EFFECTS OF SELF-STATEMENTS AND COPING STRATEGIES ON ADAPTATIONAL OUTCOMES TO STRESS

by

SHARON ANN PLATER

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We accept this thesis as conforming

to the required standard

Max R. Uhlemann, Ph.D.

Brian C. Harvey, Ph.D.

Lloyd O. Ollila, Ph.D.

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UNIVERSITY OF VICTORIA

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Supervisor: Dr. Max Uhlemann

Abstract

Research indicates that many variables influence physiological and psychological responses to stress. Two such variables, type of stressor and cognitive processes were the focus of this study.

One purpose of the study was to determine the degree of relationship between major and minor life events and the respective ability of each to account for variance in physical and psychological reactions to stress. A second purpose was to ascertain the role of self-statements in the relationship between stress and symptomology. In a similar view, a third purpose involved assessing the degree to which coping strategies discriminate between adaptive and maladaptive reactions to stress. The fourth and final purpose of the study was to determine the degree of relationship between self-statements and coping strategies.

Sixty-two female subjects ranging in age from 17 to 60 were recruited from five education and support oriented community groups. Subjects completed four questionnaires: The Life Experiences Survey, The Hassles Scale, Hopkins Symptom Checklist and the Physical Concerns Scale. In addition, information regarding stressful occurrences, self-talk patterns and coping strategies was obtained through written journal entries.

In general, it was found that major and minor life (hassles) events were significantly related. Hassles accounted for a greater proportion of variance in adaptational outcomes, and most of the variance due to major life events was subsumed under that related to hassles. Several aspects of self-statements and coping strategies were found to be significantly related. Only two of five coping strategies exerted a significant effect on the stress-symptomology relationship. In no instance did self-statements discriminate significantly between individuals who effectively or ineffectively handled stressful encounters.

Examiners:

Max R. Uhlemann, Ph.D.

Brian C. Harvey, Ph.D.

Lloyd O. Ollila, Ph.D.

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CHAPTER I

Statement of Problem

Stress is a term widely used in both everyday language and current research writings. Depending on the theoretical orientation of the researcher, it has been alternately used to indicate a stimulus (Ilfeld, 1976), a response (Rabkin & Struening, 1976), a mediating process (Sarason & Sarason, 1979; Lazarus, 1981), an organismic state (Cofer & Appley, 1964), and more specifically, a physiological condition (Selye, 1956). Within the framework of the current study, stress is viewed as a cognitive mediating process (See Appendix A for definition).

Regardless of conceptual basis, most stress research has focused on assessing the degree to which occurrences of specific life events (see Appendix A for definition) and subsequent psychological and physiological reactions are related. Selye (1980, p. 3) postulated that, "Most likely the vast majority of all maladies for which the patient seeks medical attention are predominantly due to stress - particularly psychogenic stress". Research to date suggests, in fact, that stress in the form of major life changes, such as divorce or loss of job, is somehow implicated in increased physiological (Rabkin

et al., 1976), and psychological symptoms (Vinokur & Selzer, 1975), specific disease patterns (Theorell, 1974), pregnancy and birth complications (Gorsuch & Key, 1974), and sudden cardiac death (Rahe & Lind, 1971). While the relationship between stress and the above mentioned factors has been significant and consistent, the actual correlations obtained have typically averaged about 0.30 (e.g. Christensen, 1981), which means that 90 percent of the variance is due to as yet unknown variables. Researchers, in an attempt to account for a greater degree of the variance between life changes and adaptational outcomes (see Appendix A for definition) have taken a variety of approaches including: refining the measurement of major life events, (Sarason, Johnson & Siegel, 1978), outlining potential new sources of stressors (Kanner, Coyne, Schaefer & Lazarus, 1981), incorporating personality characteristics (Kobasa, Hilker & Maddi, 1979), and investigating the role of psychological (Andrews, Tennant, Hewson & Vaillant, 1978; Girodo & Stein, 1978) and social (Yamamoto & Kinney, 1976; Antonovsky, 1974) factors. The present study focuses on two types of stressors, minor and major life events, as well as two psychological factors, self-statements and coping strategy.

Lately, an increasing number of researchers have postulated that minor everyday inconveniences may be

more detrimental in the long run than major life changes (Kanner et al., 1981; McLean, 1976; Ilfeld, 1976). While recent empirical evidence (Kanner et al., 1981) indicates some support for this theoretical position, these results have yet to be replicated. One purpose of the current study is to provide further data concerning the degree to which minor and major life events account for variance in psychological and physiological reactions to stress.

Cognitive processes, as a group are one set of mediating factors which have received substantial support in the research literature (Lazarus, 1966; Lazarus & Launier, 1978). The major proponents of cognitive therapy have asserted for a longtime that an individual's beliefs and thoughts are directly related to and influence his/her emotional state (Ellis, 1962; Meichenbaum, 1974). Although extensive research findings have linked experimentally induced self-statements with mood states (Velten, 1968; LaPointe & Harrell, 1978), many of these findings are unreplicated and contradictory. Another drawback in terms of past research is the almost total lack of naturalistic observations of spontaneous self-verbalizations, and their effects on mood states and behaviours as they occur in actual everyday settings. Working with a focus on naturalistic investigations, a second purpose of the present study is to determine the degree that self talk patterns

affect the manner in which individuals respond to the stresses of life.

Lazarus (1981) hypothesizes that another cognitive process, coping (see Appendix A for definition) is one of the major determinants that influences the quality of adaptational outcomes to stress. However, the small amount of empirical data generated thus far has been of a contradictory nature. In addition, researchers have largely concentrated on coping as a personality trait, focusing on what a person might do, rather than what they actually did in a specific situation, and have limited the scope of their analysis to one type of coping style rather than surveying a complete range of response modes. Lazarus (1981) recommends that future research should zero in on how an individual is behaving and thinking, as well as how effective the coping strategies were in terms of the overall functioning of the individual. A third purpose of the study is to determine, through assessing individuals' reactions to real life situations, if the nature of the coping skill utilized differentiates between those who do or do not effectively weather stressful encounters.

Viewed from a cognitive perspective, self statements and coping strategies are essentially two aspects of the appraisal process by which situations are assessed. Self-statements provide a way of assessing the initial

"What's going on here?", stage, while coping attends to the question, "What can I do about it?". A fourth purpose of the study is to ascertain whether a relationship exists between self talk patterns and the subsequent coping skill employed.

In summary, the following hypotheses were considered in this study;

1. It is hypothesized that the amount and type of stress encountered as a result of everyday stressors will be different from that which results from major life events.

2. It is hypothesized that four groups of subjects (high stress/high illness, high stress/low illness, low illness/-high stress, low illness/low stress) will differ in terms of self referent speech patterns.

3. It is hypothesized that four groups of subjects (high stress/high illness, high stress/low illness, low stress/high illness, low stress/low illness) will differ in terms of the type of coping strategies utilized.

4. It is hypothesized that a relationship exists between self-referent speech patterns and coping strategies.

CHAPTER II

Review of the Literature

This chapter reviews relevent information, both theoretical and empirical, that pertains to the manner in which different types of stressors and cognitive processes affect the relationship between stress and illness. To facilitate comprehension, the material has been divided into three sections. Section one outlines issues concerning the measurement of stress and consists of two subsections: major life events and minor life events. In section two current beliefs and research findings regarding the role of cognitive processes in the stress-illness relationship are discussed. Again two major subsections, self-referent speech and coping processes, are developed. Section three, briefly summarizes the current state of stress research.

Stress Measurement

Major life events.

Stress has up until recently been operationally defined solely in terms of major changes in life patterns: for example, loss of family member, marriage (Sarason, Johnson & Siegel, 1978). The development of The Schedule of Recent Experiences (SRE) by Holmes and Rahe in 1967,

was a tremendous boost to stress researchers, as it provided a relatively simple, objective and quantifiable method for measuring a given individual's level of life change or distress. Research findings using this measurement format indicated that alterations in major life circumstances were linked to subsequent manifestations of physical upset (Rahe, 1968; Holmes, 1970; Rabkin et al., 1970; Rahe & Lind, 1971; Theorell & Rahe, 1971). Further research revealed that a relationship also existed between life event and psychological symptomology (Dekker & Webb, 1974; Dohrenwend, 1973b; Myers, Lindenthal & Pepper, 1971). Although the data indicated the existence of a significant connection between stress in the form of life events and physical or psychological reactions, the actual degree of relatedness was generally quite low (Christensen, 1980). Investigators, in an effort to account for this large portion of undefined variance, began analyzing the stress-illness relationship through a wide range of methods including reformulation of life events scales (Hurst, Jenkins & Rose, 1978; Vinokur & Selzer, 1975; Cochrane & Robertson, 1973; Anderson, 1972), delineation of additional sources of stress (Kanner, Coyne, Schaefer & Lazarus, 1981); incorporation of personality characteristics (Kobasa, Hilker and Maddi, 1979) and assessing the role of social (Miller, Ingham & Davidson, 1976; Yamamato &

Kinney, 1976) and cognitive factors (Folkman, Schaefer, & Lazarus, 1979; Girodo & Stein, 1978; Lazarus & Launier, 1978).

Recently questions have been raised concerning the utility of the SRE itself as a measuring device as well as the conceptual framework underlying it (Rabkin & Struening, 1976). One major controversy centers around whether change in and of itself is the prime operative in precipitating stress or whether the valence of a given event, that is whether it's desirable or undesirable, is the influencing factor. Research findings to date appear to support the position that undesirable events are linked more strongly to symptomology than are desirable events (Kanner et al., 1981; Mueller, Edwards & Yarvis, 1978; Vinokur & Selzer, 1975). Discussion has also arisen regarding the use of arbitrary values to measure the degree of stress experienced when an individual encounters a given life event. Many researchers feel that the weighting assigned to each life event should be determined by the individual who is experiencing it (Theorell, 1974; Hinkle, 1973; McGrath, 1970) as opposed to being preset by the investigator. The assumption underlying this position is concisely stated by Apply and Trumbull (1967, p. 7), "With the exception of extreme life-threatening situations, it is reasonable to say that no stimulus is a stressor to

all individuals exposed to it". Hinkle (1973, p. 46) further outlined this point when he stated "people react to their 'life situations' or social conditions in terms of the meaning of these situations to them". Development of life events scales such as The Life Experiences Survey (Sarason, Johnson & Siegel, 1978) reflects an attempt to integrate these variables.

Minor life events.

Another avenue through which the refinement of stress measurement is being pursued is the delineation of new blocks of stressors. Minor everyday occurrences constitute one such group. Several researchers have hypothesized that minor events (stressors) which quite often occur on a regular basis are of equal if not greater importance than major life events (Kanner, et al., 1981; Ilfeld, 1976). As McLean (1976, p. 72) stated, "perhaps because the unit of stress is relatively small and the stressors so familiar, these kinds of stressors have been taken for granted and considered to be less important than more dramatic stressors". Clinical and research data indicate that these micro-stressors, acting cumulatively and in the relative absence of compensatory positive experience can be potent sources of stress.

A recent study by Kanner et al. (1981) has provided some empirical evidence to support this theoretical position. Within their model they divide everyday stressors into one of two groups: hassles or uplifts. "Hassles refer to the irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment" (Kanner et al., 1981, p. 2). They include such experiences as misplacing objects, not getting enough sleep and having too many things to do. Uplifts, on the other hand, "are positive experiences, such as the joy derived from manifestations of love, relief at hearing good news ... and so on" (Kanner et al., 1981, p. 4). The authors, using scales developed expressly for the study, attempted to assess the impact that minor everyday occurrences had on the psychological symptomology presented by subjects. In addition, they compared the relative efficacy in predicting adaptational outcomes between major life events and daily upsets and looked at whether or not the amount of daily negative and positive events had an interactive effect on the manner in which stress was experienced. Their results, in brief, revealed that hassles were considerably better predictors of psychological symptomology than major life events; that hassles were better predictors of adaptational outcome than

uplifts for both sexes; and for women only uplifts were positively correlated with negative affect, life events and hassles.

These results indicate that minor everyday events, particularly hassles, may be a substantial source of stress that needs to be taken into consideration when the relationship between stress and symptomology is being assessed. As the authors suggest, these results are of a preliminary nature. Further research with a broad spectrum of subject groups needs to be conducted to substantiate the findings. As the relevancy of daily life events is influenced by demographic characteristics such as age, socioeconomic status, and occupational role (Lewinsohn & Talkington, 1979), sub-group comparison data in particular would be a source of valuable information regarding relationship between life events, hassles and illness.

The Role of Cognitive Processes in the Stress-illness Relationship

Johnson and Sarason (1979), in a detailed summary of current trends in stress research suggest that it may no longer be viable to simply continue to search in a normative manner for additional sources of life stress.

Rather, the time has come to use an ipsative format in which the individual life patterns of those who succumb or do not succumb to stress can be charted. For these authors, moderator variables form the next link in the pathway to understanding the mechanisms underlying variability in stress reactions. Up to this point the exploration into mediating factors has largely been theoretical. Johnson and Sarason contend that it is now necessary to incorporate these theoretical constructs into experimental design so that delineation of relevant and irrelevant variables can take place.

One set of variables that is thought to be a potential mediating factor is cognitive processes. The manner in which an individual perceives, appraises, categorizes and thinks about a situation is thought by many cognitive theorists to influence their emotional and behavioural reaction to the event (Meichenbaum, 1974; Goldfried & Goldfried, 1975; Ellis, 1962).

The relationship of cognitive processes to human functioning has been explored extensively on a theoretical level. However, differences of opinion exist as to whether the empirical data collected to date support or discount the basic elements of the theory. Rogers and Craighead (1977) on the one hand feel that the use

of inadequate methodology and data analysis has obscured rather than clarified the mediating role of cognitive processes. Researchers such as Lazarus (1980) on the other hand, believe that a relatively extensive bank of evidence exists to support this role. Another confounding factor is that most results produced thus far have been inconsistent and unreplicated. Self-referent speech (self-statements) and coping processes which are the two major mediums by which cognitive processes have been explored will be examined in this review.

Self-referent speech.

In an effort to clarify the relationship between emotional arousal and cognitive processes, Rogers and Craighead measured the physiological responses of 32 subjects, while they cognitively rehearsed self-referent statements (see Appendix A; for definition) of varying degrees of balance and discrepancy from their beliefs about themselves. Results of this study failed to support previous findings that neutral and negative self-statements differentially affect emotional arousal (Russell and Brandsma, 1974) as measured by physiological responses and mood changes. Nor did it support the hypothesis that positive self-statements would produce lower levels of physiological arousal than negative

statements. One major drawback of studies such as this, which are set within an artificial laboratory situation and utilize stimuli which are not necessarily representative of processes actually occurring in the subjects life, is that the breadth of information obtained is limited. While objective laboratory based studies and the data obtained from them are valuable, the nature of the material under investigation (cognitive processes) is possibly more amenable to subjective, ipsative analysis.

