Stress, Self-Efficacy, Social Support, and Coping Strategies in University Students

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ABSTRACT

The goal of this study was to examine the relationship of self-efficacy, social support, and coping strategies with stress levels of university students. Seventy-five Education students completed four questionnaires assessing these variables. Significant correlations were found for stress with total number of coping strategies and the use of avoidance-focused coping strategies. As well, there was a significant correlation between social support from friends and emotion-focused coping strategies. Gender differences were found, with women reporting more social support from friends than men. Implications of these results for counselling university students are discussed.

RÉSUMÉ

L'objet de cette étude est d'examiner les rapports entre l'auto-efficacité, le soutien social et les stratégies d'adaptation d'une part et le degré de stress des étudiants universitaires d'autre part. Soixante-quinze étudiants en sciences de l'éducation ont rempli quatre questionnaires évaluant ces variables. On a pu observer des corrélations significatives entre le stress et le nombre global des stratégies d'adaptation et entre le stress et l'emploi de comportements d'évasion en tant que stratégies d'adaptation. On a également constaté une corrélation importante entre le soutien social de la part d'amis et les stratégies d'adaptation fixées sur les émotions. Des différences entre les genres sont apparues ; notamment, les femmes indiquent avoir reçu un soutien social plus marqué de leurs amies que des hommes. Les auteurs étudient l'incidence de ces résultats sur les services de counseling offerts aux étudiants d'université.

Stress has been identified in higher education as negatively affecting students because they can become overwhelmed with managing all of their responsibilities (Vlisides, Eddy, & Mozie, 1994). In turn, the stress that students experience may have a detrimental effect on their academic performance (Sloboda, 1990). As well, academic stress has been related to counselling concerns such as anxiety and depression among university students (Ragheb & McKinney, 1993).

Stress can be described as including external factors, internal factors, or an interaction between the two (Bernard & Krupat, 1994). The model that formed the basis for the current study was Lazarus and Folkman's (1984) transactional model of stress. This model was chosen because it attempts to conceptualize the complexity of stress by incorporating the relationship between the individual

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and the environment through the continual interaction of internal and external factors. These authors suggest that stressors have the potential to elicit different reactions among individuals because of their subjective experience of the stressor. These different reactions are based on individuals using two forms of cognitive appraisal: *primary appraisal* involving evaluating the threat of the situation (e.g., irrelevant, benign, threatening), and *secondary appraisal* involving evaluating one's available resources for coping with the stressful situation (e.g., seek more information, control impulsivity). Nelson, Karr, and Coleman (1995) tested the hypothesis that how people perceive stress can determine the impact of stress. They found that optimists reported fewer daily hassles than pessimists, and viewed events in their lives as less stressful, which provides support for the transactional model of stress.

Lazarus and Folkman (1984) view stress from the perspective of minor or daily events. Although some studies on stress (e.g., Wagner, Compas, & Howell, 1988) address the impact of major life events (e.g., loss of intimate partner, major illness, moving), other studies (Kohn et al., 1994; Perrez, 1992) have found that everyday "hassles" or daily events (e.g., conflict with partners, friends, family, struggling to meet academic standards, being betrayed by friends or rejected socially) negatively affect physical and mental health more than major life events. Because these are some of the issues brought by students to university counselling centres, the current study assessed stress as typical, daily hassles that are subjectively experienced by university students.

Much research has been conducted on stress in university students. Higher stress levels have been associated with greater symptomatology, depression, lower well-being (e.g., Frazier & Schauben, 1994; McClain & Abramson, 1995) and test anxiety (e.g., Abouserie, 1994; Gadzella, Masten, & Stacks, 1998; Sloboda, 1990). Nelson et al. (1995) report that first- and fifth-year students experienced higher stress than students in middle years. They hypothesize that first year students may be experiencing more stress because of the major life transition from high school to university, while fifth-year students may have fears about life decisions after graduation.

There are many variables that can have an impact on how students deal with their stress. For the current study, the following variables were chosen for inclusion because previous research has shown them to be related to stress and because they represented various components of the transactional model of stress (Lazarus & Folkman, 1984): a cognitive variable (self-efficacy), a social/affective variable (social support), and a behavioural variable (coping strategies).

