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THE UNIVERSITY OF ALBERTA

GRADUATE STUDENTS AND STRESS:
A LIFE EVENTS PERSPECTIVE

BY

PATRICIA LYNNE HAMES-SHEEHY

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF DOCTOR OF PHILOSOPHY

IN

COUNSELLING PSYCHOLOGY

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In memory of JC320, who made the difference.

ABSTRACT

Many identifiable stressors can be associated with commencing and completing graduate studies. Recent research has focused on the relationship between stressful life events and both physical and emotional symptomatology.

The present study utilized the Stress Audit Questionnaire as an instrument for quantifying levels of stress among graduate students in six departments at Queen's University in Kingston, Ontario. In addition, interviews were conducted with 10% of the subjects to gather qualitative data on the experience of being a graduate student.

A quantitative analysis indicated that the subjects in this study exhibited scores on the Stress Audit Questionnaire that were average when compared to the normative sample. The quantitative results also indicated that there were differences between the departments, between the sexes, and on the variable marital status.

The qualitative results revealed individual student experiences which were unique but which also contained similarities. Common issues related to time as a specific stressor, time management strategies, leisure activities as coping strategies, reflections on being a graduate student and the students' outlook on their future in a professional work environment.

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I. INTRODUCTION TO THE STUDY

A. Background to the Study

Yablon, Maykow, Rosner and Levy (1984) state, "stress, a popular term in lay and professional literature, is a complex concept about which there is little general agreement and a vast amount of literature" (p.20). The various opinions emerging from the study of stress, result in numerous definitions of the concept. Definitions range from Selye's (1982) 'stress as a response' premise to Budzynski and Peffer's (1980) perception of 'stress as a discomforting tension, conflict or psychological pressure', to Lazarus' (1982) 'interactional' viewpoint. The definitions, in part, have changed with the evolution of the concept of stress from its origins in the field of physics to it's current applications in the behavioral sciences.

The study of the concept of stress in human beings has followed a path of physiological and psychological investigation. Contemporary psychological investigations have employed life events methods in the exploration of stress in humans. The present study utilizes a life events perspective and favours the definition put forth by Miller, Smith and Mehler (1986) in their biobehavioral model of stress. They define stress as:

The dynamic state of tension that is created between an organism or structure and its environment (internal or

external) when said organism, or structure, responds to the demands and pressures of said environment (internal and/or external) in order to maintain its integrity (p.1).

Implicit in the biobehavioral model, is the recognition that precipitating events, whether stressful or not, will result in unique responses from different individuals. Their unique interaction with the event will determine their response and consequently the effect that the event will have upon them. In other words, people respond to events in their own way and what is stressful to one is not necessarily stressful to all. Hence, there is a need to recognize that stress is a product of a person's perception and internal processing, as well as a response to an event.

There is a large body of literature suggesting that certain life events or life transitions are possible causal factors for stress in some people. Authors who support this notion include Cole (1985); Dohrenwend, B.P. and Dohrenwend, B.S. (1974) and Monroe (1982). Two of the major contributors to this body of literature are Holmes and Rahe (1967), who posit that any major life event which requires adjustment is stressful, regardless of whether or not the event is pleasant. Some of the life events considered to be possible stressors by Holmes and Rahe include death, divorce, personal finances, vacation, Christmas and outstanding personal achievement.

Beyond the recognition of certain life events as stressful, there has been extensive research focusing on the relationship between stressful life events and both physical and psychological illness. Many authors such as Dohrenwend, B.S., Dohrenwend, B.P, Dodson and Shrout (1984); Cole (1985); Frank, Van Valin and Weinstein (1982); Lazarus (1983) and Miller, Ross and Cohen (1982) have studied and identified relationships between levels of stress and health-related variables such as psychological, somatic and physical symptoms.

Social relationships and their relevance to psychological and physical well-being have also been the focus of many studies examining stress. The literature contains a number of references highlighting the role of social support in alleviating the negative effects of stress. Examples of social support systems include; friends, lovers, marriage partners and community relationships. Haan (1982), Lieberman (1982) and Wills and Langner (1980) are among those who suggest that people who have good social support systems are less likely to experience negative effects when exposed to potentially stressful life events. Turner (1983) suggests that, "variations in social support or social support networks are one factor that importantly influences susceptibility to psychological distress and illness" (p.106).

Graduate Students, Life Transitions and Stress

As with any stage of life, there are many life transitions required to become a student in a graduate or professional department at a university. These transitions can include changes in some of the following; residence, financial status, personal habits, eating habits, sleeping habits, social activities and personal achievement.

Utilization of Holmes and Rahe's Social Readjustment Rating Scale for an individual who changes residence and leaves behind a social support system in order to undertake personally financed studies could yield a potential score of 250. According to Yablon, Maykow, Rosner and Levi (1983), a person with a score of between 200 and 299 on this scale has "a moderate or greater than 50% chance of developing a change in health status" (p.21).