A more individualized approach was taken by Harrell, Chambless and Calhoun (1981) who assessed subjects reactions to preset situations in terms of self-referent speech and emotional responses. They administered a set of self-report measures of psychopathology, and the Situation Self-Statement and Affective State Inventory, to 400 subjects. They found that specific irrational and rational self-statements were highly correlated with corresponding affective states, particularly in the case of those dealing with anger, depression and suspicion. These findings support those of Hollon and Kendall (1980) who found that negative self-statements were significantly related to measures of depression. It was also noted that while the relationship was stronger between specific irrational thoughts and their related emotions, the thoughts were in

general related to other irrational and upsetting affects as well. These results are contradictory to earlier ones reported by La Pointe and Harrell (1978) who found significant relationships between self-statements and relevant affective states in only 13 of 60 cases. Additional findings, which revealed that self-statements and affective states accounted for a significant amount of the variance that occurred in psychopathology and personality scores, both as discrete entities and in interaction with each other, support the belief that self-referent speech is linked in some manner to emotional-responses and psychological symptomology. Although this study focused on individual response patterns, it was still basically a passive exercise detached from the reality of subjects' lives, as the situations, thoughts, and feelings were all provided by the research. Whether or not the relationships discovered remain consistent when subjects generate their own experiences and resultant self-statements and feelings has yet to be investigated.

Coping processes.

General agreement exists that the area least understood and most in need of research centers around understanding the mechanisms operating in the relationship between cognitive activities and emotional and behavioural

responses. Over the past few years Lazarus (1980) has developed a structural framework by which the intricacies of this relationship can be more readily investigated. Cognitive appraisal, which is the term he uses to describe the mediating process that occurs between real, imagined or anticipated events in the environment and adaptational outcomes, incorporates all aspects of cognitive functioning.

Primary appraisal, which constitutes stage one, analyzes the situation in terms of the question, "Do I have anything to fear here?" Evaluation criteria include determining whether the situation is irrelevant, benign/ positive or stressful and if it is stressful whether the nature of the demand is one of harm - loss, threat or challenge. Currently, the most efficient means of grasping an understanding of the processes involved in primary appraisal is through monitoring self-referent speech patterns.

Secondary appraisal, on the other hand, addresses the issue of 'What are my available resources and how can I use them to respond to the situation?'. According to Lazarus, there are four major ways of handling environmental transactions. Three of these, information seeking, direct action and inhibition of action, serve a problem-solving function, while the fourth, intrapsychic processes,

serves to regulate emotional involvement. Another way of viewing intrapsychic processes would be in terms of defense mechanisms. Regardless of the mode of response used the impetus behind an individual coping response is an attempt to maximize the positive or minimize the negative aspects of a situation.

Lazarus emphasizes that a strong interplay exists between primary and secondary appraisal with the decision made regarding one aspect having a modifying influence over the other. The result of this interaction is a continuous cycle of appraisal and reappraisal. For example, if an initial response to a situation is one of information seeking then the result of this process will either reaffirm or alter the original impression formed. Based on the new information that has been obtained another coping strategy can then be implemented, which will again transform the transaction in some way and so on ....

Research generated by Lazarus' model of stress and coping has been limited to date. Bartlett (1980) in a recent study, investigated how the cognitive appraisal variables of personal beliefs/attitudes and irrational thinking were related to stress reactions, trait anxiety and physical symptomology. She found that positive

beliefs were negatively correlated to stress reactions, self-downing was positively correlated with stress reactions and four of five remaining irrational beliefs were correlated to anxiety only. In addition, it was observed that positive coping self-statements were related to low levels of stress reactions. The author suggests that the content of irrational thought itself, rather than the process may be a factor which differentiates between those who do and do not handle stress efficiently.

Secondary appraisal, as measured by type of coping response emitted, has been the focus of several recent investigations. In a study investigating the effects of life events, stress, coping style and psychological impairment, Andrews et al. (1978) hypothesized that coping strategy serves as a moderating variable between life stress and adaptational outcome. Coping was measured using a form developed by Vaillant (1976) which consists of two one sentence situations with six possible choices associated with each. Subjects were asked to select the strategy that was most like or unlike the one they might employ. Results, which were anlyzed in terms of whether the response was mature or immature, revealed that a significantly greater number of poor (immature) copers were psychologically impaired. Further analysis of the

data indicated that coping style did not function as a mediating variable between life stress and psychological symptomology.

These findings run contrary to Lazarus' (1981) theory where coping is viewed as a potentially powerful mediating variable in stress reactions. In discussing the results, Andrews and associates speculated that the role of coping in stress response may be hard to determine due to the difficulties inherent in measuring a variable as complex as coping. Another possible limiting factor was their use of a one-shot, standardized, non-personal stimulus to infer generalized real life coping patterns. The authors contend that future life event research in order to adequately assess the operational mechanisms underlying effective coping must incorporate among other things: (a) the significance of the event for the individual; (b) the effect of personality tendencies; and (c) an evaluation of the potential effectiveness of the coping strategies utilized.

Working from a slightly different perspective, Girodo and Stein (1978) explored the effect of specific styles of coping on the level of objective and subjective arousal experienced by subjects in an anxiety producing situation. In this study, coping style referred to the

use of various modes of self-referent speech. Subjects, who viewed an industrial accident film, were randomly assigned to one of four conditions: (1) basic information regarding film, (2) basic information plus stress innoculation training (Meichenbaum, 1975), (3) basic information plus training in denial and intellectualization (Lazarus, 1966), and (4) a control group. In brief, it was found that only information subjects showed an increase in subjective anxiety immediately after the initial discussion of the film content. In addition, the information group showed a significant correlation between subjective anxiety and anxiety relevant thoughts both during a waiting period and while viewing the film. Subjective anxiety decreased for the information and stress innoculation groups during waiting, while it increased for information and control groups during viewing. Analysis of thought patterns indicated that the stress innoculation group experienced anxiety relevant thoughts to a significantly greater extent than control or information groups during the waiting period. It is of interest to note that while stress innoculation was correlated positively with subjective anxiety during the waiting period, a negative correlation occurred during the actual viewing. The authors concluded that effective coping may be more

likely to occur when active rehearsal and planning of a coping strategy takes place.

This study provided valuable information regarding the effect of various coping strategies on emotion and, secondly, supported the rationale that cognitive processes can be accessed and emotional responses altered through the medium of self-talk. To validate the conclusion drawn, further research is needed to determine whether certain self-talk patterns precede the use of effective coping skills in people's everyday interactions with the environment.

Summary

Stress research has progressed rapidly over the past decade along many divergent yet interrelated lines, a few of which have been discussed here. General understanding of the phenomenon labelled stress, however, has not increased at the same pace. While evidence supports the existence of a relationship between stress and adaptational outcomes, the factors influencing this relationship are still largely undefined. While theory and research findings offer tentative support for the role of mediating factors such as cognitive processes, the mechanisms by which these processes operate remain

obscure. As Eisdorfer (1977, p. 39) states: "We are dealing with a riddle wrapped in an enigma wrapped in more of the same." The current trend in stress research, of which the present study is no exception, has been to develop an understanding of the functional dynamics underlying the relationship between stress and illness. Until insight is gained into the operational mechanisms influencing this relationship, little can be done in the way of preventive or rehabilitative practice to enhance the general populations encounter with stressful experiences. As Lazarus (1981, p. 210) points out, with regard to coping, "Until we are in a better position to evalute such matters in varying types of persons and situations, we will be operating almost blindly in our intervention efforts ....".

In response to criticisms such as the ones outlined above, the current study will utilize an ipsative format to assess subjects' actual response patterns to real life situations. Within such a framework, the potential for developing a deeper understanding of the interplay between various facets of the stress-reaction process is greatly enhanced. In particular this study will attempt to fill in the existing gaps concerning the relative importance of different types of stressors, and the influence exerted by self-referent speech and coping processes on adaptational

outcomes to stress. In addition, Lazarus' (1981) assertion that primary and secondary appraisal are involved in a continual process of mutual influence will be investigated.

CHAPTER III

Method

Subjects

The subjects were 75 women within the age range of 17 to 60 who were affiliated with one of five community organizations operating in the Greater Victoria area. A list of community organizations with a predominately female membership and an emphasis on education and support of self and others was drawn from the Greater Victoria Community Service Directory. All of the appropriate organizations were listed alphabetically and a number was assigned to each. These numbers were then placed in a container from which the required number of independent draws were made. Based upon this random selection procedure, the following five groups were chosen to participate: Need Crisis Line, University of Victoria Woman's Centre, Single Parents Resource Centre, Junior Service League of Victoria, and the Victoria Women's Centre. All individuals who volunteered were considered potential subjects. Of the original 75 participants, 62 completed all aspects of the study and were included in the final analysis. The subjects ranged in age from 17 to 60 with the man falling in the 25-34 age bracket (see Table 1). In terms of

Table 1

Frequency and Percentage of Subject's Across Age Categories

N=62

Age	Frequency	Percentage
Under 16	0	0
16-18	1	1.6
19-24	9	14.5
25-34	22	35.5
35-44	26	41.9
45-54	2	3.2
Over 55	2	3.2

marital stutus, married women composed the largest segment, 53.2% (see Table 2). The level of education attained varied from 'Grade school or less' to 'Graduate or professional degree', with 'Some college or university' and 'University or college degree' being the most representative, 30.6 and 29.0%, respectively (see Table 3). Subjects were distributed across all occupational categories from 'executive manager' to 'house person', with 'house person', 35.5% and 'social service worker', 27.4%, accounting for the greatest proportion (see Table 4).

Instruments

Questionnaires as well as written descriptions of actual life experiences were utilized in this study as methods of data collection.

The Life Experiences Survey. The Life Experiences Survey (Sarason et al., 1978) (see Appendix C) measures the occurrence of life changes as well as their perceived impact on the individual experiencing them. The survey uses a self-report format, consisting of 47 items. In addition, spaces are provided so that subjects can list events not represented by the inventory items. Each item represents a specific concrete life event such as divorce or death of a friend. Subjects indicate with a check

Table 2

Frequency and Percentage of Subjects' Distribution Across Marital Status Categories

N=62

Marital Status	Frequency	Percentage
Single	9	14.5
Married	33	53.2
Living Together	5	8.1
Separated	7	11.3
Divorced	7	11.3
Widowed	1	1.6

Table 3

Frequency and Percentage of Subjects Across Levels of Education

N=62

Education Level	Frequency	Percentage
Grade school or less	1	1.6
Some high school	5	8.1
High school graduation or equivalent	10	16.1
Some college or university	19	30.6
University or college degree	18	29.0
Some graduate or professional school	6	9.7
Graduate or professional degree	3	4.8
Post-graduate studies	0	0

Table 4

Frequency and Percentage of Subjects Distribution Across Occupation Categories

Occupation Category	Frequency	Percentage
Executive or manager	2	3.2
Professional (Doctor, lawyer)	2	3.2
Social Service Worker (teacher, counsellor)	17	27.4
Sales person	2	3.2
Foreman or skilled worker (welder, cook)	0	
Clerical	5	8.1
Semi-skilled worker (waitress, labourer)	3	4.8
House person	22	35.5
Other[a]	9	14.5

[a]Students accounted for 44.44% of the 'Other' category.

mark those events that they experienced within both the last six months and the six months previous to that. Respondents are also asked to indicate for each item, the extent to which they feel it affected their lives in terms of intensity and valence. The responses are recorded on a 7 point Lickert scale which ranges from - 3 (extremely negative) to +3 (extremely positive). Three scores are calculated, 1) positive change score 2) negative change score and 3) total change score by summing the numerical value of the items appropriate to each.

In two investigations of test-retest reliability correlation coefficients of: positive change, $r = 0.19$ and 0.53 $p < .001$; negative change, $r = 0.56$ and 0.88, $p < .001$; and total change, $r = 0.63$ and 0.64, $p < .001$ were obtained (Sarason et al., 1978). Research also indicates that no significant differences exist between males and females on any of the three change scores, nor do the scores show any relationship to social desirability (Sarason et al., 1978).

<u>The Hassles Scale</u>. The Hassles Scale (Kanner et al., 1980) (see Appendix D) measures the occurrence of everyday events such as misplacing objects, and too many responsibilities, that are thought to be of an undesirable nature. The purpose of the Hassles inventory is to provide

a clear, concise way of assessing how minor upsets affect human functioning. The items used in the scale represent the following aspects of living: work, family, health, friends, the environment, practical considerations and chance occurrences.

The scale uses a self-report format consisting of 117 items. In addition spaces exist in which respondents can indicate experiences not previously covered. Each item represents a distinct life experience. Subjects rate each item according to the perceived severity of the event. Responses are recorded on a 3-point scale, which ranges from; 1 - somewhat severe to 3 - extremely severe. The data are summed through the calculation of three scores: 1) frequency - accomplished by counting the number of items checked, 2) cumulated severity - the sum of the numerical ratings, and 3) intensity - which is derived by dividing cumulated severity by frequency. This latter measure indicates the degree of strength with which the average hassle is perceived to be experienced.

A major investigation into the utility of the Hassles and Uplifts Scale (Kanner et al., 1981), revealed average test-retest reliability coefficients of $\underline{r} = 0.79$, $\underline{p} < .001$ for frequency and $\underline{r} = 0.48$, $\underline{p} < .001$ for intensity. These figures indicate that, while frequency scores are

fairly consistent over time, the amount of affect associated with them is more variable. In addition,it was found that no significant difference existed with regards to sex or age.

Hopkins Symptom Checklist (HSCL). The Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth & Covi, 1974) (see Appendix E) is an inventory designed to measure psychological symptomology pertaining to the dimensions of somatization, obsessive-compulsive behavior, interpersonal sensitivity, depression and anxiety. The scale was developed to provide a personalized account of psychological functioning in an economical, easily accessible and efficient manner.

The checklist uses a self-report format consisting of 58 items. Each item represents one specific feeling, thought or behavior which is described in a short phrase, e.g. "poor appetite". Subjects indicate on a 4 point scale, ranging from 1 (not at all) to 4 (extreme distress), the degree of distress experienced when such events occurred during the previous two weeks. Five scores are calculated, one for each of the five dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression and anxiety) by summing the statement ratings pertaining to each.

The similarity of items placed within each category was investigated by Derogatis et al. (1974). They found internal consistency to range from 0.84 to 0.87 for the five dimensions. Item total correlations ranged from .64 to .80 which reflects a relatively high degree of shared common variance amongst the items.

Test-retest reliability calculated over a one week time lapse revealed a high degree of stability with scores ranging from 0.75 to 0.85 (Derogatis et al., 1974). Inter-rater reliability, which was measured by comparing interviewer and observer scores of symptomology, was found to be fairly consistent with scores varying from 0.65 to 0.80.

Research utilizing the HSCL as a measure of psychological symptomology has provided considerable information concerning criterion-related validity. Studies which focus on the effects of psychotropic drugs indicate high degrees of clinical sensitivity for all of the five dimensions (Hesbacher, Rickels, Hutchinson, Sablosky, Whalen and Phillips, 1970; Lipman, Park and Rickels, 1966; Rabkin, Schulterbrandt, Reatig and McKeon, 1970). In addition investigators have found that the HSCL is sensitive to changes in clinical status (Rickels, Lipman, Garcia and Fisher, 1972).

Derogatis, Lipman, Covi, Rickels and Uhlenhuth (1970), in a study designed to determine the construct validity of the HSCL, found that the degree of agreement which exists between the symptoms clustered under the HSCL dimensions and those obtained from factor analysis of psychiatrists' descriptions were very high.