Self-efficacy has been associated frequently with stress in students and is defined by Bandura (1986) as a belief in one's capability or skill to attain a particular goal or execute a particular behaviour. Bandura proposed that self-efficacy can explain, not only the choice or level at which an activity is pursued, but as well, the likelihood of successful completion of the activity. Self-efficacy has been found to have a significant negative correlation to level of stress (Hackett, Betz, Casas, & Rocha-Singh, 1992; Newby-Fraser & Schlebusch, 1997), suggesting that those who have a higher self-efficacy also report a lower level of stress. Therefore, it would appear that higher self-efficacy may act as a moderator of stress for university students.

Besides considering the cognitive variable of self-efficacy, it is also important to consider how social factors impact the stressful experiences in the lives of students. One such variable is the social support that university students receive from friends and family. Social support has been defined by Shumaker and Hill (1991) by making a distinction between structure, which refers to the existence and types of connections within a social network, and function, which refers to the types of resources provided. A further distinction between friend support and family support is considered important because different individuals may rely on, or benefit from, friend or family support to a different extent (Procidano & Heller, 1983). Social support has generally been found to promote psychological well-being, as well as to buffer the effects of stress. Two studies (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Elliott, Herrick, & Witty, 1992) report significant negative correlations between higher social support and lower levels of stress or daily hassles in university students. Women have also been found to have higher levels of social support than men (Shumaker & Hill, 1991). Hence, social support appears to be an important moderator of stress in university students.

Although it is helpful to understand cognitive correlates (self-efficacy) of stress, it is also necessary to examine behavioural responses or the coping strategies that students use to deal with their stress. Coping strategies can be defined as types of conscious adaptive responses consistently applied to a broad range of stressful events (Kohn, Hay & Legere, 1994). Three general strategies or styles of coping with stressful situations have been identified by Kohn et al. (1994): (a) problem-focused coping, directed at remedying a threatening or harmful external situation; (b) emotion-focused coping including ventilating, managing, or relieving one's emotional response to such a situation; and (c) avoidance-focused coping involving attempts to remove oneself mentally or even physically from threatening or damaging situations. Research by Kohn et al. (1994) found that both problem-focused and emotion-focused coping were significantly related to positive adaptation to stress, while avoidance-focused coping was related to both positive and negative adaptation to stress. Other researchers (Bowman & Stern, 1995; Dunkley et al., 2000; Oakland & Ostell, 1996) have found a strong positive correlation between number of hassles and avoidant coping. However, all types of coping strategies have been found to moderate stressful experiences.

Finally, gender is another important variable related to how university students deal with stress. Previous research shows that women report higher levels of stress than men (Baum & Grunberg, 1991), more often view their stress more negatively than men (Brazelton, Greene, & Gynther, 1996), and are more likely to report their stress as unacceptable (Campbell, Svenson, & Jarvis, 1992). As well, when types of stressors were investigated, Arthur (1998) found that female students reported greater concerns about managing relationships than did males. However, Baum, and Grunberg (1991) suggest that these differences may be due to women being more willing to report stress, as well as men and women appraising stressors differently due to different socialization patterns, hence, resulting in different socially derived needs or roles.

Gender differences also exist in the coping strategies used by men and women to deal with stress: men used more avoidance-focused coping than women (Berzonsky, 1992); men used more problem-focused coping and women used more emotion-focused coping (Ptacek, Smith, & Zanas, 1992); and women sought more emotional support than men (Ptacek, Smith, & Dodge, 1994). However, Ptacek et al. (1992) suggest that these gender differences in coping behaviour are likely due to differences in gender socialization rather than being due to inherent differences in coping behaviour of men and women.

Frazier and Schauben (1994) note that most clients in university counselling centres are women, likely due to the fact that women have higher help-seeking attitudes than men (Leong & Zachar, 1999). For some of these women, stress will be one of the issues that they present to counsellors. For these reasons, the current study will examine possible gender differences in reactions to stress.

