

THE UNIVERSITY OF CALGARY

PERSONALITY, COPING WITH UNEMPLOYMENT,
PERCEIVED COPING EFFECTIVENESS, AND SUBJECTIVE WELL-BEING
IN MATURE WOMEN

By

Louise L. Parsons

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF PSYCHOLOGY

CALGARY, ALBERTA

December, 1989

© Louise L. Parsons, 1989



National Library
of Canada

Bibliothèque nationale
du Canada

Canadian Theses Service Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

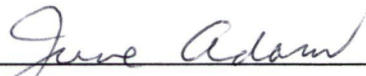
ISBN 0-315-61710-1

Canada

THE UNIVERSITY OF CALGARY

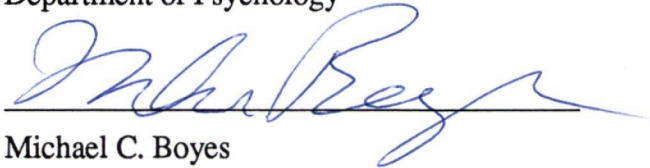
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommended to the Faculty of Graduate Studies for acceptance, a thesis entitled "Personality, Coping With Unemployment, Perceived Coping Effectiveness, and Subjective Well-Being in a Mature Women", submitted by Louise L. Parsons in partial fulfillment of the requirements for the degree of Masters of Science.



J. A. Adam (Supervisor)

Department of Psychology



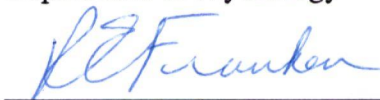
Michael C. Boyes

Department of Psychology



B. E. Dunn

Department of Psychology



R. E. Franken

Department of Psychology



W. Zerbe

Department of Management

Date December 22, 1989

ABSTRACT

Past research in the areas of personality, coping use and perceived coping effectiveness, and subjective well-being, particularly that of McCrae and Costa (1986a), led to the formulation of a conceptual model tested on a sample of 142 mature women facing unemployment. Attempts to fit this model to the data failed, primarily because it tried to impose upon the constructs of coping a system that would not hold.

Exploratory factor analyses identified strong links between the coping variables at the measurement level, suggesting two alternative models. One posited an overall coping construct of "skill" and two more stylistically based constructs ("active/denial" and "passive"); the other conceived coping as based on style of strategy, combining use and perceived effectiveness in three stylistic concepts ("active", "passive", and "denial"). These two models reflect two major perspectives in coping research; the former mirrors the psychodynamically oriented defensive polarity classifications of coping mechanisms, the latter the more cognitive-behavioural point of view.

Links among personality constructs, subjective well-being, and the use and perceived effectiveness of coping strategies were identified in each of the two models. These lent support to the findings of McCrae and Costa (1986a). Personality characteristics were found to affect the use and perceived effectiveness of coping strategies concerning unemployment of the women sampled. As well, personality characteristics were found to affect subjective well-being directly for these women. Both models suggest

the existence of a concept of "coping use" which crosses stylistic boundaries, but do not support the independent constructs of "problem-solving" and "emotional" effectiveness.

It is noted that the results of this study exemplify the problems that arise in building comprehensive models to integrate research across different areas when the concepts within those areas are not adequately defined. Issues raised by this study concerning the conception and measurement of coping and personality, and the choice of outcome variables in studies of this kind, are discussed.

ACKNOWLEDGEMENTS

I want to thank my supervisor, June Adam, for her patience and support. Mike Boyes' advice and help in dealing with various beurocracies was invaluable. A special thanks is extended to Bruce Dunn for help above and beyond the call of duty and for giving me renewed excitement about my research when I badly needed it.

Many thanks as well to my fellow graduate students, particularly Nancy Ogden, Wendy Pullen, George Alder, and Bev Frizzell.

I will be eternally grateful to Bob for his kindness, emotional support and patience during the times when I was not exactly easy to live with.

Dedicated in loving memory to my parents, Peggy Lammers Parsons and Robert Carl Parsons.

TABLE OF CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	v
LIST OF FIGURES	vi
I. INTRODUCTION	1
Personality, Coping, and Subjective Well-Being	2
Rationale for the Study of Single Life Event of Unemployment	7
Rationale for the Study of Women Coping With Unemployment	8
Personality	12
The Issue of the Stability of Personality	12
Costa and McCrae's Model of Personality	15
Coping	26
Definitions of Coping	27
Defensive Polarity Classifications of Coping Responses	28
Folkman and Lazarus' Model of Coping	30
Review of Coping Research	32
Methodological Concerns Raised by	
Literature Review of Coping	35
Subjective Well-Being	38
Theoretical Considerations	39
Influences on Subjective Well-Being	41
Methodological Concerns in Subjective Well-Being	43
Life Events	45
Hypotheses and Issues	49

II. METHOD	56
Subjects	56
Measures	58
Procedure	66
III. RESULTS	68
IV. DISCUSSION	114
V. REFERENCES	132
APPENDIX A: Sociodemographic Questionnaire	141
APPENDIX B: Ways of Coping Scale Items Categorized As Active, Passive, and Denying	142
APPENDIX C: Life Experiences Survey Items Deemed Independent of the Individual	143

LIST OF TABLES

	Page
TABLE 1	Brief Description of NEO-PI Domains 20
TABLE 2	Brief Description of the Facets of Neuroticism 23
TABLE 3	Brief Description of the Facets of Extroversion 24
TABLE 4	Brief Description of the Facets of Openness to Experience 25
TABLE 5	Frequency Distributions for Sociodemographic Variables with Means, Standard Deviations, and Ranges for Continuous Variables 57
TABLE 6	Frequency Distributions for Unemployment-Related Variables with Means, Standard Deviations, and Ranges for Continuous Variables 72
TABLE 7	Observed Versus Normed Means, Standard Deviations, and Ranges for Personality Domains and Facets 75
TABLE 8	Means, Standard Deviations, and Ranges for Coping Use and Perceived Coping Effectiveness 77
TABLE 9	Test-Retest Correlations of Life Experiences Survey 79
TABLE 10	Test-Retest Correlations of Ways of Coping Scale 81
TABLE 11	Correlations of Personality Facets and Domains with Coping Style Use, Perceived Problem-Solving Effectiveness, and Perceived Emotional Effectiveness 83
TABLE 12	Correlations of Personality Domains and Facets with the Overall Occurrence of Life Events, the Occurrence of Potentially Dependent Life Events, and the Occurrence of Independent Life Events 87
TABLE 13	Correlation Matrix for LISREL Analyses 89
TABLE 14	Descriptions of Variables Used in Path Analytic Models 91
TABLE 15	Structural Parameters of Revised Model 1 with Corresponding Standard Errors and Critical Ratios 96
TABLE 16	Measurement Parameters of Revised Model 1 with Corresponding Standard Errors and Critical Ratios 97
TABLE 17	Residual Matrix for Revised Structural Model 1 98

TABLE 18	Residual Matrix for Revised Measurement Model 1	99
TABLE 19	Unrotated Factor Matrix of Coping Variables	100
TABLE 20	Oblique Rotated Factor Structure of Coping Variables	101
TABLE 21	Measurement Parameters of Model 2 (Solution for Model 2 Using Unrotated Factor Structure of Coping Variables) with Corresponding Standard Errors and Critical Ratios	106
TABLE 22	Structural Parameters of Model 2 (Solution for Model 2 Using Unrotated Factor Structure of Coping Variables) with Corresponding Standard Errors and Critical Ratios	107
TABLE 23	Residual Matrix for Measurement Model 2	109
TABLE 24	Measurement Parameters of Model 3 (Solution for Model 2 Using Obliquely Rotated Factor Structure of Coping Variables) with Corresponding Standard Errors and Critical Ratios	113
TABLE 25	Structural Parameters of Model 3 (Solution for Model 2 Using Obliquely Rotated Factor Structure of Coping Variables) with Corresponding Standard Errors and Critical Ratios	114
TABLE 26	Residual Matrix for Structural Model 3	116
TABLE 27	Residual Matrix for Measurement Model 3	117

LIST OF FIGURES

		Page
FIGURE 1	Path Diagram Model 1	51
FIGURE 2	Path Diagram Revised Model 1	
FIGURE 3	Path Diagram Model 2	98
FIGURE 4	Measurement Model 2	99
FIGURE 5	Path Diagram Model 3	105
FIGURE 6	Measurement Model 3	106
FIGURE 7	Hypothetical Model	131

Past research has provided considerable evidence for links between the occurrence of stressful life events and both physiological and psychological distress (Kellam, 1974; Dohrenwend & Dohrenwend, 1978). Early studies, however, found consistently modest zero-order correlations between life events and dysfunctions, and consistently large standard deviation scores of the occurrence of mental and physical illness (Rabkin & Struening, 1976). The apparent lack of support for a strong, direct relationship between the occurrence of stressful life events and dysfunction led to increased interest in variables that might moderate or mediate such a relationship (Johnson & Sarason, 1979; Holahan & Moos, 1986). A major focus of more recent research has been on personality variables as moderators of the relationship between life events and well-being (Campbell, 1981; Fleishman, 1984; Costa & McCrae, 1980; Zika & Chamberlain, 1987). In addition, personality variables have been investigated as potential moderators between life events and the resultant choice of coping mechanisms and as potential moderators between those choices and their perceived effectiveness (Costa & McCrae, 1984b; McCrae & Costa, 1986a, 1986b; McLennan, Gotts & Omodei, 1988; Zika & Chamberlain, 1987).

The purpose of the current study is to further examine the relationships among personality, coping mechanism usage and its perceived effectiveness, and subjective well-being. A conceptual model focussing on the links between these areas will be developed and put to empirical test. In order to accomplish this, it will first be necessary to review the various attempts that have already been made to address this

intersection. Following that it will be necessary to identify and discuss a series of conceptual and methodological issues in each of the areas being brought together in the current research project. It will then be possible to lay out the anticipated structural relations among the concepts of personality, coping mechanism usage and perceived effectiveness, and subjective well-being that is the thesis of the current study.

Personality, Coping, and Subjective Well-Being

Relatively few studies have been published that report investigations of possible links among personality attributes, coping choices and their perceived effectiveness, and subjective well-being. The theoretical foundations and results of four such studies are examined here, concluding with the work of McCrae and Costa (1986a), which forms the basis of the current study.

Fleishman (1984) investigated relationships between general personality factors and specific coping behaviours with the purpose of determining the extent of consistency in the use of coping behaviours and identifying coping styles. Following the distinction drawn by Folkman and Lazarus (1980) between problem-focussed and emotionally-focussed coping, Fleishman examined the personality characteristics of mastery, denial, and self-esteem as they affected coping use in four role areas: work, finances, marriage, and parenthood. Contrary to expectations, it was found that coping behaviours were not strongly related to each other within each of the role areas of marriage, work, finances, and parenthood. Emotionally-focussed coping showed a more consistent pattern of correlations than did problem-solving coping. A factor

analysis of correlations among coping behaviours across role areas led to similar results. Regressions of coping behaviours on personality characteristics suggested that; (a) mastery led to problem-solving coping in impersonal areas such as finances and work, but had no relation to problem-solving coping in the interpersonal areas of marriage and parenthood, (b) denial affected emotionally-based coping in interpersonal, but not impersonal role areas, (c) self-esteem had weak and inconsistent effects on coping. Fleishman (1984) concluded that a dichotomy of problem-solving vs emotionally-focussed coping was too coarse. Personality variables displayed specificity of influence on coping behaviours that did not coincide with the problem-solving/emotionally focussed dichotomy (Fleishman, 1984).

The second relevant study in this area investigated the effect of stressors and personality variables on subjective well-being within the theoretical framework of the "buffering hypothesis" (Zika & Chamberlain, 1987). The buffering hypothesis proposes that personality dispositions moderate the influence of stressors on well-being, yet do not have a direct effect on it. Two populations were investigated through a sample of university students and a community sample of adults. Through hierarchical multiple regression, it was found that both the personality variables and the stressors were systematically associated with well-being in each sample. This association was negative between stressors and well-being, and positive between each of the personality variables and well-being. The only significant interaction terms were those for Locus of Control x Hassles and Assertiveness x Hassles for female university

students. These results provided little support for the role of personality as a moderating variable in the relationship between stressors and well-being. Zika and Chamberlain (1987) concluded that, contrary to their expectations, each personality characteristic and the severity of stressors contributed directly to subjective well-being.

In a third study, Holahan and Moos (1986) investigated personal and contextual determinants of coping strategies within the coping typology of active-behavioural, active-cognitive, and avoidance strategies proposed by Billings and Moos (1981). Two populations were sampled in this study: patients who were entering treatment for unipolar depressive disorders, and community controls who were matched with the patients on socioeconomic status. It was expected that while the absolute levels of the scores would differ between samples the pattern of predictive relations would be similar in the two groups.

The results of hierarchical multiple regression analyses were similar for both groups, supporting Holahan and Moos' hypotheses. Education, income, self-confidence, an easygoing manner, negative life events, and family support each contributed significant increments in predicting each of the three coping strategies. Active-cognitive coping was less strongly related to those predictor variables than was active-behavioural or avoidance coping. Demographic characteristics were consistently less strongly related to each of the coping strategies than were contextual and personality factors. Holahan and Moos (1986) conclude that their findings support the concept of examining coping within a broadly framed and integrative perspective.

Most pertinent to the current research project is McCrae and Costa's (1986a) report of two studies which examined the influence of personality characteristics on coping responses and the perceived effectiveness of those responses, and the effects of coping and personality characteristics on well-being. Subjects for the two studies were participants in the Baltimore Longitudinal Study of Aging (BLSA).