In a series of studies, conducted by Derogatis, Lipman, Covi and Rickels (1971-72), aimed at varying populations, it was shown that the "factorial invariance" or degree of constancy was quite high for all five dimensions, with the average invariance coefficients ranging from 0.72 to 0.96.

Physical Concerns Scale. The Physical Concerns Scale (See Appendix F) is an inventory designed to provide a general assessment of physical well-being. This is accomplished through measuring the occurrence of common physical complaints related to eight major body systems: skin disorders, allergic reactions, headaches, circulatory disruptions, digestive complaints, gynecological concerns, endocrine distrubances and musculo-skeletal problems. In addition the related categories of disease and illness are surveyed in a similar manner.

The scale consists of 30 items presented in a self-report format. Each item refers to one or a group of specific physical occurrence(s) and is listed under one

of the ten categories, with a total of three items per classification. Each category also contains a space in which subjects can indicate additional complaints. Subjects assess each symptom in terms of three dimensions: Frequency (how often), Duration (how long), and Intensity (strength). Responses are recorded on three 4-point scales which range from 1 (not at all) to 4 (constantly) for frequency, 1 (briefly-minutes) to 4 (long periods-weeks/months) for duration, and 1(mild) to 4 (severe) for intensity. The information is summed by calculating an average frequency, duration and intensity score for each of the ten categories. In addition overall frequency, duration, intensity and cumulative total, scores are calculated for each subject. A pilot study, in which the Physical Concerns Scale was administered to 5 subjects, twice over a one week time span, revealed test-retest reliability of 0.61 to 1.00, $\underline{M}$ = 0.82 for frequency, 0.52 to 0.93, M = .80 for duration; and 0.72 to 0.98, $\underline{M}$ =.88 for intensity.

An original list of 90 common physical ailments was generated by the researcher and several associates. This list was then reviewed to eliminate any duplications. With the assistance of a member of the medical profession, ten classifications of complaints were drawn up (e.g. infections, skin disorders) and each of the 90 elements

was listed under an appropriate heading. At this point a registered nurse evaluated the classifications and symptoms associated with each for exhaustiveness and clarity of presentation. From the original inventory a concise, workable scale was extracted. In the shorter version, all ten categories were retained, but the complaints listed under each were limited to three. In addition, space was allotted for respondents to indicate problems relevant to themselves which may have been overlooked in the scale. The reduction of 90 items to 30 was accomplished by grouping several items together under descriptive headings, hyphenating similar complaints and eliminating those which resulted from precise external factors (i.e. fracture, childhood disease). The final scale was again evaluated by a member of the medical profession, in terms of ease of understanding and completeness.

Structured Descriptive Exercise. Each subject was given a booklet in which, during the week following the administration of the questionnaires, they were instructed to record two stressful events that occurred in their life. Subjects were asked to describe each event in detail, to list any self-statements that were present during or shortly after the experience, to outline the coping strategy they employed and to evaluate how effective

this strategy was in terms of getting their needs met (see Appendix E for instructions to subjects). The information obtained from the descriptive exercise was summarized using the scoring procedures outlined below.

Scoring Procedure

Content analysis formed the basis by which the subject's descriptions of self-statements and coping procedures were analyzed. The actual method by which the categories were delineated was derived from a process described by Holsti (1969) who recommended that the dimensions selected should a) represent the intent of the research, b) be exhaustive, c) be mutually inclusive, d) be independent, and e) be derived from a single system of classification. Using these criteria as a guideline the scoring procedures were then developed in terms of the theoretical perspective underlying the research.

In the current study, a self-generated response mode of data collection was chosen by the researcher over an inventory method as the former is thought to produce more spontaneous and unique data (Kendal et al., 1981). These authors also suggest that when an individual's own self-statements are used a broader range of information regarding thought process and behavior is likely to be

obtained. In view of this information and the fact that the focus of the study is an individualistic assessment of reactions to stressful situations it seemed that the production method of data collection was most appropriate.

Categorization of Self-Statements. This measure was utilized to identify the type of self-talk referred to by subjects in their written description of thoughts surrounding stressful situations. The concept 'locus of attention' (Merluzzi, Cacioppo and Glass, 1979), forms the basis upon which this classification system was established. Locus of attention refers to the object which the content of thought is directed towards, e.g. self or others.

Of the five categories used to classify the self-statements, four; thoughts about self, thoughts about the interaction, thoughts about the other individual(s) involved and irrelevant thoughts; were derived from the Merluzzi et al. (1979) study. The fifth category, planning self-talk was devised by the author of the present study. In addition each statement in the first three categories; thoughts about self, others and the interaction; was rated in terms of valence, that is, whether it was of a positive, negative or neutral nature. (see Appendix H for definitions of the five self-statement categories).

Relatively little information exists concerning the reliability and validity of available self-talk coding mechanisms. One study conducted by Cacioppo, Glass and Merluzzi (1979), which provides such information reported that judges' ratings of listed self-statements showed a correlation of 0.95. Inter-rater reliability was assessed in the present study on the basis of ratings made by two independent judges who categorized a random selection of the subjects' self-talk statements (see Appendix I for guidelines). It revealed a 79% degree of consistency for self-talk category and 80% for valence.

Each of the self-statements listed by the subjects was placed by the researcher into one of the five categories listed above. Under no circumstances was a statement assigned to more than one category or deleted. Any unintelligible statements were placed in the irrelevant category. The data was summed by calculating the total number of statements per category per subject for each of two stressful situations described as well as a cumulative total for each subject. This information was then further broken down to reveal the valence distribution within each self-statement category.

Pilot work: Lists of self-statements generated by five pilot subjects in response to a stressful situation

were categorized by the researcher to assess the uniqueness and completeness of the self-talk scoring dimensions. As well two independent judges assessed the self-talk definitions for clarity.

Categorization of Coping Strategies. This method of classification was used to classify the coping strategies subjects utilized in dealing with stressful situations, as expressed in written descriptions of actual life occurrences.

The coding scheme utilized in the present study consisted of four dimensions; information seeking, direct action, inhibition of action and intrapsychic modes (see Appendix J for complete definitions); derived by Lazarus and Launier (1978), as well as a fifth one which covers all irrelevant and undiscernable responses. To date no reliability or validity exists to verify the accuracy of Lazarus et al.'s (1978) method of categorization. In the present study a measure of inter-rater reliability was obtained through the categorization of a random selection of subject's coping strategies by two independent judges (see Appendix K for guidelines). It was found that 94% of the statements were rated in a consistent manner.

Each coping strategy that was listed by the subjects

was coded into one of the four categories by the researcher using the definitions as a guideline. Under no circumstances was a subjects' response deleted. If the response contained more than one form of coping strategy (e.g. intrapsychic mode and direct action) each was coded independently. The data was summarized by calculating the total number of responses per category, per subject for each of two situations in addition to an overall total for each subject.

Pilot Work: Descriptions of coping processes written by five pilot subjects were coded by the researcher to assess the exhaustiveness and degree of independence of the categories. In addition the category definitions were reviewed by two independent judges with regards to clarity. Revisions to the coping skills scoring mechanisms were made on the basis of feedback from both these procedures.

Procedure

A brief description of the study was presented to the membership of each of the five selected community organizations at one of their regular meetings (see Appendix L). In addition, an outline of the study was either published in the groups newsletter or posted on a bulletin board so that members who were unable to attend the meeting would be aware of and have the opportunity to participate in the project. Individuals who were interested were

invited to take home a more detailed explanation of the study (see Appendix M) and to contact the researcher to set up a mutually convenient meeting time.

The initial session, which was conducted either at the group's meeting hall or the home of the researcher, depending on the preference of the participants, involved subjects filling out four self-report questionnaires assigned in random order: The Life Experiences Survey, The Hassles Scale, The Hopkins Symptom Checklist and the Physical Concerns Scale. All scales contained self-explanatory instructions. In addition subjects were given instructions regarding how to complete the at-home assignments which comprised the final portion of the study. The instructions, which were presented to each subject in written form, directed participants to record two stressful life events that occurred in their life during the ensuing week. Subjects were asked to describe each event in detail, to list any self-statements that were present during or shortly after the experience, to outline the coping strategy they employed and to evaluate how effective their strategy was for them (see Appendix G for complete instructions).

The information obtained from the subjects' descriptive accounts of actual stressful experiences was

summarized according to scoring procedures developed expressly for this study (see Appendix H for self-statement categories and Appendix J for coping strategy categories). All subjects were mailed a brief account of the study's results and conclusions.

CHAPTER IV

Results

Relationship Between Life Events and Daily Hassles

Although the response format of the life events questionnaire was broken down into 0-6 month and 7-12 month segments, and the subjects were instructed to specify the time frame in which an event took place, this section was very seldom completed adequately. Therefore, all life event scores used in the analysis were for a twelve month period. Three levels of life events scores (positive, negative and total) as well as three different hassles measures (frequency, cumulated severity and intensity) were analyzed. In general, the results indicated that a relationship does exist between life events and hassles.

The Pearson product-moment correlation coefficient was used to assess the degree of relationship between life event and hassles measures. The correlation between positive life events and hassles measures was significant for intensity, $r(60) = 0.277$, $p < 0.05$; and non-significant for cumulated severity and frequency, $r(60) = 0.170$, $p > 0.05$ and $r(60) = 0.130$, $p > 0.05$, respectively. Negative and total life events, on the other hand, were significantly related to all three of the hassles measures $r(60) = 0.505$, $p < 0.01$ to $r(60) = 0.656$, $p < 0.01$ (see Table 5). Even

though in most cases statistical significance was reached, the correlations were generally of a low order; range $r = 0.130$ to $r = 0.656$ (see Table 5).

Multiple regression analysis provided a basis for analyzing the degree to which life events and hassles differentially accounted for variance in adaptational outcomes. To accomplish this, life event and hassles scores were regressed in a hierarchial fashion on the Physical Concerns Scale and the Hopkins Symptom Checklist. Results of the initial analysis, in which life event scores formed the first step and hassles the second, revealed that life events accounted for a significant amount of the variance in six out of nine measures of physical and psychological symptomology, $r(58) = 0.398$, $p < 0.05$; $r(58) = 0.438$, $p < 0.01$ to $r(58) = 0.545$, $p < 0.01$ (see Tables 6 and 7). In addition, it was found that hassles accounted for a significant amount of variance above and beyond that which was related to life events with relation to: physical concerns overall intensity, $F(3, 55) = 3.27$, $p < 0.05$; somatization, $F(3,55) = 3.18$, $p < 0.05$; obsessive compulsive, $F(3,55) = 6.89$, $p < 0.01$; depression, $F(3,55) = 11.65$, $p < 0.01$; and anxiety, $F(3,55) = 7.70$, $p < 0.01$. The increase in variance due to the addition of the hassles variables was not significant

Table 5

Correlation Between Life Events and Hassles

Life Events Measures	Hassles Measure: Frequency	Cumulated Severity	Intensity
0-12 months Positive Score	0.130	0.170	0.267*
0-12 months Negative Score	0.608**	0.656**	0.515**
0-12 months Total Score	0.517**	0.572**	0.505**

$*p<.05$
$**p<.01$

Table 6

Hierarchial Regression Analysis of Physical Symptomology Measureson Hassles and Life Events Scores

Physical Sympto-mology Measures	Life Events-Hassles Step[a]	r^c	F^d	Hassles-Life Events Step[b]	r^c	F^d
Physical Concerns	1	0.398*	3.78*	1	0.461**	5.07**
Cumulative Total	2	0.482*	1.78	2	0.482*	0.50
Physical Concerns	1	0.288	1.75	1	0.253	1.31
Overall Frequency	2	0.365	1.06	2	0.365	1.44
Physical Concerns	1	0.094	0.176	1	.192	.063
Overall Duration	2	0.267	1.23	2	.267	.059
Physical Concerns	1	0.169	.064	1	0.396*	3.47*
Overall Intensity	2	0.419	3.27*	2	.419	0.04

a = life events first step, hassles second step
b = hassles first step, life events second step
c = both steps are multiple r's
d = F value of addition of each variable to the regression equation

*$p<.05$
**$p<.01$

Table 7

Hierarchial Regression Analysis of Psychological Symptomology Measures (Hopkins Symptom Checklist) On Hassles and Life Event Scores

Psychological Symptomology Measures (Hopkins Symptom Checklist)	Life Events-Hassles					
	Step[a]	r[c]	F[d]	Step[b]	r[c]	F[d]
Somatization	1	.499**	9.67**	1	.624**	11.82**
	2	.641**	3.18*	2	.641**	0.064
Obsessive-Compulsiveness	1	.455**	6.27**	1	.608**	11.18**
	2	.617**	5.27**	2	.617**	0.036
Interpersonal	1	.535**	10.56**	1	.673**	16.78**
	2	.688**	6.89**	2	.688**	0.77
Depression	1	.545**	12.37**	1	.750**	23.50**
	2	.758**	11.65**	2	.758**	0.50
Anxiety	1	.438**	6.40**	1	.641**	13.70**
	2	.650**	7.70**	2	.650**	0.40

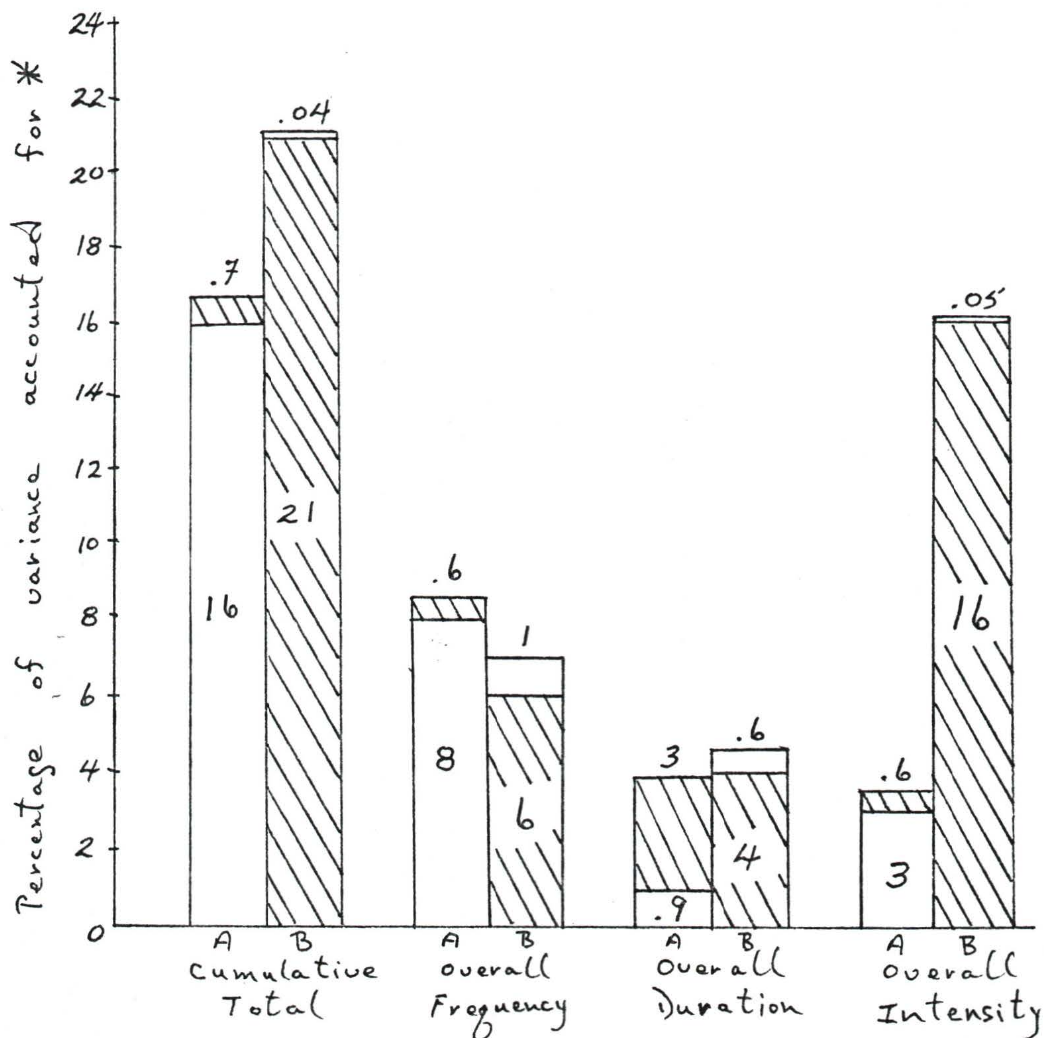
a = life events first step, hassles second step
b = hassles first step, life events second step
c = both steps are multiple r's
d = F value of addition of each variable to the regression equation

*$p < .05$
**$p < .01$

in terms of: physical concerns cumulative total, $F(3,55) = 1.78$, $p > 0.05$; physical concerns overall frequency, $F(3,55) = 1.06$, $p > 0.05$; or physical concerns overall duration, $F(3,55) = 1.23$, $p > 0.05$.