It is acknowledged that certain life events are stressful to some and also that stress can lead to physical or psychological disorders. Therefore, as a group, graduate students can be exposed to a set of life changes which may produce stress and potentially lead to illness or dysfunction. In other words some of the life events and transitions that are associated with being a graduate student, may in fact create stress.

Physiological and psychological illness have frequently been related to levels of stress in the current literature dealing with graduate students. Goplerud (1980) states that,

"given the substantial empirical support for links between major life changes and a long list of health and emotional disorders, it is not surprising that entrance to graduate school also marks the beginning of a period of high risk for physical and psychological problems among first year graduate students" (p.283). Also, Arnold and Jensen (1983), Bjorksten, Sutherland, Miller and Stewart (1983) and Goodman, Sewell and Jampol (1984) refer to the wealth of clinical information which indicates psychological stress, inhibited learning and a resultant need to seek counselling among university students in general.

In light of the limited amount of literature dealing solely with graduate students as a unique group, the literature review for this study was expanded. The assumption was made that the stressors and the environment of professional school students would be similar to that experienced by graduate students, thus, findings presented in papers on medical, dental, or law student stress could be applicable to a graduate student population.

B. Purpose of the Study

With the previous discussion in mind, it is suggested that the relationship between life events, stress and illness is worthy of inquiry. To go one step further, it can be reasoned that the investigation of life events, stress and illness in a graduate student population is also worthy of

inquiry. Therefore, the present study was designed to investigate these relationships with a three-fold purpose.

First, the purpose was to examine the lifestyle of students in a post-graduate program with regard to the amount of stress they experience and the number of physical, somatic and psychological symptoms they exhibit. The intent was to answer the question: To what extent do graduate students experience stress and exhibit symptoms of stress?

With reference to specific lifestyle information concerning vulnerability, nutrition and exercise, the following question was of interest. What are the relationships between levels of stress, symptoms of stress and the measurements of exercise, nutrition and vulnerability to stress?

Secondly, the purpose was to gain a broader picture of the patterns of stress exhibited in a post-graduate population. Related to this purpose was the question: How do levels and symptoms of stress as well as lifestyle differ amongst the various subgroups of a graduate student population? The term subgroup was used to describe the sample when it was divided and grouped by department, marital status, sex, age, thesis/non-thesis, etc..

Thirdly, the purpose was to gather qualitative data through personal interviews with graduate students concerning their lifestyles and experience of stress. The intent was to obtain information regarding both social support and coping

resources as well as possible relationships with levels or symptoms of stress in the students' lives, using a method which previously had not been reported in published literature focusing on graduate student stress.

C. Justification for the Study

The link between life events, stress and illness is acknowledged, as is the fact that embarking on a journey of graduate studies can expose an individual to potentially stressful events and activities. Therefore, if through the measurement of levels and symptoms of stress, in conjunction with interviews of individual graduate students' experiences with stress, relationships can be established between the contributing variables, then hopefully some insight can be gained into ways of dealing with the negative consequences of stress.

D. Organization of the Thesis

The purpose of the study was briefly introduced in this chapter. Relevant literature was reviewed in Chapter II and methodology and design was explained in Chapter III. The findings and results of the quantitative data were presented in Chapter IV, while the qualitative results were given in Chapter V. In Chapter VI research findings, conclusions and implications for further research were discussed.

II. RELATED LITERATURE

The following literature review provides background information on the process of defining and measuring stress prior to the introduction of research on the life events approach to the measurement of stress. Subsequent to the life events narrative is the presentation of lifestyle and health information which focuses on nutrition, exercise, social support and coping. Following that, research on stress and graduate students from a life events perspective is given and includes a discussion of sources and symptoms of stress, marital status and gender differences, social support, lifestyle, and coping. The final topic presented is research related to stress in professional work environment.

A. Definition and Measurement of Stress

Research on stress in the last three decades has resulted in a proliferation of definitions (Elliot & Eisdorfer, 1982). According to Cameron and Meichenbaum (1982) there does not appear to be notable progress in establishing a concise definition of stress. Beach (1950) noted: "if the word is going to refer to everything from homeostatic mechanism...to cerebral activity...we are apt to arrive at a very inclusive but equally indefinite concept" (cited in Cameron & Meichenbaum 1982, p.695).

According to Everly and Rosenfeld (1981) the term

originated in the field of physics, where it referred to any strain, pressure, or force applied to a system. However, in the allied health fields, the term was first introduced by Hans Selye in 1926, who most recently defined stress as: "the nonspecific response of the body to any demand" (1982, p.v.).

Selye's definition has been challenged. Van Dijkhuizen (1980) reported finding at least 40 definitions of the concept in the literature. A review of the literature for the current study also yielded several diverse definitions.