In Study 1, data were provided by 154 men aged 25-91 and 101 women aged 24-84 who had reported the occurrence of a life event classified as a loss, threat, or challenge in the previous twelve month period (McCrae & Costa, 1986a, p 389). At this time, a battery of five scales of well-being was administered. Life events were rated for stressfulness using standard units by Holmes and Rahe (1967). On the basis of participant's responses, subjects were assigned target events in the categories of 'threat', 'loss', or 'challenge'. Four months after their first response, the NEO Inventory (the personality measure) was administered. A further six months later subjects were asked to recall the target event and completed an augmented version of Folkman and Lazarus' (1980) Ways of Coping checklist. As well, at this time spouses completed the rating form of the NEO Inventory. Three years later peers completed the same measure.

Study 2 differed from Study 1 primarily in that 80 men aged 26-90 and 71 women aged 21-78 were asked to describe and evaluate their coping in three situations of their own choosing, which they considered to have constituted a 'threat', 'loss', and 'challenge' (McCrae and Costa, 1986a, p 390). Additionally, the perceived effectiveness of chosen coping items was gauged by the subject's responses to the

questions: "Did it help solve the problem?" [y/n] and "Did it make you feel better?" [y/n] (McCrae and Costa 1986a, p 391).

Results from both studies indicated that the personality domain of Neuroticism was associated with increases in the use of the coping mechanisms of hostile reaction, escapist fantasy, self-blame, sedation, withdrawal, wishful thinking, passivity and indecisiveness. Extroversion was positively correlated with restraint, substitution, rational action, and positive thinking. Openness was associated with the use of humor, and closedness with the use of faith when dealing with stress. Similar patterns of results were found for self-reports, spouse ratings and peer ratings.

It was observed that the nature of the stressor had little influence on the relative perceived effectiveness of the coping mechanism employed. There was evidence that use and perceived effectiveness were separable in that some coping mechanisms were frequently used but rarely thought useful.

McCrae and Costa's "neurotic coping" was found to be significantly negatively related to well-being as measured by the three overall coping scales and Bradburn's Negative Affect Scale. Their "mature coping" was found to be significantly positively related to Affect Balance. Since well-being had been shown to be related to personality dispositions, the contribution of coping to well-being was re-evaluated once the facets of depression and positive emotions from the NEO Inventory were partialled out. This resulted in reduced correlations between neurotic and mature coping with life satisfaction. The major effects of coping, independent of enduring personality facets,

appeared to be on positive affect. It was suggested that coping may be more useful in maintaining good spirits despite adversity than in reducing emotional distress (Costa, McCrae, & Zonderman, 1987).

One aim of the current research project was to re-investigate the relationships reported by McCrae and Costa (1986a). In the two studies of personality, coping, and coping effectiveness that have been described, these authors found systematic relationships between individual personality domains and their facets and choices of coping mechanisms. In addition, direct associations between these domains of personality and subjective well-being were reported.

Previous research on life events, coping, and psychological conditions has resulted in a growing awareness of conceptual and methodological shortcomings (Thoits, 1982; Norris & Murrell, 1984). In response to this, the current research project (1) investigated a complex model of personality, coping mechanism choice, perceived effectiveness of coping, and subjective well being that was derived from theory and research in each individual area, and which stressed the interactive nature of their relationships; (2) studied coping in response to a single life event: unemployment; and (3) focussed on coping choices made by women. The rationale for the latter two points follows directly. The case for the first point requires a more detailed evaluation of the theoretical and empirical work in each area which follows the discussion of unemployment and women.

Rationale for the Study of the Single Life Event of Unemployment

There has been a marked tendency to treat different life events as equivalent when evaluating coping choices and outcomes (Billings & Moos, 1981; Sedney, 1984; Wethington & Kessler, 1986). This was the case in the work of McCrae and Costa (1986a), leaving open the question of whether some of the differences in coping strategies attributed to personality differences may be the result of situational differences. The current research project begins to address this concern by investigating coping in response to a single life event: unemployment. Campbell (1981) found that the strongest effect on subjective well-being of a demographic variable was that of unemployment, which shows extremely detrimental effects, even when income differences are controlled. Unemployment, therefore, is an identifiable life event which clearly requires coping responses.

Rationale for the Study of Women's Coping With Unemployment

Major longitudinal studies of adults, such as the Normative Aging Study in Boston, have relied primarily on male participants (Costa & McCrae, 1985b). As a result, much of what is theorized about the relationships among personality, coping, and well-being is based on, or supported by, data from male respondents. A growing body of research based on feminist theories suggests that women may reach maturity with a different psychological history than men, facing a social reality at that time which is different from men, and that women may make a different sense of their experience,

based on their knowledge of the limits of autonomy and control (Gilligan, 1982).

Between 1966 and 1982 there was an increase of 119% in the number of women in the Canadian workforce, as opposed to an increase of 36% in the number of men (Abella, 1984). The largest factor in this increase of women was the entry or re-entry into the workforce of women over the age of 25 years (Abella, 1984). This has required considerable adjustment on the part of those women currently of middle-age (Kandel, Davies, & Raveis, 1985). The resultant coping strategies would likely be individually formulated by women in this situation since few socially accepted strategies are, as yet, in place. As women increasingly enter the workforce, they increasingly face the stress of unemployment.

The study of the relationships among personality, coping, coping effectiveness, and well-being in women is, therefore, useful, in that these relationships may differ from that of men, and little work has previously been done in this area; and timely, in that the relationship between personality and coping choice is currently not being heavily influenced by set, socially acceptable, strategies.

Although many employment issues are common to both men and women, women face some additional pressures. These often include the necessity to blend employment with childbearing and child care, different health problems and stress-related reactions, social attitudes that discourage them from many kinds of work, and frequently, the necessity to accommodate the career moves of a spouse (Lipps & Colwill, 1988). Even in the 1980's, discrimination in pay is evident. Overall, women's full-time earnings are

63.9% of their male counterparts; within the clerical sector, a full-time female employee earns only 66.9% of the salary of a full-time male employee (Lipps & Colwill, 1988, p 58). For mature women, this dismal picture is further darkened by the effect of stereotypes about aging that reduce their already limited choices of occupation (Hergenrather, 1985).

Little research has been conducted into the effect unemployment has on women. It is widely assumed that men suffer more from unemployment than women do, presumably because there is an alternative available to women in the traditional role of wife and mother (Jahoda, cf Starrin & Larsson, 1987). Swedish women's reactions to unemployment were studied by Starrin and Larsson (1987) in relation to two core variables, 'relation to wage labour' and 'relation to alternative activities'. These authors identified four different groups: 'give-uppers' and 'refocusers' were both uncommitted to wage-labour (not actively seeking employment). The former were passive, the latter were active in relation to alternative activities. 'Clenchers' and 'ambivalents' were both committed to wage-labour (actively seeking employment). The former were passive, the latter were active in relation to alternative activities. Through structured interviews, Starrin and Larsson found that unemployment 'destroyed' the daily time structure of those women who were passive towards alternative activities, the give-uppers and the clenchers. Unemployment also had serious effects on their mental conditions, resulting in feelings of hopelessness, depression, and loss of status. Refocusers, however, through involvement in alternative activities, showed fewer detrimental effects of being

unemployed. Ambivalents focussed primarily on household work while unemployed, receiving social support for their homemaker roles from their families, helping offset their frustration at their inability to find work outside their homes. Starrin and Larsson (1987) conclude that the critical difference between those women who are severely distressed by unemployment and those women who are not is the degree to which they participated in alternative activities. These authors consider this participation to reflect and/or result in a greater feelings of competency in determining how time is spent while unemployed and to demonstrate an internal locus of control.

Taken together, restricted occupational choices for women, lower wages, negative biases towards hiring older workers, and the detrimental effect of unemployment on well-being for those women who are committed to working for pay, suggest that mature unemployed women face a difficult challenge that may be beyond their individual abilities to meet. This has resulted in severe taxing of existing social resources (Lipps & Colwill, 1988). A study of the relationship among personality, coping mechanism choices, coping effectiveness, and subjective well-being of such women may produce information that is useful in allocating existing social resources and in devising new programs.

The purpose of the current research project is to investigate the relationships between personality, coping mechanism choice, perceived coping effectiveness, and subjective well being in mature female adults, as affected by a single major life event;

becoming unemployed. The current project integrates research in a number of topics in psychology: personality, coping, subjective well-being, and life events. Thus, major issues within each area, as well as relevant research, are reviewed.

Personality

Personality traits are commonly defined as 'enduring dispositions', distinguishable from temporary states (Pervin, 1985). Trait theorists do not contend that people will behave the same way in all situations, but rather view a trait as a mechanism which defines a range of possible behaviours that can be activated by the demands of a particular situation (Allport, 1961). An individual's personality is construed to be the composite of a number of traits, each of which can modify the selection of a response to a specific situation. The stability of personality traits is a necessary, though not sufficient, condition to view personality as a predictor of behavioural response.

The Issue of the Stability of Personality

Early empirical investigations into the stability of personality traits had mixed results. Statistically reliable, but low, occasion-to-occasion correlations of scores on personality traits sampled at short time intervals led to the conclusion that there was at least as much change as stability in adult personality (Neugarten, 1977).

More recently published results, particularly those from major longitudinal studies, have questioned this conclusion (Leon, Gillum, Gillum, & Gouze, 1979;

Costa, McCrae, & Arenberg, 1980; Finn, 1986). The 30 year stability of MMPI scores of a normal sample of 71 men was investigated by Leon, Gillum, Gillum and Gouze (1979). Since the MMPI is a measure of psychopathology, rather than of normal personality, it was anticipated that the range on many scales would be too restricted to show substantial correlations from occasion to occasion. Despite this, Leon et al. (1979) found the stability coefficients to be statistically significant for all scales, with the highest correlations for those scales with more 'normal' content. The authors believe that their results strongly support the view that personality traits are temporally stable.

Backetman and Magnusson (1981) studied the temporal stability of the relative levels of a number of personality attributes (aggressiveness, motor disturbance, timidity, disharmony, distraction, and lack of school motivation) in Swedish school-children from ages 10 to 13. They found considerable stability in teachers' rank orderings of attribute ratings for individuals, suggesting stability of relative levels of these traits within the three year age range studied. It is of particular interest to note that subjects in this age group demonstrated stable rank ordering of personality qualities since it is during this time that much of maturation takes place and changes in relative levels of different traits might be expected to occur.

McCrae, Costa, and Arenberg (1980) employed data from the Baltimore Aging Study to investigate the stability of the factor structure of the Guilford-Zimmerman Temperament Survey (GZTS). Unlike the MMPI, the GZTS is a personality inventory

intended for use with community samples. Its factor structure stability was analyzed longitudinally in three administrations 6 years apart, and cross-sectionally across three age cohorts. Costa et al. (1980) proposed that maturational changes of personality structures would be evident in both longitudinal and cross-sectional comparisons. Although slight variations were found from one analysis to another, the same basic pattern of factors was seen at each administration of the measure, despite aging, attrition, and possible practice effects in the sample.

Further support for the stability of personality factor structures was reported by Finn (1986), who used longitudinal, time lag, and cross-sectional data generated by the Cardiovascular Disease Project at the University of Minnesota to examine the factorial stability of the MMPI in adult men. Little variability in the structure of the MMPI's scales was found for ages 20 to 75, for cohorts born in 1900 and 1924, and across times of measurement from 1947 to 1977 (Finn, 1986). Finn concluded that a basic consistency in the organization of personality in adults is suggested theoretically by the accumulated evidence of structural consistencies of personality inventories over age, cohort and time of measurement.

Studies such as the foregoing that emphasize retest correlations or comparisons of factor structures do not address the question of the stability of the absolute level of personality traits over adulthood. Maturational increases or decreases in a level of a trait would be indicated by changes in the mean level of that trait longitudinally, in conjunction with cross-sectional differences in age-groups' means. Costa and McCrae

(1978) conducted a study of this kind which analyzed the results of Cattell's Sixteen Personality Factor Questionnaire (16PF) as part of the Normative Aging Study. Their results indicated that, while three scales showed cross-sectional differences and two others showed longitudinal changes, none showed both. Costa and McCrae concluded that the cross-sectional differences were probably generational differences, and that the longitudinal changes were probably due to practice effects or time of measurement differences. In a similar study, Siegler, George and Okun (1979) administered the 16PF four times to two cohorts, over an eight year period, to examine age/cohort differences in scale means for personality traits. They found little evidence of significant differences across cohorts or over time.

The results of studies such as these led Costa, Zonderman, McCrae, Barbano, Lebowitz and Larson (1986) to conclude that, in the normal course of aging, there is strong evidence of stability of personality domains. These authors believe that, in the absence of disastrous life events, any marked change in personality is probably a significant sign of organic pathology. They go so far as to suggest that powerful psychological mechanisms maintain characteristic functioning, or return individuals to their usual levels after brief periods of readjustment; and that understanding these mechanisms of stability could provide a basis for interventions aimed at therapeutic change as well as insights into personality itself.

Costa and McCrae's Model of Personality

The model of personality proposed by Costa and McCrae (1984a) forms the theoretical basis of the personality aspect of the current research project. Most models in the area of personality are the result of a mixed theoretical/empirical design process which identifies major factors (often five in number) that, taken together, describe personality (Norman, 1963; Pervin, 1985). The first five-factor model of personality was formulated by Tupes and Christal (1961), but is most closely associated with Norman (1963). It is based on an analysis of adjective check lists which provided trait names (Norman, 1963). Costa and McCrae's model reflects a similar design process but is based on a statistical analysis of widely used personality scales, rather than relying solely on trait names in natural language (Costa & McCrae, 1976).