In a second regression analysis, in which the order of variable insertion was reversed, it was found that there was a significant relationship bewteen hassles and seven out of the nine outcome measures $r(58) = 0.396$, $p < 0.05$; $r(58) = 0.461$, $p < 0.01$ to $r(58) = 0.750$, $p < 0.01$ (see Tables 6 and 7). The relationship between hassles and the physical concerns measures of intensity, frequency and duration were non-significant, $r(58) = 0.169$, $p > 0.05$; $r(58) = 0.288$, $p > 0.05$; $r(58) = 0.094$, $p > 0.05$, respectively. Life event scores failed to account for a significant amount of variance over that already associated with the hassles scores on any of the nine physical and psychological measures, $F(3,55) = 0.04$, $p > 0.05$ to $F(3,55) = 1.44$, $p > 0.05$ (see Tables 6 and 7).

Figures 1 and 2, in which the relative amount of outcome variance associated with life events and hassles is compared, show that in nine out of ten cases hassles accounted for a greater proportion of variance than life events, range = 3% to 56% and 0.9% to 30% respectively. The figures also illustrate quite clearly that the variance



Physical Symptomology Measures

* All percentages have been rounded off.

▧ - Hassles

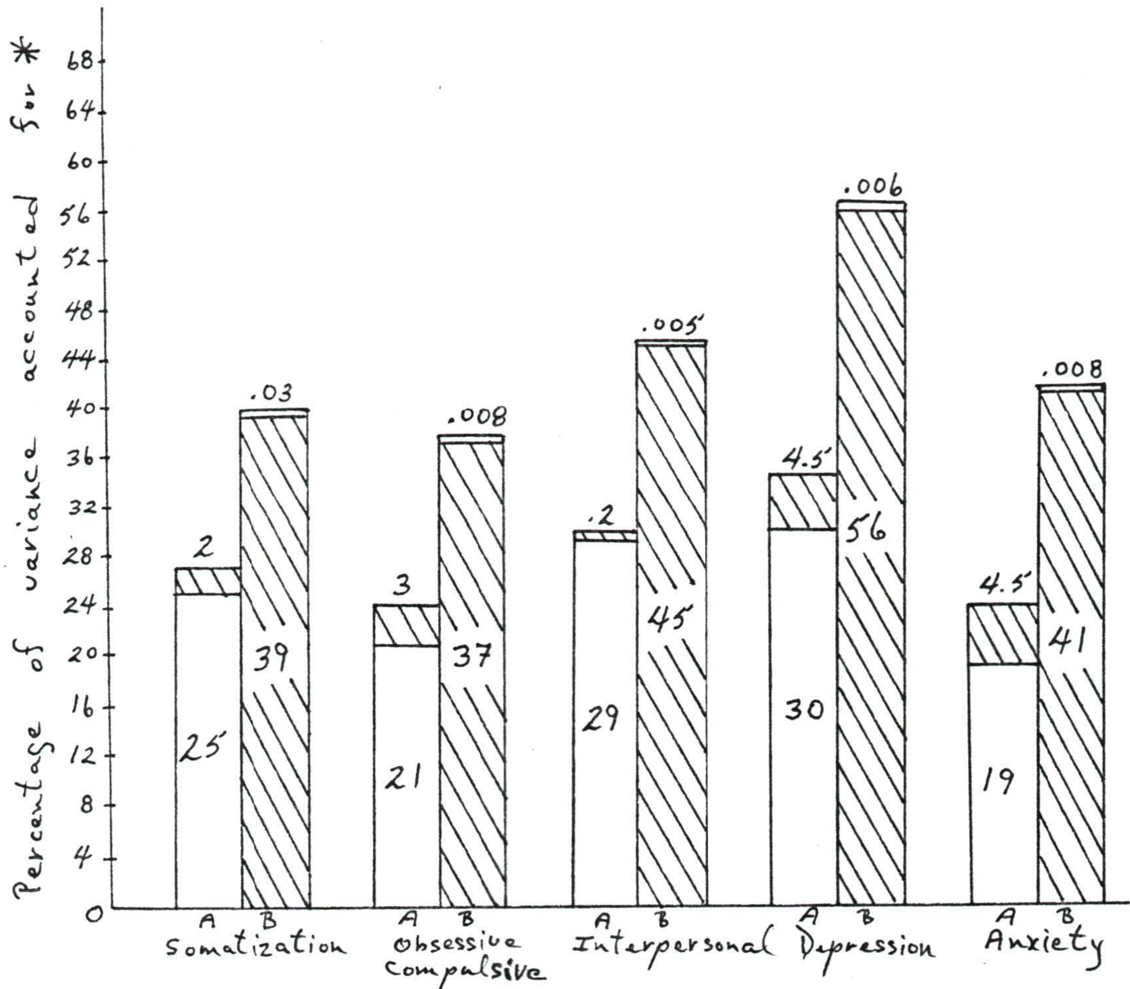
□ - Life Events

A - Life Events - 1st step; Hassles - 2nd step

B - Hassles - 1st step; Life Events - 2nd step

Figure 1

Comparison of Variance Accounted For in Regression of Life Events and Hassles on Physical Symptomology.



Psychological Symptomology Measures

* All percentages have been rounded off.

▨ - Hassles

□ - Life Events

A - Life Events - 1st step; Hassles - 2nd step

B - Hassles - 1st step; Life Events - 2nd step

Figure 2

Comparison of Variance Accounted for in Hierarchial Regression of Life Events and Hassles on Psychological Symptomology.

in outcome measures due to life events is almost entirely contained within the variance related to hassles, while the reverse relationship does not hold true.

As an outgrowth of the regression analysis, it was noted that the psychological symptomology measures were more sensitive to fluctuations in stress measures than the physical indicators. Of the four physical measures - cumulative total, overall frequency, duration and intensity - only cumulative total and intensity proved to reflect to any extent variations in life events and hassles scores. All five aspects of psychological symptomology, on the other hand, showed a relatively high degree of responsivity (see Figures 1 and 2).

The Relationship Between Self-statements and Adaptational Outcomes to Stress

To facilitate the analysis of the role of self-statements in the stress-symptomology relationship, four subject groups were developed: high stress/high illness, high stress/low illness, low stress/high illness, and low stress/low illness. Assignment of subjects to one of the four groups was based on scores obtained on The Life Experiences Survey, The Hassles Scale, The Physical Concerns Scale and the Hopkins Symptom Checklist. To

simplify subject placement, The Life Experiences Survey and Hassles Scale measures were combined using the following formula to form one measure of stress:

> (Hassles frequency X hassles intensity) +
> Life Experiences 0-12 months negative score

Measures obtained from the Physical Concerns Scale and Hopkins Symptom Checklist were similarly reduced using the following procedure:

> (somatization + obsessive-compulsive +
> interpersonal + depressive + anxiety) +
> (physical concerns overall frequency +
> physical concerns overall duration + physical
> concerns overall intensity) X physical
> concerns cumulative total

The differentiating point between high and low scores was calculated by inserting the mean scores attained on the stress and symptomology measures into the above formulas. Each subject was then grouped according to how they deviated from these derived means - stress M = 49.60, symptomology M = 60.5.

Self-statements were categorized according to type: thoughts about self, others, the interaction or planning thoughts, and whether the statement's essence was positive, negative or neutral. In general the results showed that neither the type nor valence of a subject's self-referent speech exerted a significant effect on the stress-symptomology relationship.

The data was analyzed on two different levels using a One-way Analysis of Variance program. Level one consisted of a four group comparison, while level two involved a series of two group comparisons. In no instance did any of the self-statement categories discriminate between the four stress-symptomology groups, $F(3,58) = 0.167$, p 0.05 to $F(3,58) = 1.428$, p 0.05. However, several non-significant trends were observed when the lose stress/high illness and high stress/low illness groups were compared. The self-statement categories of negative thoughts overall $F(1,16) = 1.961$, p 0.2, and thoughts about others $F(1,16) = 1.849$, p .02, appeared to differentiate between these stress-symptomology groups to a greater degree than the other categories (see Table 8). Further investigation revealed that the low stress/high illness groups reported fewer numbers of negative thoughts and thoughts about others, than the high stress/low illness group, $M = 8.4$ and 11.5; $M = 5.30$ and 8.12, respectively. The self-statement category; irrelevant thoughts, $F(1,30) = 1.876$, p 0.2, discriminated between the low stress/high illness and low stress/low illness groups to a greater extent than the other types of self-referent speech (see Table 9).

Table 8

One Way Analysis of Variance
Self-Statement Categories by High Stress/Low Illness
and Low Stress/High Illness Subject Groups

N = 18

		Between Groups	
Self-Statement Category	df	Ms	f
Thoughts of self (Total)	1	4.01	0.371
Thoughts of self (Negative)	1	4.01	0.811
Thoughts of self (Positive)	1	0.625	0.428
Thoughts about interaction (Total)	1	0.336	0.062
Thoughts about interaction (Negative)	1	0.011	0.003
Thoughts about interaction (Positive)	1	0.278	0.370
Thoughts about others (Total)	1	35.46	1.849*
Thoughts about others (Negative)	1	0.003	0.024
Thoughts about others (Positive)	1	1.34	0.840
Planning Thoughts	1	3.60	0.510
Irrelevant Thoughts	1	0.044	0.790
Cumulative Total	1	21.5110	0.568
Cumulative Negative Total	1	42.711	1.961*
Cumulative Positive Total	1	6.136	1.183
Cumulative Neutral Total	1	1.469	0.480

*0.05 p 0.2

Table 9

One Way Analysis of Variance
Self-Statement Categories by Low Stress/High Illness, Low Stress/Low Illness Subject Groups

N = 32

		Between Groups	
Self-Statement Category	df	Ms	F
Thoughts of self (Total)	1	4.809	0.268
Thoughts of self (Negative)	1	3.369	0.319
Thoughts of self (Positive)	1	0.511	0.263
Thoughts of interaction (Total)	1	9.750	1.584
Thoughts of interaction (Negative)	1	3.028	1.313
Thoughts of interaction (Positive)	1	1.420	1.274
Thoughts of others (Total)	1	0.184	0.011
Thoughts of others (Negative)	1	0.020	0.331
Thoughts of others (Positive)	1	0.028	0.027
Planning Thoughts	1	0.205	0.036
Irrelevant Thoughts	1	2.705	1.876*
Cumulative Total	1	28.00	0.419
Cumulative Negative Total	1	11.296	0.522
Cumulative Positive Total	1	3.028	0.461
Cumulative Neutral Total	1	0.184	0.025

*0.05 p 0.2

The Effect of Coping Style on the Stress-Symptomology Relationship

The procedure used to analyze the role of coping style in the stress-symptomology relationship was identical to that utilized for self-statements outlined above. Style of coping was divided into five classifications; information seeking; direct action; inhibition of action; intrapsychic processes; and irrelevant responses.

When all four groups were compared in the first level of analysis the findings showed that information seeking was the only coping style to exert a significant effect on the stress-symptomology relationship, $F(3,58) = 3.167$, $p < 0.05$. The irrelevant category also proved to discriminate between the four levels of stress and symptomology, $F93,58) = 3.036$, $p < 0.05$. The relationships between direct action, inhibition of action, intrapsychic process and the stress-symptomology groups were non-significant, $F(3,58) = 0.470$, $p > 0.05$; $F(3,58) = 0.339$, $p > 0.05$; $F(3,58) = 1.149$, $p > 0.05$, respectively.

The second level of analysis in which individual pairs of stress-symptomology groups were compared, revealed that the significant information seeking effect was due primarily to differences between the high stress/low illness and low stress/high illness groups, $F(1,16) = 4.44$,

$p = 0.05$, and the high stress/low illness and high stress/ high illness groups, $F(1,28) = 3.516$, $p = 0.07$ (see Tables 10 and 11). In both instances the high stress/low illness groups used information seeking as a coping skill more often than the high stress/high illness, $M = 0.50$ and 0.09 and low stress/high illness $M = 0.50$ and 0.00 groups. The significant irrelevant response effect was due almost entirely to differences between the low stress/low illness and low stress/high illness, $F(1,30) = 5.576$, $p < 0.05$ (see Tabel 12); with those in the low stress/high illness group recording a greater proportion of irrelevant responses; $M = 1.90$ and 0.41 respectively.

Coping was further assessed using the Chi square statistic with regard to how effective the strategy was perceived to have been. Results showed that direct action was the only coping strategy significantly related to perceived effectiveness, $x^2(18) = 35.62$, $p < 0.01$.

Relationship Between Self-statements and Coping Strategies

Thoughts about the interaction, thoughts about others, planning thoughts, negative, positive and neutral thoughts were found to be significantly related to a number of coping strategies. In addition several non-significant trends were also evident.