The purpose of the study was to clarify some of the issues students have in relation to stress by assessing three correlates of stress: self-efficacy, social support, and coping strategies. Although previous research has examined these variables individually in relation to stress, they have not all been combined in the same study. It was hoped that the results would provide counsellors with clues about how to respond to university students who need help in dealing with the stress of their daily lives. Based on previous research, it was hypothesized that there would be: (a) negative correlations for stress with self-efficacy and perceived social support from friends and family; (b) a positive correlation between stress and total coping strategies; (c) negative correlations for stress with problem-focused and emotion-focused coping strategies, and a positive correlation between stress and avoidance-focused coping strategies; and (d) a higher level of stress for women than for men.

METHOD

Participants and Procedure

The sample consisted of 75 students (54 women, 21 men) completing a fifth-year, undergraduate education degree at a large Canadian university. Participants were recruited by the first author from two sections of an educational psychology course with a total of 158 students for a 33% return rate. The age range of the participants was 22-48, with a mean age of 29 years. The students' program was a stressful, compact (8 months), professional, and academic program that combined academic time at the university and practice teaching time in local schools. Interested students received packets with four instruments, completed them on their own time, and returned them to the researcher.

Instruments

ICSRLE. The Inventory of College Students' Recent Life Experiences (ICSRLE) (Kohn, Lafreniere, & Gurevich, 1990) measures the influence of everyday stressors on the physical and mental health of university students

specifically. It consists of 49 items rated on a 4-point Likert scale for the frequency of participants' experiences with hassles over the past month, with 1 = not part of my life and 4 = very much part of my life. Sample items include: "being let down or disappointed by friends," and "not enough time to meet your obligations." Because individuals' subjective experience of stress is an essential component of the transactional approach to stress, another 4-point Likert scale was added by the researchers to measure students' subjective experience (degree of stress) of hassles-based stress, with 1 = not at all stressful and 4 = very stressful. Total possible score for both scales was 196. Internal consistency for the ICSRLE is .89, with the scores for men and women being .88 and .89 respectively (Kohn et al., 1990). For the current sample, the internal consistency for frequency of stressful life events was .89, and for the degree of stress was .91. Therefore, both the original scale of the ICSRLE and the added scale had high reliability. Evidence of criterion validity for the ICSRLE is provided by a correlation of .59 with the Perceived Stress Scale (Cohen, Kamarack, & Mermelstein, 1983).

GSE. The Generalized Self-Efficacy Scale (GSE) (Tipton & Worthington, 1984) measures people's expectations that they can perform competently across a broad range of situations which are challenging and require effort and perseverance. The instrument consists of 10 items, with a total possible score of 70 (e.g., "Once I set my mind to a task, almost nothing can stop me"). The total score was used as a self-efficacy measure. On this scale, a lower response indicates higher self-efficacy. Internal consistency for the GSE is .77 (Lennings, 1994) and for the current sample was .73. Tipton and Worthington (1984) found evidence of construct validity when people with low GSE scores expended more effort and persevered longer on two tasks than did people with high GSE scores.

PSS-Fr; *PSS-Fa.* The Perceived Social Support Scale from Friends (PSS-Fr) and Family (PSS-Fa) (Procidano & Heller, 1983) assess the extent to which individuals perceive that their needs for support, information, and feedback are fulfilled by friends and by family. The PSS-Fr and PSS-Fa are separate questionnaires which consist of 20 items each and the total scores of both measures were used to measure social support in university students (e.g., "I rely on my family for emotional support"). The PSS-Fr and PSS-Fa have been found to be internally consistent with Cronbach alphas of .88 and .90, respectively (Procidano & Heller, 1983). The alpha coefficients of reliability for the current sample were .92 on the PSS-Fr and .89 on the PSS-Fa. Support for construct validity is provided by the two instruments distinguishing between friends and family in the provision of social support (Sarason, Shearin, Pierce, & Sarason, 1987).