Costa and McCrae (1985b) conceive personality as the compilation of five independent and very broad dimensions or domains; each composed of a number of more specific aspects or facets. This comprehensive model of personality has the appealing aspect that it allows for flexibility of responding within a stable, defined structure. As mentioned previously, a major premise of this model is the stability of personality traits, or domains, throughout adulthood (Costa and McCrae, 1985b).

Within this model, a major change in personality is seen as the possible result of therapeutic intervention or a radical change in health or social status. This model views each of the personality dimensions as independent variables which influence behavioural outcomes through joint functioning with experience and situation (McCrae & Costa, 1982).

Initially, Costa and McCrae's model posited three second order factors, or domains, which were identified by a cluster analysis of Cattell's Sixteen Personality Factor Questionnaire (Costa & McCrae, 1976). The first two were labeled Neuroticism (N) and Extroversion (E), following Eysenck's (1984) classification, and the third, Openness to Experience (O) (Costa & McCrae, 1976). The NEO Inventory was designed to measure these three basic dimensions (domains) as well as some of the specific traits (facets) which underlie them. The inclusion of the domain of Openness to Experience is of particular interest in designing projects, such as the current one, which investigate patterns of coping responses. The concept of Openness focuses on the propensity of the individual to welcome new experiences or challenges.

The construct validity of Costa and McCrae's model was demonstrated through a series of factor analyses, in subsequent research, which showed that the three factors could be recovered from the Guilford-Zimmerman Temperamental Survey (Costa & McCrae, 1984a), the Eysenck Personality Inventory (McCrae & Costa, 1985a), and the NEO Inventory itself (Costa & McCrae 1978,1980; Costa, McCrae & Arenberg,1980, 1983; McCrae & Costa, 1983a). Studies of psychological well-being (Costa & McCrae, 1980a, 1984b; Costa, McCrae & Norris, 1981), vocational interest (Costa, McCrae & Holland, 1984), and health perceptions (Costa & McCrae 1985a; Schroder & Costa, 1984) further supported the construct validity of the NEO Inventory, demonstrating consistent and predictable relationships between the domains and facets of the NEO model and variables outside the area of personality.

The reliability of the NEO Inventory's scales was demonstrated through studies

employing a sample of men and women ranging in age from 21 to 91. Coefficient alpha estimates of internal consistency for the individual facets of the domains of Neuroticism, Extroversion, and Openness to Experience ranged from .60 to .86, while similar coefficients for overall N, E, and O scales ranged from .85 to .93 (McCrae & Costa, 1983a, p 249). These results were consistent for male and female respondents, both through self reports and ratings by others. Six-month retest reliabilities for a subset of the original sample yielded correlations which ranged from .66 to .92 for facets, and from .86 to .91 for the domains (McCrae & Costa, 1983a, p 250).

Goldberg's (1982) development of an improved adjective checklist to investigate the linguistically based five-factor model of Norman (1963), and Tupes & Christal (1961), allowed McCrae and Costa (1985) to compare their three-factor model to the linguistically based five-factor model. This comparison found a one-to-one correspondence between NEO Inventory scales and corresponding adjective factors measuring Neuroticism and Extroversion. McCrae and Costa felt that Norman's Culture factor was better interpreted as Openness to Experience (McCrae & Costa 1985). It was deemed necessary by McCrae and Costa to add the domains of Conscientiousness and Agreeableness in order that their model cover the full range of traits encoded in English. Traits, such as persistence and generosity, which had been beyond the range of the original three-factor model were included in the revised five-factor NEO model.

Thus, the five-factor model put forth by McCrae and Costa reflects a mixed

conceptual-empirical design process in which a priori assumptions are integrated with empirical methods in determining the number and nature of higher order factors. Buss and Finn (1987) favour a mixed conceptual-empirical classification of personality traits that formulates higher order factors through the analysis of more than one measurement instrument, such as that of Costa and McCrae, because it increases the generalizability of results.

The addition of two 18 item scales for the assessment of the domains of Conscientiousness and Agreeableness to the NEO Inventory resulted in the NEO-PI (Costa & McCrae, 1985b). Facets for these recently added domains have not yet been clearly identified, thus, no facet scales for them are currently provided by the NEO-PI.

Characteristics associated with high and low scores on each of the five domains of Costa and McCrae's model are summarized in Table 1. The domain of Neuroticism assesses adjustment vs. emotional instability and identifies individuals prone to psychological distress, excessive cravings or urges, maladaptive coping responses, and unrealistic ideas. Extroversion evaluates the quantity and intensity of interpersonal interaction. Openness considers a person's tolerance for, and exploration of, the unfamiliar and their proactive seeking and appreciation of experience for its own sake. The quality of an individual's interpersonal orientation along a continuum from compassion to antagonism in thoughts, feelings, and behaviours is assessed by the domain of Agreeableness. Conscientiousness taps the extent of a person's organization,

Table 1
Brief Description of NEO-PI Domains

Neuroticism

Assess adjustment vs. emotional instability. Identifies individuals prone to psychological distress, unrealistic ideas, excessive cravings or urges, and maladaptive coping responses.

Characteristics of the High Scorer

Worrying, nervous, emotional, insecure,
inadequate, hypochondriacal

Characteristics of the Low Scorer

Calm, relaxed, unemotional, hardy, secure, self-
satisfied

Extroversion

Assess quantity and quality of interpersonal interaction: activity level; need for stimulation; capacity for joy.

Characteristics of the High Scorer

Sociable, active, talkative, person-oriented,
optimistic, fun-loving, affectionate

Characteristics of the Low Scorer

Reserved, sober, unexuberant, aloof, task-oriented,
retiring, quiet

Openness

Asses proactive seeking and appreciation of experience for its own sake; toleration for and exploration of the unfamiliar.

Characteristics of the High Scorer

Curious, broad interests, creative, original,
imaginative, untraditional

Characteristics of the Low Scorer

Conventional, down-to-earth, narrow interests,
unartistic, unanalytical

Table 1 (Continued)

Agreeableness

Asses the quality of one's interpersonal orientation along a continuum from compassion to antagonism in thoughts, feelings, and actions.

Characteristics of the High Scorer

Soft-hearted, good-natured, trusting, forgiving,
gullible, straightforward

Characteristics of the Low Scorer

Cynical, rude, suspicious, uncooperative, vengeful,
ruthless, irritable, manipulative

Conscientiousness

Assess the individual's degree of organization, persistence, and motivation in goal-directed behaviour. Contrasts dependable, fastidious people with those who are lackadaisical and sloppy.

Characteristics of the High Scorer

Organized, reliable, self-disciplined, neat,
hard-working, ambitious, persevering

Characteristics of the Low Scorer

Aimless, unreliable, lazy, careless, lax, negligent,
weak-willed, hedonistic

persistence, and motivation in goal-directed behaviour, contrasting dependable, fastidious people with those who are lackadaisical and sloppy (Costa & McCrae, 1985b).

The personality domains of Neuroticism, Extroversion and Openness each reflect the sum of scores on six facets. Characteristics of high and low scorers for each are summarized in Tables 2 through 4. Facets of Neuroticism (Table 2) are anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability. Extroversion (Table 3) is composed of warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. Openness facets (Table 4) comprise fantasy, aesthetics, feelings, actions, ideas, and values.

The five domains measured by the NEO-PI have shown close resemblance to those factors obtained from self report and interviewer-rated versions of the California Q-Set (McCrae, Costa & Busch, 1986). Substantial cross-over agreement with adjective check lists, for both self-report and rated versions of the NEO-PI has also been reported (McCrae & Costa, 1987).

The breadth of the personality domains encompassed by Costa and McCrae's model increases the likelihood of the current study being able to identify links between coping choices and subjective well-being and personality dispositions. The NEO-PI has proved to be valid and reliable, and thus is an empirically sound measure of the model's domains. As will be seen, these points are important in light of inconclusive results generated by previous studies which were based on more restrictive models or

Table 2

Brief Description of the Facets of
Neuroticism

Characteristics of the High Scorer	Facet	Characteristics of the Low Scorer
Anxiety		
Tense, fearful, worried, apprehensive		Calm, relaxed, stable, fearless
Hostility		
Hot-tempered, angry, easily-frustrated take		Amiable, even-tempered, slow to offense
Depression		
Hopeless, guilty, down-hearted, blue		Seldom sad, hopeful, feels worthwhile
Self-Consciousness		
Ashamed, feels inferior, easily embarrassed		Poised, secure, feels adequate, comfortable
Impulsiveness		
Unable to resist cravings, yields to urges		Resists temptation, self-controlled
Vulnerability		
Easily rattled, panicked, unable to deal with stress competent,		Resilient, cool-headed, hardy

Table 3
Brief Description of the Facets of
Extroversion

Characteristics of the High Scorer	Facet	Characteristics of the Low Scorer
Warmth		
Outgoing, talkative, affectionate		Cold, distant from others, formal
Gregariousness		
Convivial, has many friends, seeks social contact		Avoids crowds, solitary, self-contained
Assertiveness		
Dominant, forceful, confident, decisive		Unassuming, retiring, avoids speaking up
Activity		
Energetic, fast-paced, vigorous		Unhurried, slow and deliberate
Excitement-Seeking		
Flashy, seeks strong stimulation, takes risks		Avoids overstimulation, cautious, staid
Positive Emotions		
Cheerful, high-spirited, joyful		Unenthusiastic, placid, serious

Table 4
Brief Description of the Facets of
Openness

Characteristics of the High Scorer	Facet	Characteristics of the Low Scorer
Fantasy		
Imaginative, enjoys daydreaming, elaborates fantasies		Prefers realistic thinking, practical
Aesthetics		
Values aesthetic experience, moved by art and beauty unappreciative		Insensitive to beauty, of art
Feelings		
Emotionally, responsive, sensitive, empathic, values own feelings		Narrow range of emotions, insensitive to surroundings
Actions		
Seeks novelty and variety, tries new activities		Prefers the familiar, follows strict routines, set in ways
Ideas		
Intellectually curious, theoretically oriented, analytical does		Pragmatic, factually oriented, not enjoy intellectual challenges
Values		
Broad-minded, tolerant, non-conforming, open-minded		Dogmatic, conforming, narrow- minded, conservative

which used less proven measures.

Coping

The current research project adopts Folkman's (1984) broad definition of coping and emphasizes conscious choices of cognitions and behaviours made in response to unemployment. These choices are hypothesized to be influenced by personality characteristics, previous experiences, and the demands of the individual situation surrounding unemployment.

Three broad styles of coping will be investigated in this project: (a) active coping, in which the existence of a problem is accepted and behavioural or strategic steps are taken to remedy it; (b) passive coping, in which the problem is acknowledged, but nothing is done or planned to alter the situation and cognitions are not strategic, but rather ruminative; and (c) denying coping, in which the focus of cognitions and behaviours is to dismiss the problem. This classification of coping items is very similar to that of Billings and Moos (1981). In the current study, active coping is comparable to Billings and Moos' active-behavioural coping, denying coping is comparable to avoiding. Passive coping in the current study differs from the active-cognitive classification of Billings and Moos by focussing on inactivity rather than planning. Some form of classification of coping responses is necessary to impart meaning to the relationships among personality, coping response, perceived coping effectiveness, and subjective well-being. Methodological concerns precluded the use of the coping

mechanisms defined by McCrae and Costa (1986a). The trichotomy employed in the current study, unlike more psychoanalytical classifications, emphasizes the conscious coping choices made by respondents. Coping choice effectiveness is evaluated, on continuous scales, in terms of both problem solving and emotionally supportive capability, as perceived by the respondents.

The coping literature, particularly as it relates to perceived coping effectiveness and subjective well-being, does not reflect a unified base of theory. Rather, the focus of published research has been on competing definitions of 'coping' (Haan, 1977; Pearlin & Schooler, 1978; Folkman & Lazarus, 1980) and resultant classifications of coping mechanisms (Lazarus, Averill & Opton, 1984; Roth & Cohen, 1986).

Definitions of Coping

Coping has historically been defined and investigated primarily within the tradition of psychodynamic defenses (Haan, 1977). As such, coping choice has been viewed as a largely unconscious process applied primarily to intrapsychic conflicts (emotional, and/or cognitive conflicts which arise within the individual) (Haan, 1977). More recently, the definition of coping has been expanded to include any response to intrapsychic conflicts or to external life-strains that serves to prevent, avoid, or control emotional distress (Pearlin and Schooler, 1978). This view considers that coping functions at many levels, from cognitive to behavioural. Coping choice is thought to be closely tied to both life events and the emotional state of the individual.

Whereas Pearlin and Schooler's definition confines coping to the negatively valenced aspects of life, Folkman and Lazarus (1980) further extend the definition of coping to encompass the more positive contexts of challenge and mastery. The definition of coping put forth by Folkman and Lazarus (1980) emphasizes adaptation which is not automatic, where uncertain outcomes require adjustments that approach the limits of an individual's adaptive skill.

Defensive Polarity Classifications of Coping Responses

Lazarus, Averill and Opton (1984) illustrate the problems inherent in the use of current classification systems with a discussion of defensive polarity classifications. Defensive polarity classifications are continua representing styles of responding that underlie the choice of specific coping responses. Although conceptualized in slightly different ways, all defensive polarity classifications are based on the psychoanalytic theory of defense. Perceived threats to the individual lead to the implementation of largely unconscious mechanisms of defense. A bias in personality attributes is considered to predispose individuals to particular coping styles which, in turn, lead to differences in dispositions to employ a given defensive reaction (Lazarus, Averill and Opton, 1984). The use of responses near one pole of a bi-polar defense classification of coping in a particular situation does not necessarily exclude the subsequent use of responses near the other pole in a different situation. Two such current classifications are the dichotomy of 'repression/sensitization' and the trichotomy of

'avoider/coper/non-specific coper' (Lazarus, Averill & Opton, 1984). Within the continuum of 'repression/sensitization', repression is defined as a hypothetical tendency to deal with threat by not admitting its existence. Sensitization is defined as a heightened awareness of potential threat that results in hyperalertness to danger. Adaptive coping responses are unlikely to occur near either extreme of this continuum. Repression results in socially undesirable behaviour and emotional disturbance. Sensitization produces paranoia and an inability to act. Repression/sensitization is generally measured by means of questionnaires, often subsets of the MMPI. The avoider/coper/non-specific coper trichotomy considers an avoider to be much like a repressor, denying the existence of a problem; a coper, like a sensitizer, to be hyper-aware; and a non-specific coper to show no consistent preference for any mode of coping. Individuals are classified using sentence completion questionnaires (Lazarus, Averill & Opton, 1984).