Budzynski and Peffer (1980) define stress as a state of discomforting tension, conflict, or psychological pressure. Hicks, Okonek and Davis (1980) define stress as: "that stimulus which can produce anxiety, either externally (social pressures, publication deadlines) or internally (physical illness such as hyperthyroidism)" (p.429). Anderson (1978) suggests that stress is any stimulus which demands adaptation on the part of the organism involved.

Holroyd and Lazarus (1982) define stress as: "relationally by reference to both the person and the environment. Psychological stress requires a judgement that environment and/or internal demands tax or exceed the individual's resources for managing them" (p.22). Lazarus' (1982) definition is similar to that of Cox (1978) and both are essentially related to an interactional viewpoint. According to Cox (1978): "stress is an individual's psychological and physiological response to a situation that

approaches or exceeds the person's perceived ability to cope with that situation" (cited in Hiebert, 1985, p.12) An incorporation of the previously mentioned definitions denotes stress as a result of an individual's interaction with the demands of life and the individual's ability or inability to cope with the experience.

The definition of stress utilized in the present study is one advanced by Miller, Smith and Mehler (1986) in their biobehavioral model of stress, where stress is defined as:

The dynamic state of tension that is created between an organism or structure and its environment (internal or external) when said organism, or structure, responds to the demands and pressures of said environment (internal and/or external) in order to maintain its integrity (p.1).

These authors have attempted to integrate aspects of other models to present a more unified concept of stress. An elaboration of the biobehavioral model follows in the life events discussion in this chapter.

There are many instruments used to measure stress, be it physiological, psychological or stress-specific symptoms. Initially, stress measurement focused upon physiological indicators to measure stress responses in human beings. A summary of physiological measures as compiled by Endler and Edwards (1982) includes: skin resistance and potential, heart rate, blood pressure, blood volume, respiratory rate,

volume of saliva, gastric motility, pupillary diameter, muscular tension, brain waves, and adrenal hormones.

A divergence from the physiological measurement of stress occurred with a choice to measure stress from a psychological perspective. Psychological measurement of stress incorporated the use of tests and instruments to measure psychological constructs related to stress, such as anxiety or depression, or to measure the "psychological effects" of exposure to stress. Presently, there is a myriad of such tests and instruments utilized to measure psychological states and traits.

The Minnesota Multiphasic Personality Inventory (MMPI) is a widely used instrument for assessing the effects of long-term stress on the personality structure of an individual (Hathaway & McKinley, 1967). Other psychological instruments used for measuring stress include: the Sixteen Personality Factor (16P-F) (Dattel, 1972), the Taylor Manifest Anxiety Scale (TAS) (Taylor, 1953), the State Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970), the Profile of Mood States (POMS) (McNair, Lorr & Droppleman, 1971), and the Subjective Stress Scale (Berkun, 1962) (cited in Everly & Rosenfeld, 1981).

B. Life Events as a Measure of Stress

Over the last two decades, the measurement of stress has focused primarily upon the use of life events scales to

quantify stress. Inherent in a life events approach to measuring stress, is the underlying assumption that daily routines, and major and minor life events, whether positive or negative, appear to be significant in contributing to stress in individuals.

Breznitz (1982) reports that Adolph Meyer was the first to speculate about life events. Meyer's (1951) theoretical model of stress utilized the concept of life events as a focal point. Meyer established the relationship of life events to the medical status of individuals through the development of his 'life chart' (cited in Breznitz & Goldberger, 1982).

The Social Readjustment Rating Scale

Holmes and Rahe (1967) initiated the practice of measuring life events as indicators of stress. Holmes, Rahe and associates developed the first quantitative measure of life events. The authors presupposed that different life events required different amounts of adjustment. The Social Readjustment Rating Scale (SRRS) (Holmes & Rahe, 1967) contained 43 events, based upon an individual's propensity to adapt to certain life events. The life events measured, ranged from minor violations of the law to death of a spouse. Each event was assigned a weight. The weights were derived from the rankings of life events within samples of the general population and reflect the amount of adjustment

required for the event.

Rahe (1974) revised the SRRS to also include 13 'productive new life change questions' and added instructions for subjective life scaling. The SRRS is currently one of the most frequently used instruments in stress research. This self-report instrument can be administered and completed in approximately five to ten minutes.

The SRRS has been used extensively, with reportedly over 1000 publications based on this instrument appearing in the empirical literature in the 1970's (Perkins, 1982). Reviews of the SRRS have been controversial. Researchers queried the implications of the effects of confounding items with measures of psychological distress (Dohrenwend, B.S., Dohrenwend, B.P., Dodson & Shrout, 1984). Tausig (1982) suggested that life events measures also confounded with physiological or psychological outcomes. Brown (1974) criticized the vagueness of item descriptions and subsequent ramifications of interpreting results.