WCQ. The Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1988) assesses thoughts and actions that individuals use to cope with the stressful encounters of everyday living. The WCQ asks participants to focus on a specific stressful episode and then respond to 66 items on a 4-point scale with 0 = not used and 3 = used a great deal The total score was used as an overall measure of coping strategies, which included eight scales. Four of the eight coping scales were also examined separately to assess planful problem solving (problem-

focused coping; 6 items), seeking social support (emotion-focused coping; 6 items), escape-avoidance and distancing (avoidance-focused coping; 14 items).). The last two scales were combined into one scale because items in both scales were indicative of avoidance-focused coping. Examples of items include "I tried to analyze the problem in order to understand it better (problem-focused); "I talked to someone about how I was feeling"(emotion-focused); "I tried to forget the whole thing" (avoidance-focused). Coefficient alphas for the WCQ range from .61-.79 which are higher than alphas reported for most other measures of coping processes (Folkman & Lazarus, 1988). Internal consistencies for the current sample were as follows: total score, .91, problem-focused coping, .56, emotion-focused coping, .81, and avoidance/ distancing-focused coping, .64. Evidence of construct validity is provided by Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) who calculated the mean correlation of each coping scale across five stressful situations in a study of married couples and found a range of .17-.47.

RESULTS

The focus of this study was to determine the subjective experience of stress encountered by university students in relation to their concept of self-efficacy, their perceived level of social support from friends and family, and the types of

TABLE 1

Means and Standard Deviations of Scales and Subscales

	Males		Females		Total Score	
Variables	*M*	*SD*	*M*	*SD*	*M*	*SD*
Recent Life Events						
Stress Frequency	93.9	22.3	95.1	15.3	94.7	17.4
Degree of Stress	86.9	24.1	90.0	17.7	89.1	19.5
Self-Efficacy	29.0	6.0	29.9	8.4	29.6	7.8
Social Support						
Friends	12.3	4.4	16.2	3.8	15.1	4.3
Family	14.0	5.4	14.3	6.0	14.3	5.8
Ways of Coping						
Problem Coping	8.7	3.8	10.0	3.5	9.6	3.6
Emotion Coping	5.5	4.0	7.7	4.7	7.1	4.6
Avoidance Coping	12.0	4.8	11.2	6.0	11.4	5.7
Total Score	72.0	23.6	72.9	27.6	72.7	26.4

coping strategies they use to deal with stress. Means and standard deviations for all of these variables are presented in Table 1. In relation to stress, students had a mean of 94.7 out of 196 for frequency of stress and 89.1 for degree of stress. In other words, they averaged 2.0 out of a 4-point scale which was equivalent to feeling "only slightly stressed" over the past month.

The first hypothesis of this study predicted that there would be negative correlations for stress with perceived self-efficacy and level of social support from friends and family. The correlation coefficients were not significant for frequency and degree of stress with self-efficacy or perceived social support from family and friends. Correlations between all variables are presented in Table 2.

The second hypothesis postulated a positive correlation between stress in university students and coping strategies. Significant positive correlations were found for number of coping strategies students used with frequency of stress (r = .48, p = .01) and degree of stress (r = .42, p = .01), indicating that students with higher stress levels used more coping strategies of all kinds.

TABLE 2

Pearson Correlations Among Self-Efficacy, Social Support, and Coping Strategies (n = 75)

Variables	1	2	3	4	5	6	7	8	9
1. Frequency of Stress	—								
2. Degree of Stress	.89**	—							
3. Self-Efficacy	2.08	-.04	—						
4. Social Support Friends	-.05	.01	-.16	—					
5. Social Support Family	-.18	.16	.01	.19	—				
6. Ways of Coping (Total Score)	.45**	.42**	-.22	.18	-.06	—			
7. Problem-Solving (WCQ)	.00	.09	-.13	.16	-.04	.49**	—		
8. Emotion-Focused (WCQ)	.19	.18	-.15	.28*	.11	.60**	0.31**	—	
9. Distancing/Avoidance (WCQ)	.39**	.39**	.00	.02	-.13	.76**	.20	.24*	—

** $p < 0.01$
* $p < 0.05$

The third hypothesis proposed that those university students who used problem-focused coping strategies and emotion-focused coping strategies would have lower levels of stress (negative correlation) and those who used avoidance-focused coping strategies would have higher levels of stress (positive correlation). For frequency of stress and degree of stress, correlations were not significant for problem-focused coping and emotion-focused coping. However, a significant positive correlation was found for avoidance-focused coping with both frequency and degree of stress ($r = .39$, $p = .01$). There was also an interesting significant correlation between emotion-focused coping and perceived social support from friends ($r = .28$, $p = .05$), indicating that students who reported more support from friends also used more emotion-focused coping strategies, such as getting professional help and talking to someone to find out more about the situation.