The costs and benefits of behaviours linked to defensive polarities are discussed by Roth and Cohen (1986). The use of repression or avoidance allows the reduction of stress, and increases hope and courage but exacts a toll by interfering with appropriate action. This can cause emotional numbness, and results in a lack of awareness of the relationship between symptoms and trauma. Use of the approach mechanisms, such as sensitization or approach coping, allows appropriate action, ventilation of affect, and the assimilation and resolution of trauma. However, their use may also result in increased emotional distress and non-productive worry.

Lazarus, Averill, and Opton (1984) feel that an emphasis on defensive polarities in the conceptualization and classification of coping has resulted in a lack of distinction between dispositional and response variables, stressing general tendencies at the expense of responses to actual episodes. This has had the effect that the situation requiring the coping response has been virtually ignored. Lazarus et al. (1984) also believe that a reliance on a clinical, psychodynamic orientation has separated the bulk of coping research from experimental psychological research (which emphasizes normal problem-solving behaviours), to the detriment of each.

In light of this, the work of Folkman and Lazarus (1985, 1988a, 1988b), detailed below, will form the basis of the structural model of coping which will be tested. Within it, a coping response is conceptually discrete from the outcome of that response.

Folkman and Lazarus' Model of Coping

In response to the problem of the division between psychodynamically oriented coping research and experimental psychological research, Folkman and Lazarus propose a cognitive theory of stress and coping which is relational and process oriented (Folkman & Lazarus, 1985). This model considers stress as a relationship between a person and their environment that occurs when the environment is appraised as endangering his or her well-being because it taxes or threatens to exceed available resources. Folkman and Lazarus' model is process oriented in that it considers this relationship to be dynamic and bi-directional, with the person and the environment acting on each other.

Within this model, the meaning of an event is defined in terms of a two part cognitive appraisal process. The primary appraisal of a particular event's significance is the evaluation in terms of the individual's well-being. It is shaped both by person variables such as the individual's beliefs, commitments, and disposition, and by situational variables such as the nature, familiarity, likelihood of occurrence, and ambiguity of the event. Secondary appraisal is the evaluation of the person's resources: his or her physical, social, psychological, and material assets, which provide the options available to deal with the demands of the situation. Unlike the colloquial definition of 'cope' which implies a successful result, coping is seen in this model as the individual's ongoing process of responding to his or her appraisal of stress, regardless of the outcome of that response (Folkman & Lazarus, 1988b). The separation of coping response from coping effectiveness is necessary in order to avoid a tautology if the construct of coping is to be used to predict outcomes (Folkman and Lazarus, 1988a).

Coping is considered to have two major functions in this model. It serves to regulate emotions, decreasing distress, and to manage the problem that is causing the distress. Emotionally focussed and problem-solving coping address different facets of the stressful situation. While emotionally focused coping is directed inward, problem-solving coping strategies can be directed at the environment as well as at oneself. The effect of problem-solving coping is thought to be largely dependent on the success of emotionally focused coping. Otherwise, intense emotions will disrupt the cognitive

activity required by problem-solving (Folkman, 1984).

Folkman and Lazarus (1988b) argue that research on coping should measure a range of responses to stressful events that extends from verbal and expressive reactions to intrapsychic changes and behavioural acts. As well, these authors feel that these responses should be measured in light of variables specific to the situation, its physical and social circumstances, and the person responding. The following review of recent research on coping focuses on those studies which address these concerns.

Review of Coping Research

Billings and Moos (1981) investigated relationships among negative life events, coping choices, social resources (such as the availability of support from family, friends and social service agencies), mood levels, and physical symptomatology for an adult community sample. A set of self-report retrospective questionnaires was employed in an attempt to operationalize and classify coping responses. The researchers found only moderate differences in coping mechanisms employed in response to different types of life events, but believed this could merely reflect the yes/no response format that had been used to measure coping. However, regression analysis showed that social resources and coping choice indices provide incremental information concerning levels of stress above that attributable to the occurrence of negative life events. It was also found that social resources and coping moderated the relationship between the occurrence of a life event and the functioning of the individual.

Billings and Moos (1981) concluded that the primary requirement for a comprehensive evaluation of coping response was the simultaneous consideration of the individual's coping choices and the nature and context of available social and individual resources.

Kaloupek, White, and Wong (1984) addressed the issue of whether coping was primarily dispositional in nature, or, alternatively, a series of responses primarily elicited by the demands of an ongoing situation. They investigated university students' affect while donating blood. A repression/sensitization scale was used as a pretest of dispositional styles of coping with a variety of hypothetical events. Coping process was evaluated through structured interviews conducted throughout the time blood was given. In this way, general styles of responding were compared to moment-by-moment coping choices and affective responses. It was found that 'process-oriented avoidance', avoidance responses made moment-by-moment, was related to a decrease in anxiety, as rated by both the individual and the interviewer. The dispositional coping scale, however, was found to be unrelated to the affective variables. In this instance it was suggested that coping effectiveness was related to reactive rather than dispositional mechanisms (Kaloupek, White, & Wong, 1984).

Norris and Murrell (1984) used prospective interviews to study a mature (55 years of age and older) community-based sample. The relationships among life events, stress, the availability of resources (defined as relatively stable conditions and supplies that are appraised by the person as available for use in meeting life changes), and the subsequent occurrence of depressive symptomatology were examined. Multiple

regression analysis indicated that discrete events were a more important component of global stress than ongoing stressors for individuals who possessed high amounts of resources, while the opposite held for those individuals with low amounts of resources. Norris and Murrell also found that the joint effects of events and resources on stress, the joint effects of events and resources on depressive symptomatology, and the joint effects of stress and resources on depressive symptomatology are very different from each other. They concluded that life events alone did not account for experienced stress very completely (Norris & Murrell, 1984). This is concordant with the contention of Lazarus, Averill, and Opton (1984) that coping need be conceptualized as an integrated part of the overall activity of a person rather than as a singular response to an isolated event.

Wethington and Kessler (1986) added yet another concept to the issues regarding life events, resources, and coping: that of perceived vs received support. They addressed the question of whether support is best conceptualized as the hypothetical availability of resources or as the actual transfer of advice, help, or emotional aid. They noted that past research had collected information on one of these concepts at the expense of the other with little emphasis on their combined effects. In a cross-sectional, retrospective study of married adults (over age 21) they found that, while perceived spousal support had a direct effect on adjustment to changes brought about by the occurrence of life events, actual spousal support did not. Actual spousal support acted only indirectly, through increasing the perception that future support

would be available. Wethington and Kessler's (1986) results support the contention of Folkman and Lazarus (1988a) that perceptions are important mediating variables in the relationships between events, coping, and affective and effective outcomes.

Rumination is one of the hallmarks of the 'passive' coping style investigated in the current research project. Sedney (1984) investigated cognitive aspects of coping by means of retrospective narratives of the effect of rumination about stressful life events on distress and adjustment in middle-aged women. She found that rumination decreased over time at differential rates according to the degree of stress caused by a life event. More stressful events resulted in both more initial attention and a more gradual decrease over time. Initially high levels of rumination were found to be negatively associated with long-term adjustment and also with a decrease in distress-related symptoms for low-stress events. No significant relationship was found between level of rumination and adjustment or symptomatology for high-stress events. This led Sedney to suggest that while initial high rumination after a highly stressful event may not enhance adjustment over time, neither does it inhibit that adjustment. She acknowledges that the retrospective and correlational nature of this study, as well as its focus on the quantity, rather than the quality, of rumination limits the interpretation of its findings to descriptive and suggestive statements (Sedney, 1984).

Methodological Concerns Raised by Literature Review of Coping

The preceding review of recent research, while by no means exhaustive, underscores a number of methodological concerns. One set of methodological

concerns follows directly from the lack of a strong, unified theory of coping and an adequate taxonomy of coping efforts. Definitions of coping vary widely, both in terms of the breadth of activity indicated, and the supposed mechanisms underlying that activity. Coping may refer to solely intrapsychic activity, a general style of responding, or to specific responses to particular situations. Coping may be conceived as following from unconscious motivations, stable personality characteristics, or demands of a given situation. The determination of appropriate predictor and criterion variables and the interpretation of the relationships between them depends upon the particular paradigm assumed. It is rare that these assumptions are clearly stated. Even when they are, differences between them make the comparison and synthesis of different results difficult to interpret. One example of this lack of consistency is the measurement of coping effectiveness. In some research it is determined solely on the basis of frequency of use, while other studies consider only emotional or problem solving aspects, often through yes/no dichotomies which do not tap ranges of perceived usefulness.

Finally, it should be noted that many of the studies in this area are retrospective, relying on a subjects' memory of events and their impacts, of coping efforts employed, and of outcomes. It is well known that there are problems inherent in retrospective studies (Thoits, 1982). Such studies may confound interactive effects of events with support on coping with the direct effects of events on support. Mental states may influence memories of the coping process (Menaghan, 1983).

The current research project attempts to address these concerns in a number of

ways. A community-based sample of adult women was surveyed to investigate coping choices in response to a specific life event. Folkman's (1984) broad definition of coping, which emphasizes conscious choices of cognitions and behaviours, was adopted. These choices were investigated as part of a model which includes interactions between personality characteristics, previous experiences, and situational variables specific to the individual's unemployment. Continuous scales were used to evaluate both the problem-solving and emotionally supportive aspects of coping effectiveness.

The current study is primarily cross-sectional and, therefore, cannot trace the processes involved in coping choices outlined by Folkman and Lazarus (1988b). The emphasis in this study is on the relationship between the coping choices made and the evaluation of their emotionally supporting and problem solving effectiveness. This relationship is investigated as part of a more complex model that stresses the interactive effects of personality, coping choice, perceived effectiveness, and subjective well-being.

As will be seen, the subjective well-being literature, like that of coping discussed previously, does not reflect a unified theoretical base. The very nature of subjective well-being is open to debate.

Subjective Well-Being

The work of Emmons and Diener (1985) and Diener Larson, Levine, & Emmons

(1985) refutes the model that well-being is composed of two independent affective states by questioning the independence of positive and negative affect and by identifying the cognitive factor of life satisfaction. In the current research project, the aspect of well-being chosen as an outcome measure was life satisfaction, because it is conceived as operating on both internal and interpersonal levels (Diener et al., 1985), and because its cognitive, or judgmental, nature fits well with the cognitive appraisal aspect of the coping model put forth by Folkman and Lazarus (1988b). In addition, the model examined in the current study considers well-being to moderate coping responses and perceived coping effectiveness. Finally, the current research project attempted to address methodological concerns in the area of subjective well-being by (1) using a multi-item scale, (2) administering it twice to each respondent so as to identify longer term feelings of satisfaction, and (3) choosing a scale, The Satisfaction With Life Scale (Diener, Emmons, Larson, & Griffon, 1985), whose items were formulated to avoid ambiguous wording.

One of the more common outcome measures used by academic psychologists in researching coping in community samples is subjective well-being (Lawton, 1983; Schwartz & Clore, 1983; Diener, 1984). The labels 'happiness', 'life satisfaction', and 'well-being' are often used interchangeably in the reporting of research in this area (Diener, 1984). Definitions of well-being fall into three broad categories (Diener, 1984). The first relies on external criteria based on normative ideals, where the values of an observer, rather than the opinion of the subjects themselves, set the standards for

evaluation (Diener, 1984). The second defines well-being as satisfaction with life. This relies on the respondents to assess the positive aspects of their lives (Diener, 1984). The third defines well-being in terms of the weighting between positive and negative affect, which denotes well-being as a preponderance of positive over negative affect (Diener, 1984). Diener (1984) asserts that a definition of well-being should have three hallmarks: (1) it should be subjective, relying on the opinion of the respondents themselves; (2) it should include positive measures, rather than being considered due to a lack of negative factors; and (3) it should include a global measure of all aspects of a person's life.

Theoretical Considerations

One of the current debates among researchers studying subjective well-being is whether to treat it as solely an affective concept (Lawton, 1983) or whether it should also include a cognitive component (Emmons & Diener, 1985). The proponents of the view that well-being is a primarily affective concept consider well-being to be composed of two independent factors, positive and negative affect (Lawton 1983). Schwartz and Clore (1983) cite numerous studies which have found the personality and demographic variables that are associated with positive affect to be different from those associated with negative affect. These authors contend that the positive and negative aspects of affect are distinct and independent (Schwartz & Clore, 1983). The strongest support for this position is that positive and negative affect scores are consistently

found to be unrelated (Lawton, 1983; Diener, 1984).

The independence of positive and negative affect was investigated by Diener, Larson, Levine and Emmons(1985). They found that affect intensity levels provided a key factor. Correlations between positive and negative affect intensity scores were strong and positive across three samples of varying age and life circumstance. Both positive and negative intensity levels were found to be consistent over time. Finally, though mean scores for positive and negative affect were uncorrelated, once intensity levels were partialled out, positive and negative affect scores were found to have a strong inverse relationship. This led Diener et al. (1985) to conclude that affect intensity is an important personality variable and that it has a suppressor effect on the relationship between positive and negative affect, and that positive and negative affect are not independent factors of well-being.