Table 10

One Way Analysis of Variance
Coping Strategy by High Stress/Low Illness and
Low Stress/High Illness Groups

N = 18

	Between Groups		
Coping Strategy	df	Ms	f
Information Seeking	1	1.11	4.44*
Direct Action	1	0.003	0.001
Inhibition of Action	1	0.803	1.172
Intrapsychic Process	1	0.025	0.028
Irrelevant Responses	1	0.336	0.065

*p 0.05

Table 11

One Way Analysis of Variance
Coping Strategy by High Stress/High Illness and
High Stress/Low Illness Groups

N = 32

		Between Groups	
Coping Strategy	DF	Ms	f
Information Seeking	1	0.982	3.516*
Direct Action	1	4.970	0.749
Inhibition of Action	1	0.728	0.777
Intrapsychic Processes	1	1.673	1.455
Irrelevant Responses	1	5.219	3.004

*p 0.07

Table 12

One Way Analysis of Variance
Coping Strategy by Low Stress/High Illness and
Low Stress/Low Illness Groups

N = 32

		Between Groups	
Coping Strategy	DF	Ms	f
Information Seeking	1	0.014	0.446
Direct Action	1	1.978	0.349
Inhibition of Action	1	0.301	0.274
Intrapsychic Processes	1	0.164	0.151
Irrelevant Responses	1	15.282	5.576*

*p 0.05

Analysis of the data was carried out using the Chi-square procedure. Thoughts about the interaction; both total (negative and positive) and negative alone, as well as irrelevant thoughts were found to be significantly related to the coping strategy of direct action, $x^2(100) = 136.837$, $p < 0.01$; $x^2(60) = 81.019$, $p < 0.05$; $x^2(50) = 111.027$, $p < 0.001$, respectively. Negative thoughts about the interaction were also significantly associated with information seeking, $x^2(12) = 31.699$, $p < 0.01$. A significant relationship existed between thoughts about others (total) and the total number of coping strategies utilized, $x^2(195) = 270.97$, $p < 0.001$. Self-statements of a planning nature were found to be significantly related to the coping style, information seeking, $x^2((14) = 25.510$, $p < 0.05$.

Positive self-statements regardless of type were found to be related significantly to the intrapsychic coping style, as well as the number of coping strategies utilized, $x^2(36) = 51.291$, $p < 0.05$; $x^2(117) = 158.042$, $p < 0.01$, respectively. Negative statements as a group, on the other hand, were significantly associated with only the number of coping strategies utilized, $x^2(247) = 328.81$; $p < 0.001$. In addition, a significant relationship was observed between neutral self-statements and infor-

mation seeking, $\underline{x}^2(16) = 28.675$, $\underline{p} < 0.05$.

As well as the significant relationship listed above several trends also emerged. It was noted that the category, number of coping strategies used, was related to a greater extent to thoughts an individual had about themselves, either in total or negative alone, than it was to most other self-statement categories, $\underline{x}^2(156) = 177.991$, $\underline{p} < 0.15$; $\underline{x}^2(143) = 162.222$, $\underline{p} < 0.2$, respectively. Negative thoughts about self were also connected in a similar manner to the coping strategy of direct action, $\underline{x}^2(110) = 126.730$, $\underline{p} < 0.15$. Information seeking appeared to have a stronger association with thoughts about the interaction, $\underline{x}^2(20) = 26.070$, $\underline{p} < 0.2$, and positive self-statements, $\underline{x}^2(18) = 27.11$, $\underline{p} < 0.1$, than with the majority of self-statement categories. It was found that the coping strategy inhibition of action, was more evident amongst those whose self-statements were of a negative nature, $\underline{x}^2(76) = 87.307$, $\underline{p} < 0.2$. In addition, irrelevant coping responses were more frequently reported by those who experienced thoughts about others (total) and planning self-statements, $\underline{x}^2(75) = 88.820$, $\underline{p} < 0.15$; $\underline{x}^2(35) = 45.949$, $\underline{p} < 0.15$.

CHAPTER V

Discussion

The results of the study confirmed the original hypothesis (see pages 5 and 6) that the amount and type of stress associated with everyday stressors would be different than that connected with major life events. The findings also offered partial support for the hypothesis that coping strategies would differentiate between the high stress/high illness, high stress/low illness, low stress/high illness, and low stress/low illness groups. In addition, the hypothesis asserting that a relationship between self-statement patterns and coping strategies exists received partial confirmation. The remaining results were inconsistent with the original hypotheses of the study. It was found that self-referent speech exerted no influence on the stress-symptomology relationship.

The Relationship Between Life Events and Hassles

The existence of a significant relationship between total life events and hassles frequency, intensity, and cumulated severity is consistent with results of some previously conducted research but contradicts others. Kanner et al. (1981) in their initial exploration of the Hassles scale found that frequency was the only hassles

measure significantly correlated with life events. In addition, it was observed that this relationship only held true for women. Their research further indicated that hassles intensity was not significantly connected with life events. Cumulative severity as a measure had been dropped from their analysis due to its high correlation with frequency scores. Lewinsohn and Talkington (1979), on the other hand, found that major life events were not significantly related to either the frequency or aversiveness of minor unpleasant events. As research in this area is limited and that conducted to date has focused on life events as a whole, ignoring whether they are pleasant or unpleasant, no information exists to support or discount the significant correlations between negative life events and all the hassles measures, or positive life events and hassles intensity found in this study. If the researchers cited above had analyzed their data in a more detailed manner, their results may have been not only more revealing but quite different from those reported.

The alignment that occurred between negative and total life events in the current study supports previous research findings (Sarason et al., 1978, Vinokur and Selzer, 1975). The data seem to suggest that effects due to life

events are largely attributable to negative experiences. It also indicates that positive occurrences do not serve to moderate the impact of negative events. It is interesting to note that although research has generated data supporting the link between total and negative life events, researchers still focus on whether positive/negative breakdown scores are more valid predictors than total life event scores. In the excitement over the discovery that significant differences exist between positive and negative scores and their connections to symptomology and performance measures, the fact that total life event scores somehow incorporate the functional dynamics of this relationship seems to have been overlooked. As a result attention has been diverted from large issues in stress research into an apparent blind alley.

The finding that minor everyday hassles account for a greater amount and different type of variance in symptomology scores than major life events, supports the limited research conducted to date. Kanner et al. (1981) found that life events rarely accounted for any variance beyond that associated with hassles, while hassles frequently accounted for a significant amount of additional variance. In addition, they discovered that the variance associated

with hassles was significantly greater than that related to major life events.

From the results it is apparent not only that a considerable overlap exists between hassles and life events but also that the possibility of a directional cause-effect sequence exists. As only a negligible amount of life event variance exists independent of that which is connected to hassles, it could be speculated that minor everyday events are the operational mechanism through which life events exert their effect on human functioning. This information, if it proves to be valid, provides valuable information both in terms of understanding and intervening in the relationship between stress and adaptational outcomes. From a counselling point of view, whether you are alleviating the negative effects of stressful encounters, enhancing an individuals coping resources or altering attitudes/perceptual frameworks, it is imperative that a handle exists by which the basic dynamics of the experiential process can be grasped. It seems as though knowledge of the connection between hassles and life events might provide such direction. For example, if you look at divorce as a total entity, it can often be overwhelming in terms of how and where to begin facili-

tating the reconstructive process. The provision of emotional support and/or reality testing, as is the most common approach, often entails a lengthy period of time. If, as the data suggests, part of the undesirable aspect of divorce is that it alters the existing pattern of daily hassles, in terms of social, emotional, and financial needs or responsibilities, then an alternate or additional intervention modality could be used. In particular, as hassles are often precise, concrete events, it suggests that the intervention process rather than being haphazard and unwieldy could proceed using a practical, problem-solving format.

As the life event-hassles relationship seems to have the potential of being a vital link in the stress-illness relationship, further research needs to be conducted to confirm it's existence. In addition, valuable information would be gained if attention was focused on discovering how and to what degree life patterns are altered when a major life event takes place.

In light of Selye's contention that the majority of physical illness directly or indirectly results from exposure to stressful experiences, it is somewhat puzzling that the measures of physical symptomology were not

overly effective in differentiating between the high and low stress groups. One explanation for this could be that in general the subjects experienced both low levels of stress and low levels of illness and therefore may not be representative of the population as a whole. Another influencing factor could be the scale used to measure physical well-being. The scale, which attempted to assess health patterns through measuring the occurrence of common physical complaints over a one month period, may not have been sensitive to more dramatic health problems that build up over a long period of time. As there appears to be a dearth of such scales, the development of a sensitive measure of general physical well-being, would be a definite asset to many areas of research.

Self-Talk as a Moderator Variable in the Stress-Symptomology Relationship

The fact that neither self-statement type nor valence exerted a significant effect on the relationship between stress and adaptational outcomes, finds both positive and negative support in the literature. Research by Lazarus and his associates has over the past twenty years deomonstrated in various way, from laboratory studies

to naturalistic investigations that cognitive appraisal processes in general play an important role in mediating reactions to stress (Lazarus, Speisman, Mordkoff & Davison, 1962; Cohen et al., 1973; Coyne et al., 1980). More specifically, research by Harrell et al. (1981); Hollon et al., 1980; Bartlett, 1980; Girodo et al., 1978; Hulburt et al., 1978; and Russell et al., 1974 has generated evidence which supports the existence of a significant relationship between self-referent speech and emotional reaction. On the other hand, other investigations have failed to find a significant degree of association between self-talk and emotional status (La Pointe and Harrell, 1978; Rogers et a., 1972). The discrepancy which exists amongst the various findings may stem from the fact that exact replications of studies relating to the role of self-talk specifically, and cognitive processes in general, are almost non-existent. As new information has emerged, researchers rather than substantiating the original evidence, have catapulted forward onto extraneous, albeit relevant tangents. The current study is no exception to this. Although the investigations have followed a logical progression from laboratory to naturalistic observations and a general to specific orientation, the con-

fusion that exists in the literature suggests that this growth has been too rapid. It seems that at this point the most productive step would be to go back and provide some additional affirmation of the basic theoretical underpinnings associated with self-referent speech.

In addition, attention should be directed towards refining self-statement assessment methods. As Kendall et al. (1981) point out, all of the current methods of monitoring self-referent speech have drawbacks. Most studies to date, the current one included, have relied on data generated by only one method. Perhaps until more reliable techniques are found, the utilization of several methods would provide a more well-rounded sampling of subjects' cognitions.

The observed tendency for negative thoughts to discriminate between the high stress/low illness and low stress/high illness groups contradicts findings recently reported by Bartlett (1980). Her data revealed that positive coping self-statements, and self-evaluations were related to low levels of stress reactions. The findings of Merluzzi, Cacioppo and Glass (1979) that the high socially anxious subjects in their study had fewer positve and more negative self-thoughts than low socially anxious

subjects also run counter to this trend. Cognitive-behaviourists have long asserted that irrational beliefs (Ellis, 1962), which are generally of a negative nature, and negative self-talk (Meichenbaum, 1974; Beck, 1976) are linked with maladaptive emotional and behavioural responses. However, until recently the amount of empirical evidence, either positive or negative, associated with the theoretical position has been small. The trend evident in the current study appear to suggest that the detrimental effect associated with negative self-verbalizations is of questionable validity.

This information is important for those practitioners who attempt to improve a clients level of functioning by altering their attitudes, self perceptions or patterns of internal dialogue. If, as in the current study, a greater number of negative self-statements is associated with an increased ability to effectively handle stressful encounters then possibly decreasing their occurrence is not a particularly efficient way of short circuiting a client's reactive process. It definitely provides food for thought.

The limited research conducted to date provides some support for the finding that thoughts about others

differentiated between the stress symptomology groups to a greater degree than other types of self-statements. Merluzzi et al. (1979) noted that high socially anxious subjects thought less about the interaction and other individuals than low socially anxious subjects.

It could be that those individuals who think less about themselves and more about the others involved or the interaction in any given situation, are less apt to become involved in a perpetual self-praising or self-negating cycle that may be unrealistic in view of the circumstances at hand.

An individual who on the other hand focuses mainly on the interaction or the other people involved may be attempting to gain an understanding of what was happening, how the other person was reacting and what is of value to them regarding each. In the latter instance an opportunity exists for the individual to develop a creative analysis of or approach to the situation while in the first case, the repetition of automatic possibly inappropriate response patterns is more likely (Goldfried & Davison, 1969). If this is the case then ascertaining the object of a client's thoughts and refocusing them could be one way of facilitating their interactions with the environment.

Additional research needs to be conducted to provide affirmation or negation of the observed trend.

No research finding exist to date regarding the function of irrelevant self-statements.

Coping Processes as Mediators of the Relationship Between Stress and Adaptional Outcomes

The significant effect attributed to information seeking and irrelevant coping responses, in which they were associated with low levels of symptomology, is inconsistent with some and consistent with other research findings. Andrews, et al. (1978) reported that coping ability did not serve a mediating role between life event stress and psychological impairment. In a study relating disease and accident occurrence to stress level and coping ability, Stewart & Brown (1981) found that the association between coping ability and disease prevalence was non-significant. Studies that focused on specific concerns such as post-operative recovery, terminal illness and hypertension, on the other hand have found that the type of coping strategy employed exerts a significant effect on final outcome (Weisman and Worden, 1975; Cohen & Lazarus, 1973; and Aldrich & Mendkoff, 1963).

It is interesting to speculate that the reason

information seeking significantly differentiates between those who react physically and emotionally to stress and those who don't, is due to the fact that it creates a time lag between the reception of the stimulus and the output of the response. Not only does asking for further information increase the prospect that the initial impression may be altered on the basis of new input, but it also allows the individual to slow down, regain a foothold and process the data. In other words it could afford a much needed breathing space. Dollard and Miller (1950) assert that the first stage of reasoning is to, "Stop and think". They feel that an individual who responds immediately when presented with a problem may not have sufficient time to formulate an effective course of action. In support of this position, Bloom and Broder (1950) found that those problem solvers who were unsuccessful tended to be impulsive and gave up quickly if a solution was not readily apparent. It would be interesting to ascertain whether the operative mechanism in the significant information seeking effect was due to the increased data provided or to the provision of a short time out.

The fact that an increase in the number of irrelevant coping responses emitted was significantly associated

with increased maladaptive reactions to stress may be due in part to a lack of motivation or inability to initiate a plan of action. For the most part those responses coded under irrelevant consisted of self-statements about the situation e.g., "I wonder what's going on here," "Holy shit." It could be postulated that those individuals who reported a lot of irrelevant coping responses never really progressed beyond the appraisal stage. If this is the case then it seems reasonable that they would have elevated levels of symptomology, as essentially they are spinning their wheels expending a considerable amount of time and energy without ever seeing an end to the situation. The delineation of the dynamics underlying the relationship of coping responses to adaptational outcomes of stress, would be an asset to practitioners. If, as in the case cited above, the speculation holds true, then an intervention procedure aimed at encouraging the development of step by step action plans could be implemented with confidence. As it now stands, the relationship between irrelevant coping responses and high levels of symptomology could be due to any number of influences including being an artifact of the measuring scheme.

It is interesting to note that the only coping

strategy to be significantly related to perceived effectiveness was direct action. Yet direct action did not discriminate between the four stress-symptomology groups. One possible explanation for these findings lies in research concerning the personality factor of internal-external locus of control. Kobasa et al. (1979) found that those individuals who felt they had control over their world more successfully weathered stressful encounters than those who felt that what happened to them was basically controlled by others. So although, at a surface level, an individual may take a direct action and indicate satisfaction with the results of it, if their underlying belief system is such that whatever they do is perceived to be of little consequence in the overall scheme of things, then this direct action will do little to ameliorate the negative aspects of stress.