The fourth hypothesis predicted that women would report higher levels of stress than men. To test this hypothesis, an independent samples *t*-test was performed with scores of men and women on degree of stress. The *t*-test was not significant, $t(73) = -.61$, $p = .55$, due to very similar means for men and women, 86.9 and 90.0, respectively. An examination of the means for perceived social support from friends revealed a potential difference between men and women. To determine if there was a significant difference between men and women, an independent samples *t*-test was performed: $t(73) = -3.79$, $p = .01$. Women reported more social support from friends (16.2) than men reported (12.3).

DISCUSSION

The current study was conducted to explore the issue of stress among a nonclinical sample of university students by examining how the subjective experiences of stress in university students related to their sense of self-efficacy, perceived social support, and use of coping strategies to deal with stressful events. Because the "degree of stress" scale was a measure of the subjective experience of stress, the correlations with that scale (rather than frequency of stress) are the focus of the discussion.

Contrary to previous research (Elliot et al., 1992; McCarthy, Pretty, & Catano, 1990; Newby-Fraser & Schlebusch, 1997; Solberg & Villarreal, 1997), there were no significant associations for stress with self-efficacy and social support in the current sample. It is difficult to make comparisons between previous research and the current study because previous research used different measures for self-efficacy and social support. However, the means on these variables indicated that students in the current study had high self-efficacy, high social support from friends and family, and a moderate level of stress. Thus, there may have been a ceiling effect for self-efficacy and social support with small variability in the variables. Even though these students were enrolled in a stressful educational experience, it may be that because they were high-achieving students (with entry averages of B+ or higher), they believed in themselves and their ability to cope

with stress. They also may have had high social support from friends because they were in a supportive educational environment in some small classes that provided opportunities for them to help each other and feel part of a professional, academic group.

It was hypothesized that there would be a significant positive relationship between total number of coping strategies and stress which was supported by the results. Similar findings were reported by Oakland and Ostell (1996). Students in the current sample reported using more coping strategies when their perceived stress was higher. This finding provides partial support for the transactional model of stress because students reported using a variety of cognitive and behavioural coping strategies to deal with their stress.

Although stress did not correlate negatively with either problem-focused coping or emotion-focused coping, as hypothesized, a significant positive relationship between stress and avoidance-focused coping strategies was found which is consistent with previous research (Bowman & Stern, 1995; Dunkley et al., 2000; Oakland & Ostell, 1996). In the current sample, those students experiencing greater stress also used more avoidance-focused coping strategies. It is interesting that avoidance-focused coping, a type of coping that may provide short-term relief from stress but not long-term relief, was used by students who reported higher stress. One wonders if that coping style could contribute to feelings of stress. It is likely that problem-focused or emotion-focused coping would be more effective coping strategies for university students over time. However, it is important to point out that, overall, these students used avoidance-focused coping less often than emotion-focused or problem-focused coping (means of .8, 1.2, and 1.6 respectively, with 1 = used somewhat).

Another significant positive correlation was found between emotion-focused coping and perceived social support from friends. This result is not surprising because seeking social support comprises a large portion of the definition of emotion-focused coping, which involves regulating and ventilating stressful emotions (Folkman et al., 1986). However, it is helpful to know that students who have a good social network are more likely to use that network to help deal with their stress. This finding may provide direction for counsellors who are working with isolated, stressed students to help them develop more supportive social networks as one way of handling their stress.

Based on previous research, it was expected that women would report higher stress levels than men. However, there was no significant difference between men and women in their stress levels which differs from previous findings (Abouserie, 1994; Arthur, 1998). This result may be due to the small number of men in the sample, the women in the sample experiencing less stress than other samples because of developing an ability to deal with stress in a competitive environment, and/or the sample being more homogeneous across genders in relation to stress because of being in the same academic program.

Consistent with previous research (Arthur, 1998; Wohlgemuth & Betz, 1991), women reported more social support from friends than men. Wohlgemuth and

Betz (1991) found that women reported more socially supportive behaviours being done on their behalf and more satisfaction with the support they received from their friends than did men, while Arthur (1998) found that female students reported greater concerns about managing relationships than men. It is likely that female socialization makes it easier for women than for men to seek help and social support from friends, as well as from counsellors.

