant stress-moderating effects on both university transition and daily hassles. However, the nature of these interactions actually indicates a vulnerability effect rather than a buffering effect.
different when different criteria variables are concerned.

Effects of personality

This study examined the effects of personality on both stress perception and mental health. There has been suggestive evidence that some specific personal resources may influence stress appraisal and/or coping (e.g., Strube & Boland, 1986; Petrosky & Birkimer, 1991). However, very few studies have attempted to examine the relationship between personality and reported stressors (Strube et al. 1985; Lu, 1989). This study has found that both locus of control and extraversion negatively correlated with perceived university stress, whereas neuroticism positively correlated with perceived university stress. In other words, people with internal locus of control and extraversion seem to view the university transition as less stressful while neurotics view the same transition as more threatening. This fits well with Rotter’s original thesis (1966), that people with internal locus of control tend to view life changes as challenges rather than threats, and therefore as being stressful. Extraversion correlating at 0.56 (P < 0.001) with locus of control in one previous study (Lu & Argyle, 1991), presumably has similar protective effects. Neuroticism, on the other hand, is generally found to correlate with external locus of control (Petrosky & Birkimer, 1991).

Consistent with general findings in the literature (e.g., Smith et al. 1989), neuroticism affected symptoms across the board in this study. However, neuroticism has also been found to be stable over time (McCrea & Costa, 1985) and stress level (Orem, 1983). Neuroticism would not explain the effects of life events on anxiety and daily hassles on depression which were found in this study. Neither would it explain the interactive effects of extraversion on somatic symptoms. Extraversion was negatively correlated with psychological distress, i.e., depression and anxiety. However, in the case of somatic symptoms, extraversion turned into a vulnerability factor. In other words, when extraverts did perceive higher university stress, or experience higher levels of daily hassles, they suffered more physical symptoms. Do these intriguing results point to the possibility that the protective effects of personality resources in one sphere of mental health may be counterbalanced or weakened by their costs in another mental health sphere? More research is needed to settle the issue.

In conclusion, this study has shown that (1) life events, and daily hassles are both important in mental health; (2) locus of control and extraversion correlated negatively while neuroticism correlated positively with perceived university stress; and (3) neuroticism had a main negative effect on all symptom reporting, while extraversion had a vulnerability effect on somatic symptoms.

REFERENCES