The lack of agreement in the literature pertaining to coping is quite possibly a side-effect of the complexity of the construct under consideration. Coping can be divided into two distinct processes, emotion-based (White, 1974) and problem-focused coping (Janis & Mann, 1977). Emotion based refers to taking a palliative approach while problem-solving is more solution oriented. The degree

to which either of these processes will be effective depends on the requirements of the situation at the time. As the dynamics of the situation change so must the coping strategies if they are to produce optimal results. Folkman and Lazarus (1980) found that the context of an event and how it is appraised are the two factors which exert the most powerful effect on type of coping strategy chosen. Their data revealed that in situations where little option for change existed, emotion-based coping was more often the chosen course of action. Often neither one of these processes works well on its own but rather becomes productive only in conjunction with the other. For these reasons, a simplistic analysis of coping process tends to produce information of limited utility. In the current study, further analysis of the data looking at source of stress and whether or not an option for change was perceived to exist would possibly have pointed out additional relationships between coping style and the four stress-symptomology groups. Naturalistic observations extending over a lengthy period of time, such as the Folkman and Lazarus study, and incorporating measures of adaptational outcomes appear to be the logical pathway for coping research to follow.

Self-Statement Patterns and Coping Style - Are They Related?

Appraisal (how a situation is evaluated) and coping (the response made to this appraisal) function according to Lazarus, (1981) in a mutually influential fashion. As self-referent speech is used as a means to monitor the appraisal process then it seems plausible to assert that some sort of relationship should exist between self-statement patterns and coping style. The findings of the current study, that several self-statement categories were related to a number of coping strategies, seems to offer support for this notion. These results are consistent with those reported by Folkman et al. (1980) who found that appraisal was one of the major factors influencing the type of coping strategy chosen. The structural framework used in the Folkman et al. study to categorize appraisal, was based on the degree to which the situation was perceived to be amenable to change. This focus was totally different from that used in the current study, where object of the thought was used as the basis for grouping, and therefore a more detailed comparison between the two studies was not possible.

Apart from the study cited above, and those of Monet et al. (1972) and Fokins (1970), which focus on perceived control of the situation as it relates to the

use of emotion based and problem-focused coping, no studies directly address the issue of how various self-talk patterns affect subsequent coping style. As such, the following discussion of the findings discovered in the present study is of a purely speculative nature.

An interaction between content and valence factors may have produced the significant relationship of negative thoughts about the interaction and self with direct action. Negative information whether self or other generated is generally less comforting to live with than positive input (Schneider, 1976). As such, when negative thoughts are experienced a greater push may be exerted to reduce the associated level of discomfort than when positive statements prevail. In addition, if it's feasible to alter the object of the thought, then the likelihood of attempt to alleviate the negative aspects will be increased. For example, attempting to change another individual or their behaviour can often be a very unproductive expenditure of energy. However, an orientation towards altering a situation or one's own behaviour permits a much greater chance of success. The significant relationship between the category total thoughts about the interaction and direct action may have arisen from an interaction between

a strong negative and weak positive component: a similar situation to that observed earlier between total and negative life events. The fact that positive thoughts about the interaction are not related to any coping style seems to affirm the weakness of their role.

As noted previously neither direct action or the self-statement categories associated with it exert any effect on the stress-symptomology relationship. While the analysis technically looked at these variables in isolation from each other, their intertwining nature prohibits this from occurring in reality. Future research in which one of the factors is held constant while the other manipulated would possibly provide valuable information regarding where the balance of power lies. Which has more influence, appraisal or coping?

The fact that total and negative thoughts about the interaction are related to information seeking seems to logically follow from the previous discussion. If direct action is going to be instigated then it seems quite feasible that one of the first steps might be to gain more data regarding the situation. In this way a more appropriate plan of action could then be initiated. In light of this conceptualization one would expect that

both direct action and information seeking would exert a similar effect on adaptational outcomes to stress. However, as previously mentioned only information seeking discriminates significantly between those who do or do not succumb to stress. This discrepancy may have roots in the separate connections these two coping strategies have with various other types of self-statements. The statistical determination of whether an interaction effect existed between total and negative thoughts about the interaction, information seeking and direct action, would provide some basis for the conjectures outlined above.

Positive information or evaluation in general creates an atmosphere in which the processes of growth and expansion are enhanced (Schneider, 1976). In addition, Beck (1974) noted that a negative orientation impairs functioning. This may account in part for the observed relationships between positive and neutral thoughts and information seeking. It seems that an individual who is open to new experiences and change would benefit from fresh input about both themselves and the situation. No life processes function effectively without feedback, and information is the prime ingredient in any feedback system (Corey, G., 1978).

The significant relationship between planning thoughts and information seeking is incorporated readily within a problem-solving format. If an individual is carrying on an internal dialogue which emphasizes planning, then it seems reasonable to assume that a search for and development of a suitable response is under way. If so, then problem-solving is taking place. Regardless of what the first problem-solving stage is labelled, it's primary function is one of accumulating an extensive bank of data regarding the situation at hand (Goldfried & Davison, 1976; Weinstein, Hardin and Weinstein, 1976). In addition, information in the form of feedback is an integral part of the whole problem-solving process.

The number of coping strategies utilized was significantly related to several self-statement categories as well as being implicated in a number of trends. In view of the fact that this category is significantly related to both positive and negative statements it would appear that as a discriminator on the valence factor it is of limited utility. In terms of type of self-statement however, the coping strategy total, was significantly related to only thoughts about others (total) and marginally related to thoughts about self (total and negative).

Data collected by Folkman and Lazarus (1980) revealed that in the majority of instances both emotion based and problem focused coping are utilized. It could be that attempting to come to terms with one's self or another individual requires implementation of both of these aspects of coping and therefore a greater number of strategies are utilized. Thoughts about the interaction, on the other hand, which was not related to coping strategy total, may be more amenable to just problem focused coping strategies. Due to the lack of a relationship between the number of coping strategies employed and negative reactions to stress, it appears that quality not quantity perse may also be an influencing factor.

The definition of intrapsychic processes utilized in this study incorporated such processes as rationalization, cognitive restructuring, denial and positive reinforcement. The main function of which is to remove, through widely different means, the negative stigma associated with a thought, feeling or behaviour. In view of these circumstances it is of little wonder that a significant connection was found between positive thoughts and intrapsychic process. Neither positive thoughts nor intrapsychic processes were influential indiscriminators between the stress-symptomology levels. This lack of

effect for intrapsychic processes may stem from a tendency for it to work well only in conjunction with other more practically based strategies.

Inhibition of action is a coping strategy designed to curtail escalation of a situation beyond the point it's currently at. This is accomplished by not expressing those thoughts, emotions or behaviours which are surfacing in response to the stressful stimuli. If the overall perception of the event or of those involved is negative then inhibition of action may allow for a quick escape from an already undesirable situation. If this is so, then the significant relationship between inhibition of action and negative thoughts found in the present study is understandable. It would be interesting to know whether subjects in the current study used inhibition of action more frequently in one shot encounters than in interactions of an on-going nature. The effects of walking away from a situation that you're not likely to encounter again may take less of a toll than to not act on an event that is going to repeatedly occur. Accounting for the source of stress in this instance may alter the relationship between inhibition of action and adaptational outcomes to stress.

The trend for planning thoughts to be related to irrelevant coping responses coincides with an earlier observation. It was previously noted that irrelevant coping responses in the main consisted of evaluative statements regarding the situation. It was also observed that those individuals who responded in this manner were more likely to experience negative reactions to stressful events. In light of these facts it was postulated that individuals categorized as irrelevant copers had failed to move beyond the appraisal stage. The new information regarding planning thoughts suggests that the aspect of the appraisal phase posing a major block might involve the point at which a specific course of action needs to be chosen. Plans remain nothing more than a phantasy until they are broken down with specific action-oriented steps. If further investigation verifies the existence of this trend, then attention needs to be focused on determining the point at which the appraisal-coping process breaks down. If it holds that these individuals cannot formulate specific coping strategies, then it seems that their negative responses to stress could be reduced quite readily using a structured behavioural learning program.

Limitations

One major limitation of the study stems from the use of a totally female subject pool. As sex was not a variable under investigation and research indicates that physiological and perceptual differences exist in the manner in which males and females experience stress (Frankenhauser, Wright, Collins, Wright, Sedvall, and Sevahn, 1978; Bradley, 1980) a decision was made to eliminate sex as a confounding variable. The choice of females was purely arbitrary. Further research assessing males reactions to stress as well as differential response patterns peculiar to each sex is needed.

The small number of stressful incidents reported as well as the brief time span over which they were collected were also limiting factors. A longitudinal study, assessing individual reactions to a wide range of stressful experiences would have provided a much more represntative sample of typical response patterns. In addition, valuable information regarding consistency of coping responses across time and circumstance would have been generated.

The rather meager mediating role observed for self-talk and coping may have been largely due to the design of the study. In terms of self-statements the small sample size (N = 65), use of one method for monitoring

self-referent speech and the criteria by which negative, positive and neutral self-statements were evaluated seem to be those areas which might have had the most impact. Research using a wider sampling base both for subjects and recording of self-statements, as well as a more refined coding scheme for categorizing self-referent speech is needed before any firm conclusion can be drawn from these results.

Coping is a complex process, and as such requires intricate assessment methods. Both appraisal and the coping response are influenced by a wide range of variables. The effectiveness of any given strategy is greatly dependent on the combination of variables present. In the study under discussion, a number of potential influencing factors were overlooked. Possibly if the source of the stress and the perceived opportunity for change, had been integrated into the analysis, a greater depth of information may have emerged.

In addition, the interactive affect of the variables under investigation was not always taken into consideration. This was especially evident concerning the response aspect of coping. Folkman et al.'s (1980) finding that 82% of all their subjects used both emotion-based and problem-focused coping suggests that specific combinations

of coping skills might be more effective than those used in isolation. The findings pertaining to the effect of coping on adaptational outcomes to stress may have been quite different had these interactions been incorporated into the analysis.

In order to reduce the limitations discussed above, the current study would have required expansion in several directions. Due to time constraints this was not feasible. In most instances, each of the limitations could well become the basis for further research.

Summary

Ever since the development of devices permitting the measurement of individual stress levels, researchers have focused considerable attention on discerning what, when, where and how stress affects human functioning. The refinement and expansion of stress measurement as well as the delineation of relevant personality, cognitive and social factors have of late generated the most interest. In the present study the issues of stress identification and cognitive mediating factors were addressed.

The results of this study along with previous research indicate that hassles or minor life events, constitute

a major source of stress. In addition, it appears that hassles may serve a mediating role in the relationship between life events and adaptational outcomes. At this point,dissecting the hassles life events link and determining the operative mechanisms by which hassles affect human functioning, are two productive pathways that future research could follow.

The cognitive processes of self-referent speech and coping strategy were closely scrutinized in the present study. The results obtained were varied. Some integrated well within current theories of cognitive functioning while others deviated rather widely. Lazarus's (1981) notion that the coping process involves an integration between appraisal and the coping response received support from the data. The existence of several significant and near-significant relationships between self-statements and coping skills suggests that the manner in which an individual communicates with themselves ultimately affects the coping strategy chosen.

The link between self-statements and coping strategy, reinforces the attitude held by cognitive practitioners that changing thought patterns is the key to altering emotional and behavioural responses. However, if as the

data indicates, changing the behaviour and/or emotion does not necessarily remove the negative by-products of the interaction then it seems that the whole process is of questionable utility.

Lazarus' further assertion that the coping process as a whole strongly moderates the stress-symptomology relationship, however, did not bear out. Neither the type nor valence of self-statements significantly differentiated those who effectively handled stress from those who didn't. Information seeking and irrelevant responses were the only coping strategies to significantly affect the relationship between stress and adaptational outcome.

At the present time an overall picture of the coping response to stress is needed. However this is difficult to attain when component parts are looked at in isolation from the rest. Before microscopically analyzing selected aspects of coping, future research needs to focus on the interactive effects of the multitude of variables influencing coping effectiveness.

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APPENDIX A

Definitions

Definitions

Stress: Is a process which occurs in the organism when a situational demand presents a call for action that is perceived as exceeding the organisms resources (Sarason & Sarason, 1979). In this study it will be measured by the scores attained on The Life Experiences Survey (Sarason, Johnson & Siegel, 1978) and The Hassles Scale (Kanner, Coyne, Schaefer & Lazarus, 1981).

Life Events: An event which instigates change in the life pattern of activities of the individual (Dohrenwend, 1974) as measured by the Life Experiences Survey (Sarason et al., 1978).

Hassles: Refer to the irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment, as measured by The Hassles Scale (Kanner et al., 1981).

Adaptational Outcome: Is the end result of an interaction between an individual and the environment. In this study it is represented by measures of

physical symptomology (Physical Concerns Scale) and psychological functioning - Hopkins Symptom Checklist (HSCL; Derogatis, Lepman, Rickels, Uhlenhuth and Covi, 1974).

Self-Referent Speech: In the context of this study, self-referent speech refers to internal, automatic thoughts, the prime audience of which is the individual him/herself. The same process will alternately be referred to a self-talk, self-statements, and self-thoughts.

Coping: Efforts, both action-oriented and intra-psychic, to manage (i.e. master, tolerate, reduce, minimize) environmental and internal demands and conflicts amongst them, which tax or exceed a person's resources (Lazarus & Launier, 1978).

APPENDIX B

Demographic Data Sheet

Demographic Data

Directions: Circle the number beside the appropriate answer.

What is your age:

1) Under 16
2) 16-18
3) 19-24
4) 25-34
5) 35-44
6) 45-54
7) Over 55

What is your marital status:

1) Single
2) Married
3) Living together
4) Separated
5) Divorced
6) Widowed

What level of education have you completed:

1) Grade school or less
2) Some high school
3) High school graduation or its equivalent
4) Some college or university
5) University or college degree
6) Some graduate or professional school
7) Graduate or professional degree
8) Post-graduate studies

What is your occupation:

1) Executive or manager
2) Professional (Doctor, lawyer, etc.)
3) Social Service worker (teacher, child care worker)
4) Salesperson
5) Foreman or skilled worker (welder, cook, seam-stress)
6) Clerical
7) Semi-skilled or unskilled worker (labourer, waitress)
8) House person
9) Other

APPENDIX C

The Life Experiences Survey

The Life Experiences Survey

Directions:

Listed on the following pages are a series of life events which may or may not have occurred for you during the past year. After reading over each item, indicate with a check mark in the appropriate space located to the right, whether it occurred in the past six months (0-6 months) or the six months prior to that (7-12 months). If a life event did not occur skip over it and go on to the next item. Next, consider the numbers on the far right which range from: -3 (extremely negative) to +3 (extremely positive) and indicate by circling one, how the event affected your life.

Remember that only those events which have taken place within the past twelve months are to be considered.