Before the implications of these results can be discussed, the limitations of the study must be addressed. First, self-report measures were used, which can lead to either exaggeration or minimization of responses. These measures also used a forced-choice format, which may not have captured accurate responses from some students. Second, the Generalized Self-Efficacy Scale (Tipton & Worthingon, 1984) has not been used often in research and may focus more on motivation and persistence rather than on Bandura's (1986) definition of self-efficacy as a belief in one's capacity to execute action. Third, the current study did not include a measure of physical and psychological symptoms which might have contributed to explaining students' subjective experiences of stress. Finally, the study used a nonclinical student sample who were likely less stressed than clinical student samples.

Even though the study had limitations, it may still be possible to draw some implications for counsellors working with education students. It is helpful to know that successful students in a Faculty of Education use more coping strategies when their stress levels are higher. For example, counsellors may want to encourage students to increase their repertoire of coping strategies to deal more effectively with their stress. However, because students with higher stress levels also used more avoidance-focused coping strategies, it would be beneficial for counsellors to help students identify whether they use avoidance strategies, and if so, whether they perceive them to be helpful in the long term.

Sloboda (1990) argues that counsellors should support coping strategies that are: (a) ones that students naturally use, (b) ones that are judged effective, and (c) ones which actually reduce stress. It is likely that avoidance strategies are not the most effective nor helpful in reducing stress and that students may have used them for other reasons, such as previously formed habits and procrastination. Additionally, Campbell et al. (1992) believe that counsellors should focus on the blocks to managing stress that students perceive, as well as being sensitive to gender and age differences in what obstacles students experience. Men and women, younger and older students are likely to perceive different obstacles in dealing with their life stressors.

Brown (1992) offers even more specific suggestions to counsellors and university staff for helping students reduce their levels of stress: teach students that stress can be more manageable if it is distributed across the semester, engage students in solving stress by examining which situations have been stressful for them in the past, help students deal with the everyday problems of time management that lead them to procrastinate, and help students develop and maintain the motivation and appropriate behaviour to reach long-term goals. Grayson

(1991) believes that traditional, noninterventionist psychotherapeutic approaches may not work on their own and may need to be supplemented by more direct guidance and practical suggestions for dealing with stress. For example, Brown (1992) suggests that workshops or parts of class periods early in the semester provide a setting in which counsellors and instructors can help students in proactive ways to predict and control some common sources of stress. In other words, besides counsellors needing to be informed about how to treat those students who present with stress, universities also need to develop educational strategies to help those students who do not seek counselling to deal with stress.

The finding that women had higher social support from friends than men may suggest that counsellors could be helping men to improve their social networks. Corey and Corey (1997) believe that individual therapy may not be the best mode for helping men. Rather, group counselling may be more beneficial in providing men with a safe context to explore gender role expectations and how their socialization has influenced their lives. As well, Winstead, Derlega, Lewis, Sanchez-Hucles, and Clark (1992) found that friendships in which one or both persons are female (i.e., female-female and male-female) were described as more intimate and that both genders reported being less lonely when they spent time with female friends. Thus, it may be helpful for counsellors to encourage male clients to establish supportive relationships with both genders, which may in turn help men deal with stress more effectively.

In conclusion, while this study did not provide support for the transactional model of stress by finding an association between external and internal factors with stress, partial support for the model came from students reporting using a variety of cognitive and behavioural coping strategies, as well as experiencing stress subjectively. Thus, counsellors need to allow students to define stress in their own terms and gather information about students' subjective experience of stress. Although some events may seem minor to others, some students will perceive them as being quite stressful (Frazier & Schauben, 1994). Not only do students perceive stressors differently, they also cope with stress in different ways as indicated by the students in the current study using more coping strategies when their level of stress was higher. However, the finding that students who attempted to distance themselves and avoid stress reported higher stress levels may suggest that some of their coping efforts were not as effective as other strategies. Therefore, treatment of stress in university students needs to focus on helping them establish coping strategies that are effective and maintained throughout the school year. As well, universities need to develop educational strategies and health promotion initiatives to help students learn more about their sources of stress and how to deal with them before they become unmanageable.

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