In opposition to Lawton (1983), Emmons and Diener (1985) conceive subjective well-being as having three identifiable, though not necessarily independent, components: positive affect, negative affect, and life satisfaction (a cognitive or judgmental aspect). These authors investigated the relationships between the affective and cognitive aspects of well-being and a number of personality characteristics. They found positive affect to be correlated with high levels of extroversion, activity, and enthusiasm, but to not be related to self-esteem. Negative affect was associated with emotional reactivity and low self-esteem. Life satisfaction was associated with some factors in common with each affective aspect: sociality, self-esteem, and self-sufficiency. Emmons and Diener concluded that positive affect is best conceptualized

as linked to, and effected by, interpersonal responses. Negative affect, however, primarily reflects emotional responses that are internal to the individual. Emmons and Diener (1985) believe that the cognitive aspect of well-being, life satisfaction, is an important component that should be conceptualized as operating on both internal and interpersonal levels.

Influences on Subjective Well-Being

Numerous demographic, environmental, and personality variables that may impact subjective well-being have been identified. In terms of demographics, it has been found that the effect of income on well-being seems to be relative, rather than tied to the absolute level of goods and services individuals can afford. Wealthier people tend to be happier than poorer people (Campbell, 1981). Secondly, the influence of gender appears to shift during the life course. Younger women have been found to be happier than younger men, older men happier than older women, though the differences between the sexes is never great (Diener, 1984). Thirdly, George, Okun, and Landerman (1985) found age to have a moderating effect on subjective well-being, through its influence on marital status, income and health, but it had no significant direct effect. Fourthly, Andrews and Withey (1974) report that virtually all studies of marital status and well-being find married individuals are happier and more satisfied with their lives than any category of unmarried people. Finally, the strongest effect on subjective well-being of a demographic variable appears to be that of unemployment.

Campbell (1981) found unemployment to have extremely detrimental effects, even when income differences were controlled. It is likely, therefore, that the mean scores on the Satisfaction With Life Scale (Diener, Emmons, Larson, & Griffon, 1985) generated by the unemployed, mature, female respondents of the current research project will be depressed if compared to those generated by more heterogeneous samples.

A person's environment also seems to affect their subjective well-being. Life events consistently show moderate influences on subjective well-being (Diener, 1984). As would be expected, 'good' life events are related to the aspect of positive affect, 'bad' life events to negative affect (Diener, 1984). It is of some interest to note that few cross-over effects have been reported; 'good' events have shown little effect on reducing negative affect, 'bad' events to have little effect on reducing positive affect (Diener, 1984). It is possible that this apparent independence of positive and negative affect reflects the suppression effect of affect intensity discussed previously.

Personality variables are related to subjective well-being scores as well. McCrae and Costa (1983b) looked at the relationship between psychological maturity (as measured by ego development scores), personality characteristics, and the affective aspects of well-being. They failed to replicate earlier findings of Alker and Gawin which suggested that happiness was qualitatively different for different groups as a function of psychological maturity. Rather, McCrae and Costa (1983) found that personality characteristics, particularly Neuroticism and Extroversion, had an invariant

influence on well-being across ego levels. This is in accord with the work of Campbell (1981) who found high self-esteem to be one of the strongest predictors of subjective well-being. Campbell's finding that self-esteem drops during periods of unhappiness suggests that this relationship is also bi-directional.

It appears, therefore, that subjective well-being is influenced by variables both internal to the individual as well as variables within his or her environment. The strength of these associations may be questioned, however, on the basis of a number of methodological concerns.

Methodological Concerns in Subjective Well-Being Research

Subjective well-being is often evaluated by means of single-item scales such as Andrews & Withey's Delighted-Terrible Scale (1974). While these have the benefit of being brief and easy to administer, Diener (1984) notes a number of methodological problems. The variability in responding due to the specific wording of the item cannot be identified and controlled. There is no way to acquire estimates of internal validity. Temporal reliability is possible to evaluate. However, single-item scales tend to be less temporally reliable than multi-item scales (Diener, 1984). There is evidence for validity of single-item scales of subjective well-being through convergence with other scales, but this does not address the concern that a single item is always scored in one direction and hence open to problems in response bias. Finally, a single-item scale yields only a global measure of subjective well-being and cannot address differential satisfaction with different aspects of a person's life (Diener, 1984).

Multi-item scales of subjective well-being present potential problems as well. It is often difficult to separate long-term feelings of well-being from momentary moods. For example, Schwartz and Clore (1983) found that immediate affective states influenced happiness and satisfaction judgements. They suggest that both current mood and long-term affect are reflected in subjective well-being measures. A second potential concern is the validity of self-reported measures, particularly in light of the ambiguity of words such as 'happy'. Larson, Diener, and Emmons (1986), however, found that correlations between measures of subjective well-being and both lie scales and social desirability scales were low. As well, they found that self-reported evaluations correlated moderately with happiness ratings made about respondents by others. Thus, it appears that subjective well-being measures reflect substantial amounts of valid variance and are valid.

The current research project attempts to address these methodological problems in a number of ways. A multi-item scale measuring life satisfaction will be employed. In addition, the life satisfaction measure will be re-administered to each respondent after a 5 to 20 day interval. This will allow identification of longer-term feelings of satisfaction. Finally, items of the measure of life satisfaction chosen for this study, The Satisfaction With Life Scale, have been formulated so as to avoid ambiguous wording (Diener, Emmons, Larson, & Griffon, 1985).

Subjective well-being appears to be a construct composed of both cognitive and affective aspects. Research treats subjective well-being both as a predictor and a

criterion variable, depending on the specific relationship(s) under examination. The model examined in the current research project emphasizes the cognitive aspect of subjective well-being, life satisfaction, and treats well-being as both a moderating and a criterion variable. Life satisfaction is seen as moderating the relationships among coping choice, perceived problem solving effectiveness, and perceived emotionally supportive effectiveness. It does this by colouring perceptions of effectiveness. Life satisfaction is also viewed as being affected by personality variables and the perceived effectiveness of coping choices.

Life Events

By emphasizing the importance of a given event's meaning to the individual, the current study adopts the perspective put forth by Brown and Harris (1976) that different life events have disparate effects on well-being. While this study focuses on the specific life event of unemployment, it is recognized that no single event occurs in a vacuum. Prior, concurrent, and subsequent life events may well affect the choices of mechanisms made to cope with unemployment. The overall impact of other life events is included in the model under investigation. It is seen as a potential moderator and mediator of coping choice, perceived effectiveness of choice, and subjective well-being. In addition, the overall impact of other life events has the potential of affecting subjective well-being directly.

The concept of change is central to the definition of life events (McLanahan & Sorensen, 1984). This change may be in the area of an individual's social status, social

roles, behavioural patterns, cognitions, perceptions, or in any combination of the aforementioned. Early studies correlated major life changes and specific illnesses in clinical and other non-random populations (McLanahan & Sorensen, 1984). Positive associations between illness and the recent occurrence of a major life event or series of events were regularly found (McLanahan & Sorensen, 1984). The development of the "Schedule of Recent Life Events" by Holmes and Rahe (1967) allowed the assessment of the impact of the occurrence of life events to be included in numerous community studies. Total event scores were used in these studies to predict variation in more general indicators of both physical and psychological health (McLanahan & Sorensen, 1984). As McLanahan and Sorensen (1984) report, results consistently supported the idea that life changes had a negative impact on both physical and mental well-being.

Clark & Watson (1988) present the two perspectives of the relationship between well-being and life events that dominate the theoretical literature. One view, following the work of Holmes and Rahe (Rahe, 1979), considers change per se as a stressor that affects well-being. Within this approach, the event/well being relationship is likened to the physiological model of the disease process. Change is viewed as traumatic to the organism, eliciting adaptive responses. These responses may result in psychological distress if the individual's capacities are exceeded. Both positive and negative events are seen by adherents to this model as potentially able to cause distress (Clark & Watson, 1988).

The second perspective of the relationship between life events and well-being

emphasizes both the differential effect of disparate life events on well-being, and the importance of an event's meaning to the individual (Clark & Watson, 1988).

Psychological distress is viewed as the result of negative changes in people's perceptions of themselves engendered by a cognitive appraisal of their ability to cope with change (Clark & Watson, 1988). This model, originated by Brown and Harris (1976), posits a much more analytical process than the one discussed previously.

Changes brought about by particular life events are not necessarily uniform. The effects of events are thought to be dependent on the circumstances that surround them, and on the individual's perceptions of them (Clark & Watson, 1988). There are substantive differences among researchers' beliefs concerning the kind of life events that are most stressful. Some researchers emphasize events that result in loss (Brown & Harris, 1976), or those events that are independent of the person's actions (Miller, Dean, Ingham, Kreithman, 1986), others emphasize 'off-time' events, those that happen in unusual sequences or at unusual stages of development (Ryff & Dunn, 1985).

As previously mentioned, early work in this area concentrated on the effects of 'major' life events such as entering or leaving an institution, or the death of a close family member. A predominant controversy in the current literature concerns the degree to which 'uplifts' and 'hassles' (minor, reoccurring events, positive and negative in effect) tax coping abilities and impact on well-being (Monroe, 1983; Burks & Martin, 1985; Rowlison and Felner 1988).

Monroe (1983) investigated the relative contributions of major and minor life

events through a 12 month prospective study of the effects of desirable and undesirable major events, hassles, and uplifts on psychological symptoms. He concluded that relatively minor life events, (hassles), were significant and independent (from major life events) predictors of subsequent psychological symptoms.

A similar study by Burks and Martin (1985) focussed solely on the relative importance of hassles and negative major events. It was found that self-reported hassles were better predictors of psychological symptoms than were major events.

More recent work by Rowlison and Felner (1988), however, suggests that the strength of the relationship between hassles and symptoms had previously been confounded by conceptual overlap between life stress and symptom items. These authors believe results may also have been affected by response bias induced by the instructional sets of stress measures. A multi-trait (affective, physical, and academic indices of adjustment; controllable, uncontrollable, symptomatic, and non-symptomatic indices for hassles, desirable major events, and undesirable major events) multi-method (self, parent, and teacher ratings) procedure resulted in findings that both major life events and minor stressors had significant degrees of unique and shared variance with adaptive functioning. Rowlison and Felner (1988) concluded that minor and major life events represented conceptually discrete, though related, sources of life stress that contributed independently and jointly to a person's overall level of well-being.

The current study included a measure of the overall impact of life events other than unemployment that occurred to respondents in the twelve months prior to their

participation. It is possible that life events which occurred prior to unemployment would have a direct effect on subjective well-being, as well as a moderating effect on the relationships among coping choice, perceived coping effectiveness, and subjective well being through pre-empting the resources required for coping with unemployment. In addition, life events occurring subsequently to unemployment could have been generated by the occurrence of unemployment and, therefor, mediate the relationships among coping choice, perceived coping effectiveness, and subjective well-being.

Hypotheses and Issues

Underwood (1949) provides the distinction between hypotheses and issues used in the current study. He posits that there are two types of empirical problems. The "I-wonder-what-would-happen" type (p 11) covers those situations in which the lack, or limit, of previous research disallows the formulation of specific predictions. The "I'll-bet-this-would-happen" type (p 12) is utilized in those situations in which predictions can be made on the basis of existent evidence. Within the present study, both of these problems will be posed.

The current research project will use a LISREL analysis to test a complex model of the relationships among demographic variables, personality domains, coping choices, perceived coping effectiveness, and subjective well being. It should be noted that the valences of the coefficients specified are, by necessity, tentative. They are based on studies where the pertinent relationships were considered in isolation from the

effects of other variables. LISREL considers the interactive effects of all variables in a model simultaneously. This can result in changes in the signs of effects when compared to their isolated relationships (Hayduk, 1987). A graphic representation of this model can be seen in Figure 1. Particular aspects of this model are identified below.

The five-factor dimensional continuity model of Costa and McCrae (1985b) suggests that

- (1) There will be differential, unidirectional effects of each of the personality domains on the use of coping styles (see Fig. 1: $\Gamma 5$, $\Gamma 6$, $\Gamma 7$, $\Gamma 8$, $\Gamma 9$).
- (2) There will be differential, unidirectional direct effects of each of the five personality domains on well-being (see Fig. 1: $\Gamma 12$, $\Gamma 13$, $\Gamma 14$, $\Gamma 15$, $\Gamma 16$).
- (3) There will be indirect effects of personality domains on well-being which are moderated by the use and subsequent perceived effectiveness of coping styles (see Fig. 1: B1, B3, B7, B9).