The literature pertaining to life events research is extensive in scope and contains some critical viewpoints. Funch and Marshall (1984) disputed the consistency of a respondent's ability to accurately recall events which had occurred in the past. Similarly, Paykel (1983) highlighted retrospective reporting as one of the main problems in life events data collection. Events which are deemed to be effects of illness, as well as the quantification of these

unequal events, are additional methodological problems (Leventhal & Tomarken, 1987).

Monroe (1982) and Dohrenwend (1973) identified the potential confounding of event incidence with preexisting disorder. Further criticism of life events measures have referred to the weak correlations between cumulated life events and health outcomes (Kanner, Coyne, Schaefer & Lazarus, 1981; Lin, Simeone, Ensel & Kuo, 1979; Nezu & Ronan, 1985; Thoits, 1982).

Daily Hassles and Daily Uplifts

Lazarus' (1981) contribution to life events research incorporated the need to examine more fully the intricacies of an individual's daily routines. Lazarus defined these day to day events as 'daily hassles' and 'daily uplifts'. According to Lazarus: "the immense adaptational significance of the relatively minor stresses and pleasures that characterize everyday life" (Kanner, Coyne, Schaefer & Lazarus, 1981, p.2) are particularly pertinent to the investigation of life events research.

Hassles are the irritating, frustrating, distressing demands that, to some degree, characterize everyday interactions with one's environment. The Hassles Scale is comprised of a list of 117 items that were generated by research staff using the following areas as guidelines: work, health, family, friends, environment, practical

considerations, and chance occurrences. Examples include misplacing and losing things, declining physical abilities, not enough time for family, concerns about owing money, and pollution. Clients rate each hassle based on its occurrence during the previous month, for both severity and persistence, on 3-point subscales (Kanner, et al., 1981).

The Uplifts Scale consists of 135 items that were derived from the same content areas as the Hassles Scale. Examples include: relaxing, spending time with family, using skills well at work, praying, and nature. Uplifts are rated and scored in the same manner as hassles.

In summary, the Hassles Scale is subject to similar methodological criticisms as the SRRS and other life events approaches. For example, the issue of items being confounded with psychological disorders contributes to the difficulty of discerning causal factors. Dohrenwend, B.S., Dohrenwend, B.P, Dodson & Shrout (1984) found that in more than three quarters of the items on the Hassles Scale, there was a tendency for items to be related to manifestations of psychological disorders.

The Biobehavioral Model of Stress

Life events measurements are an established medium used in the investigation of potential relationships between illness and day to day living. As previously mentioned, the measurement and use of life events as indicators of stress

has some methodological problems. These methodological difficulties are partially derived from lack of adequate definitions from which meaningful models and methods of measurements can be constructed (Miller, Smith & Mehler, 1986, p. 1). The instrument of choice in the current study was constructed with these methodological difficulties in mind.

The biobehavioral model of stress emerged from the interest of Miller et al. (1986) in integrating aspects from other models to create 'a more unified concept' of stress. Coupled with this interest was the intent to develop a form of measurement which considered the implications of general health and well-being. The model is based upon assumptions in four areas; general assumptions, assumptions regarding demands and pressures, assumptions regarding symptoms, and assumptions regarding vulnerability to stress.

According to the general assumptions of the model, stress is additive, cumulative and a relatively enduring state phenomenon. The assumptions pertaining to demands and pressures are perceived and defined by the individual. In order to respond to these demands and pressures, the individual must mobilize physiological resources. Moreover, extreme, frequent, or prolonged mobilization will lead to strain ie. tension (Miller, et al., 1986, p. 1).

Assumptions regarding symptoms suggest that symptoms of strain are represented in discrete neurophysiological

systems. Miller states that strain leads to system failures and the production of symptoms, and that symptoms of strain become sources of demand and pressures, in and of themselves (Miller, et al., 1986, p. 1). Assumptions concerning vulnerability to stress state that vulnerability varies within an individual, that there are individual differences, and that vulnerability is determined by complex interactions among health behaviors, such as; life style considerations, financial, spiritual and social resources, and physiological predisposition (Miller, et al., 1986, p. 2).

The Stress Audit Questionnaire

The Stress Audit Questionnaire (SAQ) (Miller & Smith, 1987) is the instrument used in the current study. The SAQ is a 238 item, Likert scale instrument that provides a profile reflecting three facets of stress: situations, symptoms and vulnerability factors.

The SAQ measures stress in six situational areas: family, individual roles, social being, environment, financial, and work/school. Examples of the varied items in these scales include marital difficulties, meeting obligations to oneself, being excluded from a group, noisy or unfriendly neighbors, loss of income, and pressure to do well at work/ school (Miller, et al., 1986, p. 4).

The questionnaire also provides an objective measure of stress symptoms expressed through the muscular, emotional,