	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
1. Marriage			-3	-2	-1	0	+1	+2	+3
2. Detention in jail or comparable institution			-3	-2	-1	0	+1	+2	+3
3. Death of spouse			-3	-2	-1	0	+1	+2	+3
4. Major change in sleeping habits (much more or much less sleep)			-3	-2	-1	0	+1	+2	+3
5. Death of close family member:									
a. mother			-3	-2	-1	0	+1	+2	+3
b. father			-3	-2	-1	0	+1	+2	+3
c. brother			-3	-2	-1	0	+1	+2	+3
d. sister			-3	-2	-1	0	+1	+2	+3
e. grandmother			-3	-2	-1	0	+1	+2	+3
f. grandfather			-3	-2	-1	0	+1	+2	+3
g. other (specify)			-3	-2	-1	0	+1	+2	+3
6. Major change in eating habits (much more or much less food intake)			-3	-2	-1	0	+1	+2	+3
7. Foreclosure on mortage or loan			-3	-2	-1	0	+1	+2	+3
8. Death of close friend			-3	-2	-1	0	+1	+2	+3
9. Outstanding personal achievement			-3	-2	-1	0	+1	+2	+3
10. Minor law violations (traffic tickets, disturbing the peace, etc.)			-3	-2	-1	0	+1	+2	+3

		0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
11.	Male: Wife/girlfriend pregnancy			-3	-2	-1	0	+1	+2	+3
12.	Female: Pregnancy			-3	-2	-1	0	+1	+2	+3
13.	Change work situation (different responsibility, major change in working conditions, working hours, etc.)			-3	-2	-1	0	+1	+2	+3
14.	New job			-3	-2	-1	0	+1	+2	+3
15.	Serious illness or injury of close family member:									
	a. father			-3	-2	-1	0	+1	+2	+3
	b. mother			-3	-2	-1	0	+1	+2	+3
	c. sister			-3	-2	-1	0	+1	+2	+3
	d. brother			-3	-2	-1	0	+1	+2	+3
	e. grandfather			-3	-2	-1	0	+1	+2	+3
	f. grandmother			-3	-2	-1	0	+1	+2	+3
	g. spouse			-3	-2	-1	0	+1	+2	+3
	h. other (specify)			-3	-2	-1	0	+1	+2	+3
16.	Sexual difficulties			-3	-2	-1	0	+1	+2	+3
17.	Trouble with employer (in danger of losing job, being suspended, demoted, etc.)			-3	-2	-1	0	+1	+2	+3

		0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
18.	Trouble with in-laws			-3	-2	-1	0	+1	+2	+3
19.	Major change in financial status (a lot better off or worse off)			-3	-2	-1	0	+1	+2	+3
20.	Major change in closeness of family members (increased or decreased closeness)			-3	-2	-1	0	+1	+2	+3
21.	Gaining a new family member (through birth, adoption, family member moving in, etc.)			-3	-2	-1	0	+1	+2	+3
22.	Change in residence			-3	-2	-1	0	+1	+2	+3
23.	Marital separation from mate (due to conflict)			-3	-2	-1	0	+1	+2	+3
24.	Major change in church activities (increased or decreased attendance)			-3	-2	-1	0	+1	+2	+3
25.	Marital reconciliation with mate			-3	-2	-1	0	+1	+2	+3
26.	Major change in number of arguments with spouse (a lot more or a lot less arguments)			-3	-2	-1	0	+1	+2	+3

		0 to 6 mo	7 mo to 1yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
27.	Married male: change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)			-3	-2	-1	0	+1	+2	+3
28.	Married female: change in husband's work (loss of job, beginning new job, retirement etc.)			-3	-2	-1	0	+1	+2	+3
29.	Major change in usual type and/or amount of recreation			-3	-2	-1	0	+1	+2	+3
30.	Borrowing more than $10,000 (buying home, business, etc.)			-3	-2	-1	0	+1	+2	+3
31.	Borrowing less than $10,000 (buying car, T.V., getting school loan, etc.)			-3	-2	-1	0	+1	+2	+3
32.	Being fired from job			-3	-2	-1	0	+1	+2	+3
33.	Male: Wife/girlfriend having abortion			-3	-2	-1	0	+1	+2	+3
34.	Female: Having abortion			-3	-2	-1	0	+1	+2	+3
35.	Major personal illness or injury			-3	-2	-1	0	+1	+2	+3

		0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
36.	Major change in social activities, e.g. parties, movies, visiting (in-creased or decreased participation)			-3	-2	-1	0	+1	+2	+3
37.	Major change in living conditions of family (building new home, re-modelling, deterioration of home, neighbourhood, etc.)			-3	-2	-1	0	+1	+2	+3
38.	Divorce			-3	-2	-1	0	+1	+2	+3
39.	Serious injury or illness of close friend			-3	-2	-1	0	+1	+2	+3
40.	Retirement from work			-3	-2	-1	0	+1	+2	+3
41.	Son or daughter leaving home (due to marriage, college, etc.)			-3	-2	-1	0	+1	+2	+3
42.	Ending of formal schooling			-3	-2	-1	0	+1	+2	+3
43.	Separation from spouse (due to work, travel, etc.)			-3	-2	-1	0	+1	+2	+3
44.	Engagement			-3	-2	-1	0	+1	+2	+3
45.	Breaking up with boy-friend/girlfriend			-3	-2	-1	0	+1	+2	+3
46.	Leaving home for the first time			-3	-2	-1	0	+1	+2	+3
47.	Reconciliation with boyfriend/girlfriend			-3	-2	-1	0	+1	+2	+3

Other recent experiences which have had an impact on your life. List and rate.	0 to 6 mo	7 mo to 1 yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
48. ________________			-3	-2	-1	0	+1	+2	+3
49. ________________			-3	-2	-1	0	+1	+2	+3
50. ________________			-3	-2	-1	0	+1	+2	+3

APPENDIX D

The Hassles Scale

The Hassles Scale

Directions:

Hassles are irritants that can range from minor annoyances to fairly major pressures, problems or difficulties. They can occur few or many times.

Listed in the center of the following pages are a number of ways in which a person can feel hassled. First, circle the hassles that have happened to you in the past month. Then look at the numbers on the right of the items you circled. Indicate by circling a 1, 2, or 3 how SEVERE each of the circled hassles has been for you in the past month. If a hassle did not occur in the last month do NOT circle it.

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
1.	Misplacing or losing things	1	2	3
2.	Troublesome neighbours	1	2	3
3.	Social obligations	1	2	3
4.	Inconsiderate smokers	1	2	3
5.	Troubling thoughts about your future	1	2	3
6.	Thoughts about death	1	2	3
7.	Health of a family member	1	2	3
8.	Not enough money for clothing	1	2	3
9.	Not enough money for housing	1	2	3
10.	Concerns about owing money	1	2	3
11.	Concerns about getting credit	1	2	3
12.	Concerns about money for emergencies	1	2	3
13.	Someone owes you money	1	2	3
14.	Financial responsibility for someone who doesn't live with you	1	2	3
15.	Cutting down on electricity, water, etc.	1	2	3
16.	Smoking too much	1	2	3
17.	Use of alcohol	1	2	3

HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
18. Personal use of drugs	1	2	3
19. Too many responsibilities	1	2	3
20. Decisions about having children	1	2	3
21. Non-family members living in your house	1	2	3
22. Care for pet	1	2	3
23. Planning meals	1	2	3
24. Concerned about the meaning of life	1	2	3
25. Trouble relaxing	1	2	3
26. Trouble making decisions	1	2	3
27. Problems getting along with fellow workers	1	2	3
28. Customers or clients give you a hard time	1	2	3
29. Home maintenance (inside)	1	2	3
30. Concerns about job security	1	2	3
31. Concerns about retirement	1	2	3
32. Laid-off or out of work	1	2	3
33. Don't like current work duties	1	2	3
34. Don't like fellow workers	1	2	3

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
35.	Not enough money for basic necessities	1	2	3
36.	Not enough money for food	1	2	3
37.	Too many interruptions	1	2	3
38.	Unexpected company	1	2	3
39.	Too much time on hands	1	2	3
40.	Having to wait	1	2	3
41.	Concerns about accidents	1	2	3
42.	Being lonely	1	2	3
43.	Not enough money for health care	1	2	3
44.	Fear of confrontation	1	2	3
45.	Financial security	1	2	3
46.	Silly practical mistakes	1	2	3
47.	Inability to express yourself	1	2	3
48.	Physical illness	1	2	3
49.	Side effects of medication	1	2	3
50.	Concerns about medical treatment	1	2	3
51.	Physical appearance	1	2	3
52.	Fear of rejection	1	2	3

HASSLES		SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe	
53. Difficulties with getting pregnant	1	2	3
54. Sexual problems that result from physical problems	1	2	3
55. Sexual problems about other than those resulting from physical problems	1	2	3
56. Concerns about health in general	1	2	3
57. Not seeing enough people	1	2	3
58. Friends or relatives too far away	1	2	3
59. Preparing meals	1	2	3
60. Wasting time	1	2	3
61. Auto maintenance	1	2	3
62. Filling out forms	1	2	3
63. Neighbourhood deterioration	1	2	3
64. Financing children's education	1	2	3
65. Problems with employees	1	2	3
66. Problems on job due to being woman or man	1	2	3
67. Declining physical abilities	1	2	3
68. Being exploited	1	2	3

HASSLES		SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
69.	Concerns about bodily functions	1	2	3
70.	Rising prices of common goods	1	2	3
71.	Not getting enough rest	1	2	3
72.	Not getting enough sleep	1	2	3
73.	Problems with aging parents	1	2	3
74.	Problems with your children	1	2	3
75.	Problems with persons younger than yourself	1	2	3
76.	Problems with your lover	1	2	3
77.	Difficulties seeing or hearing	1	2	3
78.	Overloaded with family responsibilities	1	2	3
79.	Too many things to do	1	2	3
80.	Unchallenging work	1	2	3
81.	Concerns about meeting high standards	1	2	3
82.	Financial dealings with friends or acquaintances	1	2	3
83.	Job dissatisfactions	1	2	3
84.	Worries about decisions to change jobs	1	2	3
85.	Trouble with reading, writing or spelling abilities	1	2	3

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
86.	Too many meetings	1	2	3
87.	Problems with divorce or separation	1	2	3
88.	Trouble with arithmetic skills	1	2	3
89.	Gossip	1	2	3
90.	Legal problems	1	2	3
91.	Concerns about weight	1	2	3
92.	Not enough time to do the things you need to do	1	2	3
93.	Television	1	2	3
94.	Not enough personal energy	1	2	3
95.	Concerns about inner conflicts	1	2	3
96.	Feel conflicted over what to do	1	2	3
97.	Regrets over past decisions	1	2	3
98.	Menstrual (period) problems	1	2	3
99.	The weather	1	2	3
100.	Nightmares	1	2	3
101.	Concerns about getting ahead	1	2	3
102.	Hassles from boss or supervisor	1	2	3
103.	Difficulties with friends	1	2	3

	HASSLES	SEVERITY 1. Somewhat severe 2. Moderately severe 3. Extremely severe		
104.	Not enough time for family	1	2	3
105.	Transportation problems	1	2	3
106.	Not enough money for transportation	1	2	3
107.	Not enough money for entertainment and recreation	1	2	3
108.	Shopping	1	2	3
109.	Prejudice and discrimination from others	1	2	3
110.	Property, investments or taxes	1	2	3
111.	Not enough time for entertainment and recreation	1	2	3
112.	Yardwork or outside home maintenance	1	2	3
113.	Concerns about news events	1	2	3
114.	Noise	1	2	3
115.	Crime	1	2	3
116.	Traffic	1	2	3
117.	Pollution	1	2	3
	HAVE WE MISSED ANY OF YOUR HASSLES? IF SO, WRITE THEM IN BELOW:			
118.	______________________________	1	2	3

APPENDIX E

Hopkins Symptom Checklist

Next to each statement listed below, please indicate the degree of distress you experienced when such a situation occurred during the last two weeks, up to and including today.

	ITEM	DISTRESS			
		Not at all	Low Distress	Moderate Distress	Extreme Distress
1.	headaches	1	2	3	4
2.	nervousness or shakiness inside	1	2	3	4
3.	being unable to get rid of bad thoughts or ideas	1	2	3	4
4.	faintness or dizziness	1	2	3	4
5.	loss of sexual interest or pleasure	1	2	3	4
6.	feeling critical of others	1	2	3	4
7.	bad dreams	1	2	3	4
8.	difficulty in speaking when you are excited	1	2	3	4
9.	trouble remembering things	1	2	3	4
10.	worried about sloppiness or carelessness	1	2	3	4
11.	feeling easily annoyed or irritated	1	2	3	4

	ITEM	DISTRESS			
		Not at all	Low Distress	Moderate Distress	Extreme Distress
12.	pains in the heart or chest	1	2	3	4
13.	itching	1	2	3	4
14.	feeling low in energy or slowed down	1	2	3	4
15.	thoughts of ending your life	1	2	3	4
16.	sweating	1	2	3	4
17.	trembling	1	2	3	4
18.	feeling confused	1	2	3	4
19.	poor appetite	1	2	3	4
20.	cry easily	1	2	3	4
21.	feeling shy or uneasy with opposite sex	1	2	3	4
22.	a feeling of being trapped or caught	1	2	3	4

	ITEM	DISTRESS			
		Not at all	Low Distress	Moderate Distress	Extreme Distress
23.	suddenly scared for no reason	1	2	3	4
24.	temper outbursts you could not control	1	2	3	4
25.	constipation	1	2	3	4
26.	blaming yourself for things	1	2	3	4
27.	pains in the lower part of your back	1	2	3	4
28.	feeling blocked or stymied in getting things done	1	2	3	4
29.	feeling lonely	1	2	3	4
30.	feeling blue	1	2	3	4
31.	worrying or stewing about things	1	2	3	4
32.	feeling no interest in things	1	2	3	4
33.	feeling fearful	1	2	3	4

	ITEM	DISTRESS			
		Not at all	Low Distress	Moderate Distress	Extreme Distress
34.	your feelings being easily hurt	1	2	3	4
35.	having to ask others what you should do	1	2	3	4
36.	feeling others do not understand you or are unsympathetic	1	2	3	4
37.	feeling that people are unfriendly or dis-like you	1	2	3	4
38.	having to do things very slowly in order to be sure you are doing them right	1	2	3	4
39.	heart pounding or racing	1	2	3	4
40.	nausea or upset stomach	1	2	3	4
41.	feeling inferior to others	1	2	3	4
42.	soreness of your muscles	1	2	3	4
43.	loose bowel movements	1	2	3	4

	ITEM	DISTRESS			
		Not at all	Low Distress	Moderate Distress	Extreme Distress
44.	difficulty in falling asleep or staying asleep	1	2	3	4
45.	having to check and double check what you do	1	2	3	4
46.	difficulty making decisions	1	2	3	4
47.	wanting to be alone	1	2	3	4
48.	trouble getting your breath	1	2	3	4
49.	having to avoid certain places or activities because they frighten you	1	2	3	4
50.	your mind going blank	1	2	3	4
51.	numbness or tingling in parts of your body	1	2	3	4
52.	a lump in your throat	1	2	3	4
53.	feeling hopeless about the future	1	2	3	4

ITEM	DISTRESS			
	Not at all	Low Distress	Moderate Distress	Extreme Distress
54. trouble concentrating	1	2	3	4
55. weakness in part of your body	1	2	3	4
56. feeling tense or keyed up	1	2	3	4
57. heavy feelings in your arms or legs	1	2	3	4

APPENDIX F

Scale of Physical Concerns

Scales of Physical Concerns

Listed below are a series of common physical complaints. Read over each item and indicate on the scales provided:

(1) How often you experience such a symptom over the past month (frequency).