The model of the effect of life events put forth by Brown and Harris (1976) suggests that

- (4) There will be a negative direct effect on life satisfaction of the number and severity of negatively perceived life events other than unemployment

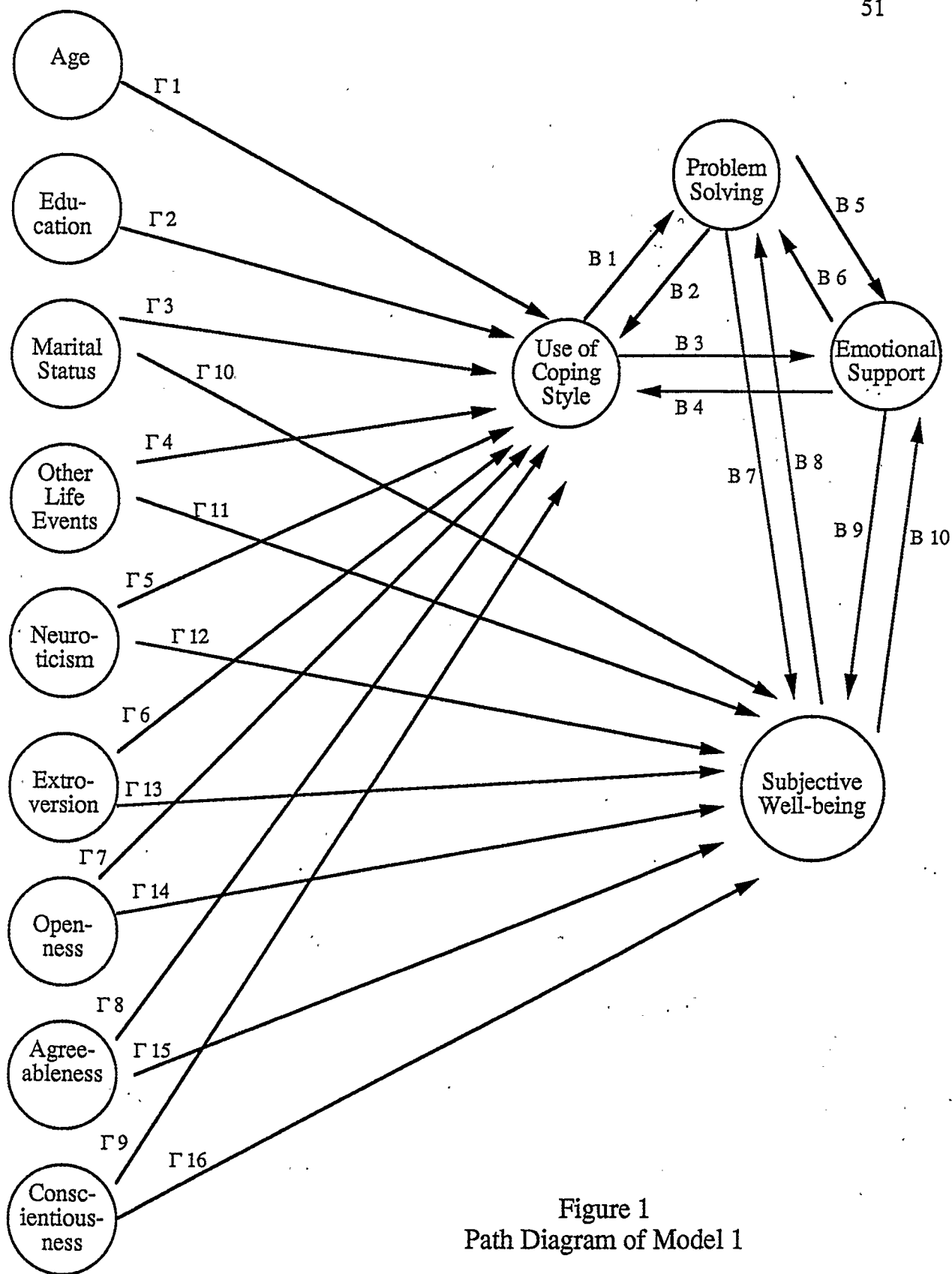


Figure 1
Path Diagram of Model 1

(see Fig.1: $\Gamma 11$).

(5) There will be a negative direct effect of the number and severity of life events other than unemployment on use of coping styles (see Fig.1: $\Gamma 4$).

In opposition to the note made by McCrae and Costa (1986a), the cognitive appraisal aspect of the model of coping put forth by Folkman and Lazarus (1988b) would suggest the following

(6) There will be a bidirectional relationship between the use of the three coping styles and the evaluation for effectiveness (see Fig. 1: B1, B2, B3, B4). The perception that a particular coping style has been effective, either in helping to solve the problem or in helping the individual feel better, will increase the likelihood that that coping style will be used again. Conversely, coping styles which are often used will be perceived as being effective on the basis of their frequency of use.

(7) There will be a bidirectional relationship between perceived problem solving effectiveness and perceived emotional effectiveness (see Fig. 1: B5, B6). The perception that a coping style was emotionally supportive will increase the perception that that style is considered to be helpful in solving the problem. In the same way, perceptions that a coping style was helpful in solving the problem will increase the perception that it was emotionally supportive as well.

The work of Folkman and Lazarus (1988a) suggests that life satisfaction, the

cognitive component of subjective well-being, is a moderating variable, therefore

(8) There will be bidirectional effects between the perceived effectiveness of coping styles and well-being (see Fig. 1: B7, B8, B9, B10). An increased satisfaction with life will lead to the perception that coping choices are more effective, while the perception that coping choices are effective will lead to increased satisfaction with life.

The work of George et al. (1985) and Andrews and Withey (1974) would suggest that:

9) Marital status will have a direct effect on well-being, married women will display higher life satisfaction than unmarried women (see Fig. 1: Γ 10).

In addition, correlational analyses will be carried out to examine relationships not specified by the LISREL model.

It is necessary to re-examine the relationships of the personality domains to coping, as McCrae and Costa's (1986a) taxonomy of coping differed from that used in the LISREL analysis. As well, the relationships between facet scores and coping must be examined as personality facet scores were not separated from overall domain scores in the LISREL model described above. It is expected that the results of McCrae and Costa's (1986a) study concerning the nature of coping efforts employed in response to

negatively perceived life events will be upheld. Therefore the following hypotheses are posed:

(10) The domain of Neuroticism, and its facets will be (a) strongly and positively correlated with the use of denying coping mechanisms, (b) less strongly and positively correlated with the use of passive coping mechanisms, and will be (c) negatively correlated with the use of active coping mechanisms.

(11) The domain of Extroversion and its facets will be (a) strongly and positively correlated with the use of active coping mechanisms, (b) less strongly and positively correlated with the use of passive coping mechanisms, and will be (c) negatively correlated with the use of denying coping mechanisms.

(12) The domain of Openness and its facets will be (a) correlated positively with the use of active and (b) passive coping mechanisms and (c) weakly negatively with the use of denying coping mechanisms.

The five-factor dimensional continuity model of Costa and McCrae (1985b) suggests that

(13) There will be significant correlations between life events whose occurrence is potentially dependent on the behaviour of the individual, and the personality domains and their facets, but no significant correlations between life events whose occurrence is independent of the behaviour of the individual, and the personality domains and facets.

The model of well-being put forth by Emmons and Diener (1985) would suggest that

(14) Life satisfaction scores will be temporally reliable over the short term.

Finally, the subjective evaluation of the effects of life events other than unemployment generated by respondents will be compared to the objective measures of their impact from the Schedule of Recent Life Events (Holmes & Rahe, 1967). The general philosophy of this research project, which credits respondents with the ability to identify and evaluate behaviours and their effects, would suggest that

(15) There will be strong, positive correlations between the subjective and objective evaluations of the impact of life events.

METHOD

Subjects

Participants in this study were solicited from the female clientele of Opportunity 45. Opportunity 45 is an employment counselling and referral service in Calgary which is funded by the government of Alberta. A letter of introduction and request for participation was mailed to every woman who had registered with Opportunity 45 in the twelve months prior to the commencement of this study, with a positive response rate of 16%. This was followed up by telephone contact, as a postal labour dispute was in progress at the time of the mailout, resulting in the participation of 20% of those contacted. New female clients were apprised of this study and given the option of participating by their counsellors at the time of intake interviews. Approximately 20% of these women showed interest in volunteering. Criterion for inclusion in the study were that the women be between the ages of 45 and 65 years old, be currently unemployed, or have been unemployed in the previous twelve months, and be, or have been, actively looking for work.

Two hundred and four women completed the initial stage of this study, complete data were available for 142 of them (69.6%). The women who completed data sets were Caucasians whose mean age was 53 years. Demographic characteristics of this sample are presented in Table 5.

Table 5

Frequency Distributions for Sociodemographic Variables with Means,
Standard Deviations, and Ranges for Continuous Variables

<u>Variable</u>	<u>N</u>	<u>%</u>	<u>Mean</u>	<u>S.D.</u>	<u>Range</u>
Age			53.00	5.55	45-65
45 - 49	14	9.9			
50 - 54	41	28.8			
55 - 59	28	19.8			
60 - 65	59	41.5			
Education			3.00 a	1.16 a	1 - 6 a
grade 8	7	4.9			
grade 12	47	33.1			
vocational	50	35.2			
2 yr college	17	12.0			
4 yr university	18	12.7			
post-graduate	3	2.1			
Marital Status					
never married	7	4.9			
married	74	52.1			
separated	3	4.9			
divorced	50	35.2			
widowed	7	4.9			

a Lowest education assigned a value of 1 through to the highest education assigned a value of 6.

All participants were unpaid volunteers. In accordance with A.P.A. ethical guidelines, all were apprised of the nature of the study, the confidentiality of their responses, and given the choice to suspend participation at any time.

Measures

In addition to sociodemographic factors, data were collected on (a) personality characteristics, (b) coping choices, (c) problem solving effectiveness of coping choices, (d) emotionally supportive effectiveness of coping choices, (e) life satisfaction, and (f) life events other than unemployment. The measures were presented in the form of paper and pencil questionnaires.

Sociodemographic characteristics. A ten item questionnaire measured the sociodemographic characteristics of respondents. The first four items solicited background information regarding the: age, education level, marital status, and current employment status of the individual. The last six items concerned the circumstances surrounding the occurrence of unemployment such as: the nature of the job's ending, the amount of notice given that the job would end, the number of wage earners in the respondent's family, the amount of financial support available at the time of unemployment, and the number of job changes in the previous ten years.(The Sociodemographic Questionnaire may be seen in Appendix A)

Personality characteristics. Participants completed Costa and McCrae's (1985c) NEO Personality Inventory (NEO-PI). The NEO-PI is a 181 item questionnaire developed through factor analysis to fit the Five Factor Model. Respondents used a 7 point Likert scale to indicate the degree of their (dis)agreement with each item. This measure is composed of eight items pertaining to each of six facets within each of the three broad domains of neuroticism, extroversion, and openness to experience, plus two 18-item scales which measure the domains of agreeableness and conscientiousness. Scale scores for the facets are obtained by summing the scores of the eight pertinent items. Domain scores are the sum of the relevant facet scores for neuroticism, extroversion, and openness to experience and the sum of the 18 item scales for agreeableness and conscientiousness. This measure also includes one item which assesses the willingness of respondents to answer to the best of their ability.

Internal consistency and reliability has been demonstrated for the NEO-PI with coefficient alphas ranging from .60 to .86 for the individual facets, and coefficient alphas ranging from .85 to .93 for the domains of neuroticism, extroversion, and openness to experience. In addition, test-retest reliabilities for the measure range from .66 to .92 for the facets and from .86 to .91 for the domains (Costa & McCrae, 1985b, p28-29). No internal consistency or retest data are available for the domains of agreeableness and conscientiousness.

The validity of the NEO-PI is supported by significant correlations between its facet and domain scales and comparable scales of the Eysenck Personality Inventory

and the Guilford-Zimmerman Temperament Survey (Costa & McCrae, 1985b, p 30).

Consensual validation of the NEO-PI facets and domains has been demonstrated through convergent correlations between self-reports and spouse ratings. The median correlations for the facets was .47, while correlations for the domain scores ranged from .45 to .72 (Costa & McCrae, 1985b, p 32).

Coping Choices and Coping Choice Effectiveness. The choices of behaviours and cognitions made in response to unemployment was examined by means of the revised Ways of Coping Scale (WCS) (Lazarus & Folkman, 1984, pp 328-333). This measure consists of 67 items that identify potential responses to the occurrence of a life event, plus three open-ended items that allow respondents to indicate responses not covered by the other items in the questionnaire. In the current study, responses were made to each item on three scales: degree of use (a 5 point scale, ranging from 'never' (1) to 'always' (5)), problem solving effectiveness (a 9 point scale, ranging from 'made problem worse' (1) to 'made problem better' (9)), and emotional effectiveness (a 9 point scale, ranging from 'felt worse' (1) to 'felt better' (9)). If a participant answered 'never used' on the degree of use scale (1), no other response was made to that item. These scales are expanded from those in the revised WCS, which allowed only yes/no responses for use and 4 point scales for the two effectiveness measures. It was felt that a longer scale would allow respondents to indicate more exactly the degree to which choices were used and to more exactly identify their perceived effect.

Reliability, as expressed by consistency of scores over time, is difficult to apply to the WCS because coping is conceived of as a process that changes over time in response to changes in the situation that required it and in response to previous coping choices (Folkman & Lazarus, 1985). Asking respondents to complete the questionnaire twice within a very short time period (1 to 2 days) would raise the problem that results could be confounded by the respondent remembering, and duplicating, their first response. Internal consistency of the revised WCS has been evaluated through factor analysis. Principal-component analysis yielded coefficient alphas for six factors that ranged from .70 to .86 (Folkman & Lazarus, 1985).

Construct and concurrent validity have been demonstrated for the revised version of the WCS through a study of changes in coping choice over the course of a single life event, a college examination (Folkman & Lazarus, 1985). Substantial differences were found in ways of coping from one time period to the next during the preparation period before the examination, while no significant increase in the use of any form of coping was seen following the receipt of the grade from that examination. The original version of the WCS has demonstrated the ability to differentiate clinically depressed patients from community controls, effective from poor self-ascribed problem solvers, and individuals with an internal from external locus of control from those with an external locus of control (Tennen & Herzberger, 1985).

To the best of this author's knowledge, no efforts have as yet been made to test the convergent validity of the WCS by comparing responses to other self-report

measures of coping strategies.