(2) How long it lasts usually (duration); and

(3) The strength with which it presents itself (intensity).

e.g. fainting

	Not at all	Occasionally	Frequently	Constantly
Frequency	1	2X	3	4
	Briefly (Minutes)	short periods (hours)	moderate (days)	long (week/-months)
Duration	1X	2	3	4
	mild	moderate	strong	severe
Intensity	1	2	3X	4

Frequency	Not at all 1	Occasionally 2	Frequently 3	Constantly 4
Duration	Briefly (Minutes) 1	Short Periods (hours) 2	Moderate (days) 3	Long(weeks/- months) 4
Intensity	Mild 1	Moderate 2	Strong 3	Severe 4

Skin Disorders:

1.	excema	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	acne	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	rash/- itchiness	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all 1	Occasionally 2	Frequently 3	Constantly 4
Duration	Briefly (Minutes) 1	Short Periods (hours) 2	Moderate (days) 3	long (weeks/-months) 4
Intensity	Mild 1	Moderate 2	Strong 3	Severe 4

4. Others (please specify)	Frequency	1	2	3	4
	Duration	1	2	3	4
	Intensity	1	2	3	4

Allergies:

1. asthma	Frequency	1	2	3	4
	Duration	1	2	3	4
	Intensity	1	2	3	4
2. Foods/-Drugs/-Substances	Frequency	1	2	3	4
	Duration	1	2	3	4
	Intensity	1	2	3	4
3. Others (please specify)	Frequency	1	2	3	4
	Duration	1	2	3	4
	Intensity	1	2	3	4

Frequency	Not at all 1	Occasionally 2	Frequently 3	Constantly 4
Duration	Briefly (Minutes) 1	Short Periods (hours) 2	Moderate (days) 3	long (weeks/- months) 4
Intensity	Mild 1	Moderate 2	Strong 3	Severe 4

Headaches:

1.	dizziness	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	blurred vision	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	headaches	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all 1	Occasionally 2	Frequently 3	Constantly 4
Duration	Briefly (Minutes) 1	Short Periods (hours) 2	Moderate (days) 3	Long (weeks/- months) 4
Intensity	Mild 1	Moderate 2	Strong 3	Severe 4

Circulatory:

1.	high/low blood pressure	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	nose bleeds	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	tachycardia/-palpitations	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all 1	Occasionally 2	Frequently 3	Constantly 4
Duration	Briefly (Minutes) 1	Short Periods (hours) 2	Moderate (days) 3	Long (weeks/- months) 4
Intensity	Mild 1	Moderate 2	Strong 3	Severe 4

Digestive Complaints:

1.	diarrhea/-constipation/-colitis	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	abdominal pain/ulcer	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	gas	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Other (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all	Occasionally	Frequently	Constantly
	1	2	3	4

Duration	Briefly (Minutes)	Short Periods (Hours)	Moderate (days)	Long (weeks/-(months)
	1	2	3	4

Intensity	Mild	Moderate	Strong	Severe
	1	2	3	4

Gynecological Concerns:

1.	menstrual tension	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	vaginal irritations	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	complica- tions of pregnancy	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all	Occasionally	Frequently	Constantly
	1	2	3	4

Duration	Briefly (Minutes)	Short Periods (hours)	Moderate (days)	Long (weeks/-(months)
	1	2	3	4

Intensity	Mild	Moderate	Strong	Severe
	1	2	3	4

Endocrine:

1.	premenstrual tension	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	diabetes	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	hypo/-hyperthyroid	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all	Occasionally	Frequently	Constantly
	1	2	3	4

Duration	Briefly (Minutes)	Short Periods (hours)	Moderate (days)	Long (weeks/-months)
	1	2	3	4

Intensity	Mild	Moderate	Strong	Severe
	1	2	3	4

Musculo-skeletal:

1.	back acne	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	stiff neck	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	muscular cramps/-tightness	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all	Occasionally	Frequently	Constantly
	1	2	3	4

Duration	Briefly (Minutes)	Short Periods (hours)	Moderate (days)	Long (weeks/-months)
	1	2	3	4

Intensity	Mild	Moderate	Strong	Severe
	1	2	3	4

Infections:

1.	kidney/-bladder infections	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	cold sores/-cankers	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	stys/boils	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

Frequency	Not at all	Occasionally	Frequently	Constantly
	1	2	3	4

Duration	Briefly (Minutes)	Short Periods (hours)	Moderate (days)	Long (weeks/-months)
	1	2	3	4

Intensity	Mild	Moderate	Strong	Severe
	1	2	3	4

Disease Entites:

1.	cold/flu	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
2.	venereal disease	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
3.	mononucleosis	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4
4.	Others (please specify)	Frequency	1	2	3	4
		Duration	1	2	3	4
		Intensity	1	2	3	4

APPENDIX G

Subject's Instructions For The Structured Descriptive Exercise

During the coming week, I would like you to focus your attention on the stressful events that are occurring in your life. In terms of this study, a stressful situation can range from a broken finger nail, to being late for an appointment, to a marital separation. Basically, it would be any circumstance in which you feel stressed.

When you encounter a situation that is stressful for you, would you please write a brief detailed description of what took place, on the paper provided, as soon after the event as possible. After outlining the incident, I would like you to reflect back on and list all of the thoughts you had about the situation just prior to, during and shortly after it's occurrence. Asking the question, "What kind of things was I saying to myself" might help you to focus on these thoughts. List the thoughts as they occurred. They do not have to make sense nor is it necessary that they be written in grammatically correct sentences; words and phrases will suffice.

Upon completion of your self-thought list, would you indicate briefly the manner in which you coped with the situation. This could range from expressing an emotion, to ignoring the occurrence, to looking for a solution.

Lastly would you indicate how effective your manner of coping was for you in this particular incidence. In other words, "To what degree were your needs met?" Repeat this procedure once , so that a total of 2 situations have been described.

To further increase your understanding of this portion of the study, a complete example has been provided.

If you have any questions, please do not hesitate to contact me.

Thank you for your cooperation.

APPENDIX H

Definitions of Self-Statement Categories

The following criteria were used to define each self-statement category:

1. Thoughts of Self

   Object of the self-statement is the individual experiencing it.

   e.g. "Why am I behaving this way?"

   "I am feeling anxious."

2. Thoughts About the Interaction

   The current process or situation that the person is involved in is the focus of attention.

   e.g. "Wonder how long the interview will be?"

   "This party is boring."

3. Thoughts of the Other Individual(s) Involved

   The object of the thought are those with whom the individual is interacting.

   e.g. "She doesn't look very old."

   "Wonder what the new members think about me."

4. <u>Planning Thoughts</u>

Self-statements which focus on establishing and/or outlining plans for future action.

e.g. "I've got two choices here. I can either bring the conflict into the open or ignore it. Which would be best."

"The next time the situation occurs I am going to..."

5. <u>Irrelevant Thoughts</u>

Self talk which has a focus of attention other than those listed in the four preceeding categories.

e.g. "It is spring, the flowers are starting to bloom."

"Oil went up today."

APPENDIX I

Guidelines for Scoring Self-Statements

Instructions for judges:

Attached to this sheet you will find a list of categories and definitions pertaining to self-statements as well as the material to be coded. Your function is to examine and categorize subjects' responses to stressful situations into representative categories using the object towards which the content of the self-statement is directed as the basis for classification.

Before proceeding please read over the definitions carefully and develop for yourself a feeling for the qualities of each category as well as the distinctions between them.

When you have an understanding of the classification scheme, read over each statement and assign it to the appropriate category. Your choice should be formed on the basis of which category best fits the object towards which the communication is directed, e.g. Who or What is the focus of this statement? When you have come to a decision, place the number of the assigned category at the end of the statement. At this time also indicate whether you perceive the nature of the statement to be positive, negative or neutral.

In some cases the object towards which the communication is directed may not be immediately clear. It may be necessary in such instances to use your intuitive reaction to the words being used as the basis for your decision. However, if a communication proves to be too obscure, incomplete or mixed up to classify then it should be placed in the irrelevant category. In no instances should a statement be skipped over.

On occasion a statement may include more than one main theme. If such a case occurs then consider each theme as in independent entity and classify each as such, e.g. He can be so aggravating at times, that I just feel like I am going to explode. For this particular communication the first half would be coded under 'thoughts of other involved' (negative), while the second parts would be classified as 'thoughts of self' (negative).

Thank you for your participation.

APPENDIX J

Definitions of Coping Strategy Categories

The criteria which delineate each of the coping skill categories are as follows:

1. Information Seeking

   Involves the process of surveying a situation with the intent to increase knowledge of the relevant features so that decision making is facilitated.

   e.g. "After surgery, what will I feel like?"

   "Earlier you said, '.....', I'm not sure what you meant could you explain it for me?"

   or researching/reading about a problem area.

2. Direct Action

   Involves any response apart from cognitive coping mechanisms that is designed to alter directly the person-environment relationships. Usually such a response is expressed as a readily observable behavior.

   - expressing feelings (frustration, joy, etc.)
   - increasing physical fitness routine
   - emersing self in work
   - moving away; severing relationships

3. <u>Inhibition of Action</u>

   Involves the process of stopping, refocusing or limiting a direct action that has the potential to produce undesirable results.

   - instead of fleeing in response to fear, or anxiety, sticking with working through the situation.
   - deciding not to express a particular emotion.

4. <u>Intrapsychic Processes</u>

   Involves not only traditional defense mechanisms but also thought restructuring processes. Some of the more prevalent responses would include denial, reaction formation, projection, avoidance, distancing, negating importance of feelings associated with or consequences of an event, intellectualization, withdrawal.

   The sole function of most of these mechanisms is to minimize the degree of emotional distress experienced and thereby allow the individual to feel a sense of control over the situation.

   e.g. "That would have been a lousy job to have anyway."

   "If he/she really cared about me then they would..."

5. <u>Irrelevant Responses</u>

Would include any responses which did not fit into one of the above categories as well as those which were incomplete or unintelligible.

e.g. "I would go and ...."

"Maybe, well sometimes, it might be that, you know, Mmmm......"

APPENDIX K

Guidelines for Scoring Coping Strategies

Instructions for judges:

Attached to this sheet you will find a list of categories and definitions pertaining to coping strategies as well as the material to be assessed. Your function is to examine and categorize subjects' responses to stressful situations into respective categories using the mode of reaction as the basis for classification.

Before proceeding please read over the definitions carefully and develop for yourself a feeling for the qualities of each category as well as the distinctions between them.

When you have an understanding of the classification scheme, read over each statement and assign it to the appropriate category. Your choice should be formed on the basis of the manner in which the subject reacted to the situation, e.g. "What did he/she do when this event occurred?" When you have come to a decision, place the number of the chosen category at the end of the statement.

In some cases, the manner in which the individual responded may not be described in an overly clear fashion. In such instances, it may be necessary to rely on your own intuitive reaction to the words used as the basis of

your decision. However, if a communication proves to be too vague, incomplete or mixed up, then it should be placed in the irrelevent category. In no instances should a statement be skipped over.

On occasion, a statement may include more than one coping strategy. In a case such as this then, both coping strategies should be treated as separate responses and coded as such, e.g. "Even though it doesn't matter what he thinks I'm going to find out what he meant when he said....". In the preceeding communication both an intrapsychic and an information seeking response occurred.

Thank you for your participation.

APPENDIX L

General Request for Subjects

I am currently enrolled as a Master's student in Counselling Psychology. As part of my degree program I am required to complete a major research project or thesis. My area of research focuses on how individuals react to stress, in particular the kinds of things they say to themselves in a stressful situation and the coping strategies they use to work through the event.

My purpose in approaching you lies in the fact that I'm looking for an all female subject pool. Subjects would be required to commit approximately 3 hours worth of time (at a maximum). The time will be divided into one one hour sessions spent with the researcher, and a two hour period of individual work. Meetings will be held at the University, or the researcher's home and times will be arranged at the subject's convenience. The project will be run sometime during the month of April. Participation is completely voluntary. Under no circumstances will anyone be required to continue with the study if they feel it would be inappropriate to do so.

All information will be held in strictest confidence and written material will be identifiable by a code mark known only to the subject. If you are at all interested

and would like further information please contact me after the meeting or at home (598-6292).

Sharon Plater

APPENDIX M

Detailed Information Package for Subjects; Purpose, Procedure and Participant Safeguards

Purpose:

The purpose of this study is to increase understanding of some of the factors involved in individual reactions to stress, in particular locus of control, self-statements and coping strategies.

Procedure:

In total the study involves roughly four hours of time. The initial session, which will last about one hour, will involve filling out four self-report questionnaires. Two of these forms are checklists of stressful life experiences; another relates to psychological well-being, and the final one refers to physical symptomology.

The second session, also approximately an hour in length, consists of filling out an inventory concerning locus of control; as well as a brief instructional period concerning the work to be done at home.

The remaining section of the study involves:

1. describing three stressful situations you are involved in, shortly after they have occurred.

2. Listing all of the thoughts that were running through your head while you were involved in the situations;
3. outlining the coping strategy you used to deal with each incidence; and
4. rating how effective these coping methods were for you.

Additional Information:

1) The situations to be described will be chosen strictly on the basis of the subject's discretion.
2) It is not necessary to have an overly stressful life to participate. Stress as referred to here can be anything from a broken shoe lace to death of a loved one.
3) All material used in the study will be coded with a symbol that is known only to the subject. This way the material can be matched for analysis and at the same time complete anonymity is assured.
4) All information obtained will be used for research purposes only.

If you feel as though you would like to become involved in this project please contact me so that we can arrange a time to meet.

Your participation would be most welcome.

Thank you for your time and consideration.

Sharon Plater

598-6292

APPENDIX N

Example of Subjects Take Home Assignment: Situation Description Self Thoughts; Coping Strategy Effectiveness

Description

Scheduled to meet with a gentleman who is very important to me. I really want this individual to like me, to find me attractive and interesting. As much as I have positive feelings toward this person I am terrified to let be them know. I am afraid I will be rejected. The closer the interview gets the more distraught I become.

Self-Thoughts

- It really isn't important whether he likes me or not.
- This is ridiculous. You're acting like a little kid.
- Why can't I be cool, suave and in control.
- You really are a loser, most other people wouldn't react this way.
- It will be different this time. Wait and see.
- Why am I so nervous? It is just another human being.
- I am so dull, I will never be able to think of anything to say.
- Don't know why you even bother, he won't notice you anyway.
- If only I was more outgoing, had more of a personality.

Coping Strategy

- Try to avoid thinking about the meeting.
- At the meeting act cool, aloof, don't really talk to the person. Be critical and sarcastic.

Effectiveness

No, it is not effective because my anxiety keeps me from interacting with this individual on anything but a superficial level.

VITA

Surname: Plater   Given Names: Sharon Ann

Place of Birth: Victoria, B.C. Date of Birth August 20, 1949

Educational Institutions Attended, with Dates of Entering and Leaving:

UNIVERSITY OF VICTORIA   1974 to present

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

B.Sc.(Honors)   1979   University of Victoria

Honors and Awards:

University of Victoria, President's Scholarship, 1977/78, 1978/79

University of Victoria Fellowship, 1980/81, 1981/82

Publications:

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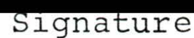
Author 
Signature

Sharon Ann Plater
Name (typewritten)

September 17, 1982
Date