Classification of Coping Items. Methodological concerns about the way in which McCrae and Costa (1986 b) classified coping items into mechanisms precluded the use of their classification in the present study. A principal component analysis with varimax rotation of the Ways of Coping Scale (Folkman & Lazarus, 1984) by McCrae and Costa identified 28 factors which were used as guides in grouping coping items (McCrae, 1984). "Rational consideration" was employed to classify those items which loaded on more than one factor (McCrae, 1984). As a result, these coping mechanisms were composed of anywhere between one and seven items. This disparity in the number of items that contributed to a mechanism raises problems with the comparison of correlations based on these mechanisms. In particular, correlations involving those mechanisms that are composed of only a single item, or relatively few items, are likely to be dampened.

A principal component analysis with varimax rotation was performed on the coping data from the current study. The resultant 20 factors showed little substantive meaning and had the same problems as those in McCrae and Costa's classification. The 20 factors were composed of between 3 and 17 items, making the comparisons of correlations relying on them problematic. As well, many items loaded on more than one factor. Since there is no widely accepted way of classifying coping items (Tennen & Herzberger, 1985), and strictly empirical classification methods had proved fruitless, it was decided to classify the items on the Ways of Coping Scale by consensual validation. Three broad styles of coping were adopted, 'activity', 'passivity', and

'denial', following the philosophy of Lazarus and Folkman (1984). The following definitions were used to classify coping items: "activity, reflecting 1) acknowledgement that a concern exists 2) a focus on changing the situation or one's feelings about it 3) a focus on direct action to accomplish the above; passivity, reflecting 1) acknowledgement that a concern exists 2) a focus on accepting the situation or one's feelings about it 3) a focus on intellectualizing or looking to others to accomplish the above; denial, reflecting 1) unwillingness to acknowledge that a concern exists 2) a focus on avoiding or ignoring the situation."

Ten members of the faculty and graduate program in psychology at the University of Calgary classified the items of the Ways of Coping Scale, resulting in total consensus for eight items under the "passivity" definition, nine items under the "denial" definition, and ten items under the "activity" definition. Since an equal number of items contributing to each style was desirable for further analyses, one item was randomly removed from the pool of "denial" items and two items were randomly removed from the pool of "activity" items. Those items contributing to each coping style are presented in Appendix B. In subsequent analyses, the "use" score for a particular coping style was the sum of the degree of use scores for the eight items of the Ways of Coping Scale designated for that style. Similarly, "problem-solving effectiveness" and "emotional effectiveness" scores for a particular style were the sum of the scores for pertinent items.

Life Satisfaction. The cognitive component of subjective well-being proposed by Emmons and Diener (1985), life satisfaction, was measured by means of the Satisfaction With Life Scale (SWLS) (Diener, Emmons, Larson, & Griffin, 1985). The Satisfaction With Life Scale elicits a global evaluation of life satisfaction through responses to five items by means of 5 point Likert scales that range from 'strongly disagree' (1) to 'strongly agree' (5).

An examination of the reliability of the SWLS yielded a test-retest correlation coefficient of .82 (over a two month period) and a coefficient alpha of .87 (Diener et al., 1985). The SWLS has demonstrated internal consistency through a factor analysis of its items that resulted in the emergence of a single factor which accounted for 66% of the variance (Diener et al., 1985).

Convergent validity of the SWLS is supported through correlations between it and other measures of well-being (Andrews and Withey's Delight-Terrible Scale, Fordice's single item measure of happiness and percent of time happy question, Bradburn's Affect Balance Scale, and Tellegan's well-being subscale of his Differential Personality Questionnaire) that range from .47 to .75 (Diener et al., 1985). A very low correlation between the SWLS and the Marlow-Crowne scale of social desirability (.02) suggests that the SWLS does not evoke a social desirability response set (Diener et al., 1985).

Construct and concurrent validity of the SWLS are reflected in negative correlations between it and a symptoms checklist (-.41), between the SWLS and the

neuroticism scale of Eysenck's Personality Inventory (-.48), and between the SWLS and the emotionality scale of Buss and Plomin's personality scale EASI-III (-.25); in conjunction with positive correlations between the SWLS and Rosenberg's Self Esteem Scale (.54) and the SWLS and the EASI-III scale of sociability (.20) (Diener et al., 1985).

Life Events. Life events other than becoming unemployed that participants experienced in the twelve-month period prior to unemployment were evaluated by means of Ryff and Dunn's (1985) version of Sarason, Johnson, and Siegel's (1978) Life Experiences Survey (LES). The version of the LES used in the current study consisted of 50 items designed to cover the range of events that are likely to occur to an adult, plus two open-ended items which allowed respondents to indicate the occurrence of an event not covered by the previous items. For each event respondents indicated as having occurred, they were asked to identify the length of time since the occurrence of the event (1-12 months) and the perceived impact of the event (on a 11 point scale, ranging from 'extremely negative' (-5) to 'extremely positive' (+5)). In addition, respondents were asked to indicate which, if any, of the events that had occurred were interrelated.

Ryff and Dunn (1985) altered the original LES to make it more relevant to mature adults. The following seven items were added by these authors to make the questionnaire more applicable to this group: "experienced a significant accomplishment of a family member", "became a grandparent", "was the victim of crime", "had a

serious personal emotional problem", "went through a major change in community activities", "had a major change in cultural experience (much more, much less)", and "experienced a major change in travel experiences (much more, much less)". In addition, two of the original items of the LES that referred to 'boyfriend/girlfriend' were rephrased to read 'a romantic relationship'. The current study's sample consisted solely of women, requiring further adaptation of the LES. Two items, specific to men, were removed from gender-equivalent pairs, "Married male: Change in wife's work outside the home" and "Married male: Wife/ girlfriend having an abortion".

Reliability and validity information are available only for the original version of the LES. The LES allows the examination of the positive impact of life events, their negative impact, and overall change as designated by the perceived effects of respondents. The test-retest correlation scores (over 6-8 week periods) from two studies reported by Sarason et.al (1978) were .63 and .64 for overall change scores, .19 and .53 for positive change scores, and .56 and .88 for negative change scores. The LES, like the WCS discussed previously, records events that are part of ongoing processes. Thus, it is possible that test-retest correlations are dampened by the occurrence of events between the times of measurement (Sarason et al., 1978).

Convergent validity of the LES is demonstrated through differential correlations between positive and negative change scores on the LES and trait anxiety (Sarason et al., 1978). As well, negative correlations have been reported between student's grade point averages and positive, negative, and overall change scores on the LES (Sarason et

al., 1978). Correlations between the three change scores and the Marlowe-Crowne Social Desirability Scale ranged from $-.05$ to $+.05$, suggesting that responses to the LES are relatively free from the influence of social desirability bias (Sarason et al., 1978).

Sarason et al. (1978) compared the negative life change scores generated by the LES to those imposed by the objective weights for each item of Holmes and Rahe's Schedule of Recent Events (for each event indicated as having occurred). They correlated these scores with those of the Beck Depression Inventory. The correlation between LES negative change scores and depressive symptomatology was significantly larger than that between scores from the Schedule of Recent Events and depressive symptomatology ($.37$ vs $.17$, $t(66)=2.31$, $p<.05$) (Sarason et al., 1978, p 939).

The current study used an altered version of the LES, therefore the foregoing information concerning reliability and validity is only presented as an approximation of the reliability and validity estimates of the version of the LES used here. There is a paucity of reliability estimate information for the versions of the Ways of Coping Scale and the Life Events Survey used in the current study. As a result, respondents were asked to answer portions of these scales at a second time of measurement. Each respondent re-answered 1/5 of each of these measures between 5 days and 3 weeks after the initial completion of the entire scale. This allowed test-retest estimates of reliabilities to be calculated for the versions of these measures used in the current study.

Validity estimates for the Life Events Survey are of less concern in the present study, due to the nature of the scale and its place in the proposed model of coping with

unemployment. Careful consideration of the face validity of the LES was given by 6 members of the psychology department at the University of Calgary (2 professors and 4 graduate students). It was judged that the scale was logical and believable as a measure of the occurrence and perceived effect of recent life events.

Classification of Life Events. It was necessary to classify items from the Life Experiences Survey on the basis of their independence/potential dependence of the individual to which they occurred in order to investigate the relationships among personality facets and domains, and the occurrence of independent and potentially dependent life events. Seven members of then faculty and graduate program at the University of Calgary were asked to identify independent life event items on the Life Experiences Survey, on the basis that independent events were "on logical grounds, unlikely to have been brought about by the behaviour of the individual; ...(and their) ... occurrence is clearly outside the control of the non-pathological, law-abiding, reasonably well-adjusted individual". There was consensus on 21 items. These items are presented in Appendix C. The remaining items on the Life Experiences Survey were considered to be potentially dependent on the behaviour of the individual.

Procedure

Data were gathered from participants of the current study, through questionnaires, on two occasions, 5 days to 3 weeks apart. The first occasion was a pre-arranged meeting with the researcher, the second occasion was at the discretion of

the participant (within the specified time frame).

Appointments with those women who agreed to participate were scheduled at the offices of Opportunity '45. Participants met with the researcher in small groups (up to 5 women) whenever possible to facilitate efficient use of Opportunity '45's space. The current study was explained to participants with no effort made to conceal its purpose. The confidentiality of individuals' data was emphasized, as was the right of participants to withdraw at any time, or to choose not to answer any specific question(s) on any of the measures. A signed consent form, indicating that the participant understood the nature and conditions of this study, was obtained from each participant.

Participants received a packet of questionnaires composed of the sociodemographic scale, the Satisfaction With Life Scale, the revised Ways of Coping Scale, and the Life Events Survey. The researcher explained the directions for responding to each of the questionnaires and requested that participants ask questions at any time if uncertain about how to respond. Participants answered the questionnaires at their own pace. Upon completion of the packet, questionnaires were returned to the researcher, who glanced at them briefly to ascertain that they had been completed correctly.

A second packet of questionnaires, in a stamped, self-addressed return envelope, was then given to participants to take home, complete at their convenience, and return by mail. The NEO-PI's instructions were explained at this time. It was made clear to participants that they were to wait at least 5 days, but no longer than 3 weeks before

completing the second packet. The second set of questionnaires consisted of the NEO-PI, a second copy of the Satisfaction With Life Scale, and a compilation questionnaire comprised of 1/5 of the items on the Ways of Coping Scale and the Life Events Survey.

RESULTS

Descriptive Statistics

Demographic characteristics of the sample are presented in Table 5. Participants in the current study ranged in age from 45 to 65 years, with a mean age of 53 years. Forty-one percent of the participants were 60 years of age or older. Respondents' education ranged from completion of Grade 8 (4.9%) through completion of post graduate degrees (2.1%) with bimodal education levels of high school graduation (33.1%) and some vocational training (35.2%). Married women made up 52.1% of the sample, separated or divorced women, 35.2%.

Employment-related characteristics of the sample are presented in Table 6. Sixty-nine percent of the respondents were unemployed at the time they participated in the current study. The remaining 31% of respondents had been unemployed in the twelve months prior to their participation, as this was one of the criteria for inclusion in the current study. Unemployment duration for the whole sample ranged from 1 to 98 months, with a mean duration of 12.49 months.

The majority of respondents (70.5%) had one month or less notice that their previous jobs would end. Nearly one third of respondents (29.6%) were given one day or less notice that their previous jobs would end. Participants, on the average, had between two and six months of insurance or savings to live on at the time they became unemployed. Nearly one fifth (18.3%) of the sample had more than one year of insurance or savings at this time.

Table 6

Frequency Distributions for Unemployment-Related Variables
with Means, Standard Deviations, and Ranges
for Continuous Variables

<u>Variable</u>	<u>N</u>	<u>%</u>	<u>Mean</u>	<u>S.D.</u>	<u>Range</u>
Length of Unemployment			12.49	16.3	1 - 98
1 - 6 months	61	43.0			
7 - 12 months	47	33.2			
13 - 18 months	11	7.7			
19 - 24 months	10	7.0			
25 - 60 months	10	7.0			
61 - 98 months	3	2.1			
Amount of Notice of Job's Ending			2.7 a	1.57 a	1 - 5 a
1 day	42	29.6			
1 week	22	15.5			
1 month	36	25.4			
2 months	18	12.7			
6 months	12	8.5			
Length of Time Savings/Insurance Would Last			3.47 b	1.76 b	1 - 6 b
1 week	1	.7			
1 month	19	13.4			
2 months	35	24.6			
6 months	15	10.6			
1 year	25	17.6			
longer	26	18.3			
Number of Jobs in the Last 10 Years			2.93	2.55	1-20
1	45	31.7			
2	30	21.1			
3	34	23.9			
4-5	18	12.6			
6-9	10	7.0			
10-15	4	2.8			
16-20	1	0.7			

Table 6 (Continued)

<u>Variable</u>	<u>N</u>	<u>%</u>	<u>Mean</u>	<u>S.D.</u>	<u>Range</u>
Current Employment Status					
employed	44	31.0			
unemployed	98	69.0			
Nature of Last Job's Ending					
quit	62	43.7			
laid off	52	36.6			
fired	7	4.9			
other	21	14.8			
Number of Wage-Earners in Family					
respondent was					
sole wage-earner	67	47.2			
respondent was					
co-earner	75	52.8			

- a Least amount of notice assigned a value of 1 through to the most assigned a value of 5.
- b Least savings/insured time assigned a value of 1 through to the most assigned a value of 6.

Respondents had changed jobs between 1 and 20 times in the ten years prior to their participation in this study. One third of the sample (31.7%) had only held a single job in the previous ten years. Nearly all the respondents (89.4%) had held five, or fewer, jobs in the ten years prior to their participation in the current study.

Unemployment was the result of quitting their previous jobs for 43.7% of the participants. Lay-offs ended previous jobs for 36.3% of the sample, and 4.9% of the sample had been fired from their previous jobs. At the time of unemployment, nearly half of the sample (47.2%) were the sole wage earners in their families.

The means, standard deviations, and ranges observed in the present study for the personality domains and facets of the NEO-PI, as well as norms provided for this measure by Costa and McCrae (1985b) are presented in Table 7. As can be seen from Table 7, the sample employed in this study differed little overall from those previously tested. One noteworthy difference is that the sample of the current study scored moderately higher on the domain of neuroticism. This is reflected in higher scores for the facets of anxiety, hostility and depression.

An overall total impact of life events, other than unemployment, was calculated as the difference between total negative and total positive impact scores. Total negative impact scores were the sum of impacts indicated by respondents as having from "somewhat" (-1) to "extremely" (-3) negative effects. Total positive impact scores were the sum of impacts indicated by respondents as having from "slightly" (1) to

Table 7
Observed Versus Normed* Means, Standard Deviations, and Ranges
for Personality Domains and Facets

<u>Variable</u>	<u>Observed</u>			<u>Norms*</u>		
	<u>Mean</u>	<u>Standard Deviation</u>	<u>Range</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Range</u>
Neuroticism	90.4	21.0	41-146	82.5	22.3	34-142
anxiety	18.3	5.4	4-40	16.0	5.4	6-29
hostility	12.4	4.7	3-28	10.5	5.4	2-23
depression	16.6	5.6	4-30	13.33	5.5	4-30
self-consciousness	16.1	4.4	7-27	15.0	4.7	6-27
impulsiveness	16.4	4.4	6-27	16.2	4.8	5-29
vulnerability	12.3	4.1	3-28	11.6	4.4	2-27
Extroversion	105.1	16.4	64-180	101.3	15.9	61-145
warmth	22.2	4.1	12-31	22.2	3.4	13-30
gregariousness	15.9	4.2	6-30	15.7	4.2	7-26
assertiveness	15.0	4.0	7-26	14.8	4.9	3-28
activity	17.5	4.0	9-28	17.3	5.0	6-30
excitement-seeking	14.5	4.3	4-27	12.1	4.3	3-26
positive emotions	19.5	4.8	8-30	19.2	4.3	8-30
Openness	109.8	17.8	74-155	111.3	17.9	67-154
fantasy	15.7	5.2	3-29	15.5	4.9	5-31
aesthetics	18.3	5.0	5-31	19.4	5.3	7-31
feelings	21.4	3.7	11-32	21.1	3.7	11-30
actions	16.5	3.7	8-25	17.3	3.7	8-26
ideas	18.0	4.9	6-28	17.9	5.1	6-30
values	20.4	4.2	6-31	20.3	4.3	8-30
Agreeableness	49.6	7.6	27-95	49.9	9.1	**
Conscientiousness	50.4	8.1	20-67	52.5	9.9	**

* Costa and McCrae, 1985

** Ranges are not available for the domains of agreeableness and conscientiousness.

"extremely" (3) positive effects. Scores ranged from -44 to 30, with a mean of -2.9 and a standard deviation of 14. The total impact of negatively perceived life events, used in subsequent analyses, was found to range from a high of -62 to a low of 0, with a mean of -12.6 and a standard deviation of 11.6.

Means, standard deviations, and ranges for the use and perceived effectiveness of the three coping strategies are presented in Table 8. The strategies of activity and passivity were used nearly equally and more than denial. The strategy perceived as most effective by respondents was activity, both as emotionally supportive and as an effective problem-solving device.

Total life satisfaction scores ranged from 5 to 35 with a mean of 19.54 and a standard deviation of 7.91.

Reliability Statistics

The reliabilities of three measures, The Satisfaction With Life Scale, the Life Experiences Survey, and The Ways of Coping Checklist were evaluated by means of test-retest correlations, and internal consistency estimates.

Satisfaction With Life Scale. The Satisfaction With Life Scale was administered twice. The correlation of the total scores for time1 and time2 was found to be .847 ($p < .001$). An internal consistency analysis of the items yielded an alpha coefficient of .8406. Further evidence for the internal consistency of this scale was established through a principle components factor analysis in which all items loaded on a single factor, with

Table 8
Means, Standard Deviations, and Ranges for Coping Use and Perceived Effectiveness

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Range</u>
activity use	20.75	7	0-38
passivity use	20.87	6.13	0-35
denial use	17.85	5.63	0-32
activity problem- solving effectiveness	39.13	14.93	8-72
passivity problem- solving effectiveness	36.92	12.57	8-66
denial problem- solving effectiveness	31.05	11.74	8-62
activity emotional effectiveness	41.78	16.30	8-72
passivity emotional effectiveness	38.42	13.32	8-68
denial emotional effectiveness	32.47	13.09	8-69

factor loadings ranging from .826 to .938. The factor that emerged explained 77.1% of the variance. These analyses support the internal consistency and reliability of the Satisfaction With Life Scale and also suggest that there was little change in the five day to three week interval between respondents' evaluations of their satisfaction.

Life Experience Survey and Ways of Coping Scale. The lengths of the Life Experiences Survey and the Ways of Coping Scale precluded their being re-administered in their entireties. Instead, five shortened versions of each of these measures were composed, each version consisting of every fifth question of the original questionnaire and administered at time2. The entire measure for each was administered at time1. The shortened versions of these measures were randomly administered to respondents. As a result of failures on the part of some subjects to complete their data sets and the fact that not all of the questionnaire packets prepared were needed, data from unequal numbers of respondents for each shortened version of these two measures are available.

Life Experiences Survey For each shortened version of the Life Experiences Survey, a total score was calculated (the sum of events indicated as having occurred) and correlated with the total of the same items on the original inventory. The time1 - time2 correlations for the five versions of the Life Experiences Survey are presented in Table 9. Correlations ranged from .356 to .801, and all were significant ($p < .05$). The overall reliability of the Life Experiences Survey was evaluated through a weighted group mean reliability coefficient corrected for length of test by the Spearman-Brown

Table 9
Test-Retest Correlations of Life Experiences Survey

<u>Group</u>	<u>Number of Subjects</u>	<u>Pearson Coefficient</u>	<u>p</u>
1	20	.8003	.001
2	18	.6685	.01
3	33	.7571	.001
4	32	.3356	.05
5	39	.3584	.05

formula (Allen & Yen, 1979). The resultant coefficient was calculated to be .8809.

These analyses suggest that respondents were able to consistently identify the life events that had occurred in the previous twelve months, and that few events occurred between the initial and second administration of the measure.

Ways of Coping Scale. For each shortened version of the Ways of Coping Scale a total score was calculated (the sum of the degree to which each item was used) and correlated with the total of the same items on the original measure. The time1 - time2 correlations for the five versions of the Ways of Coping Scale are presented in Table 10. The correlations ranged from -.203 to .330, none of them reached significance ($p > .05$). However, when the overall reliability of the Ways of Coping Scale was evaluated through a weighted group mean reliability coefficient corrected for length of test by the Spearman-Brown formula (Allen & Yen, 1979), the coefficient (.3986) was found to be significant ($p < .05$). It appears that there was average stability over time in responding to the Ways of Coping Scale. The moderate magnitude of this coefficient may be influenced by the inability of respondents to accurately recall to what degree they have used the items on the checklist, or may reflect an ongoing, dynamic process, as suggested by Lazarus and Folkman (1984).

Table 10
Test-Retest Correlations of Ways of Coping Checklist

<u>Group</u>	<u>Number of Subjects</u>	<u>Pearson Coefficient</u>	<u>p</u>
1	20	.3014	ns
2	18	.3303	ns
3	33	-.0264	ns
4	32	-.2036	ns
5	39	.3085	ns

Correlational Analyses

Personality facets and domains with coping styles Correlations among the use, problem-solving effectiveness, and emotional effectiveness of the three coping styles, and scores on the domains and facets of personality of the NEO-PI, are presented in Table 11. Activity coping use was found to be positively correlated with the positive emotions facet of the domain of extroversion (.199). The use of passivity as a coping style was found to be positively correlated with the domain of neuroticism (.169), its facets of depression (.248) and self consciousness (.192), and negatively correlated with the values facet of the domain of openness to experience (-.189). Denial coping use was found to be positively correlated with the depression facet of the domain of neuroticism (.207) and the excitement seeking facet of the domain of extroversion (.247). While these correlations are statistically significant ($p < .05$), none of the relationships between the use of a particular coping style and the domains or facets of personality as measured by the NEO-PI are very strong.

The perception that active coping was effective in problem-solving was positively correlated with the anxiety facet of the domain of extroversion (.364). The perception that passive coping was effective in problem-solving was negatively correlated with the hostility facet of the domain of neuroticism (-.901) and the assertiveness facet of the domain of extroversion (-.563) and positively correlated with the positive emotions facet of the domain of extroversion (.688) and the domain of agreeableness (.664). The correlations between perceived problem-solving effectiveness and personality

Table 11

Correlations of Personality Facets and Domains with
Coping Style Use, Perceived Problem-Solving Effectiveness, and Perceived Emotional Effectiveness ^a

Domain or Facet of Personality	Use of Coping Style			Problem-Solving Effectiveness of Coping Style			Emotional Effectiveness of Coping Style		
	Activity	Passivity	Denial	Activity	Passivity	Denial	Activity	Passivity	Denial
Neuroticism	ns	.1690	ns	ns	ns	ns	ns	ns	ns
Anxiety	ns	ns	ns	.3638	ns	ns	ns	ns	ns
Hostility	ns	ns	ns	ns	-.9013	ns	ns	-.8215	ns
Depression	ns	.2497	.2070	ns	ns	ns	ns	ns	ns
Self-Consciousness	ns	.1915	ns	ns	ns	ns	ns	ns	ns
Impulsiveness	ns	ns	ns	ns	ns	ns	ns	ns	ns
Vulnerability	ns	ns	ns	ns	ns	ns	.3915	ns	ns
Extroversion	ns	ns	ns	ns	ns	ns	ns	ns	ns
Warmth	ns	ns	ns	ns	ns	ns	ns	ns	ns
Gregariousness	ns	ns	ns	ns	ns	ns	ns	ns	ns
Assertiveness	ns	ns	ns	ns	-.5634	ns	ns	ns	ns
Activity	ns	ns	ns	ns	ns	ns	ns	ns	ns
Excitement-Seeking	ns	ns	.2471	ns	ns	.0737	ns	ns	ns
Positive Emotions	.1995	ns	ns	ns	.6875	ns	ns	.5429	ns

Table 11 (Continued)

Domain or Facet of Personality	Use of Coping Style			Problem-Solving Effectiveness of Coping Style			Emotional Effectiveness of Coping Style		
	Activity	Passivity	Denial	Activity	Passivity	Denial	Activity	Passivity	Denial
Openness	ns	ns	ns	ns	ns	ns	ns	ns	ns
Fantasy	ns	ns	ns	ns	ns	.6106	ns	ns	ns
Aesthetics	ns	ns	ns	ns	ns	ns	ns	ns	ns
Feelings	ns	ns	ns	ns	ns	ns	ns	ns	ns
Actions	ns	ns	ns	ns	ns	ns	ns	ns	ns
Ideas	ns	ns	ns	ns	ns	ns	ns	ns	ns
Values	ns	-.1891	ns	ns	ns	ns	ns	ns	ns
Agreeableness	ns	ns	ns	ns	.6635	ns	ns	ns	ns
Conscientiousness	ns	ns	ns	ns	ns	ns	ns	ns	ns

^a Only significant ($p < .05$) values are reported, all others are designated as non-significant (ns).

facets and domains range from moderate to strong, and are, overall, considerably stronger than those between the use of a particular coping style and the personality variables.

The perception that an active coping style was emotionally supportive was found to be positively correlated with the vulnerability facet of the domain of extroversion (.392). The emotional effectiveness of passivity in coping was found to be negatively correlated with the hostility facet of the domain of neuroticism (-.822) and positively correlated with the positive emotions facet of the domain of extroversion (.543). None of the personality facets or domains were found to be correlated with the perception that a denying coping style was emotionally supportive.

The strongest relationships found were between the hostility facet of the domain of neuroticism, and the perceived problem-solving and emotionally supportive effectiveness of passivity. Respondents who scored low on the hostility scale considered passive coping to be effective both in solving problems and providing emotional support. The most inconsistent relationships between coping style use and perceived effectiveness, and personality variables appear to be those of the positive emotions facet of the domain of extroversion. It is of interest to note that respondents exhibiting high scores on the facet of positive emotions used an active coping style, yet perceived passive coping to be more emotionally supportive and better at solving problems. In light of the number of correlations calculated (270) the number of significant correlations found (17) must be viewed with caution. There is a strong

likelihood that at least some of these would occur by chance.

Personality facets and domains with the occurrence of independent / potentially

dependent life events. Correlations among the personality domains and facets, the overall occurrence of events, the occurrence of potentially dependent events, and the occurrence of independent events are presented in Table 12. Overall, though statistically significant ($p < .05$), none of these correlations are very strong. As can be seen from Table 12, identical patterns of significant correlations emerged for the complete life event inventory and the subset considered to be potentially dependent on an individual's behaviour. There is a slight decline in the strength of the correlations for the latter group. This would suggest that the correlations in the complete inventory are primarily, though not completely, the result of those events potentially under the control of the individual. The events considered independent of the individual show fewer significant correlations with the facets and domains of the NEO-PI than do those potentially dependent on behaviour. It is interesting to note that all the significant correlations that were found for independent life events were also significant for the potentially dependent events: the extroversion facets of assertiveness and positive emotions, and the openness facet of feelings.

Subjective with objective evaluations of the impact of the occurrence of life events

The relationship between the subjective appraisal of the impact of the occurrence of life events by respondents and the objective estimation of their impact was evaluated. In this analysis the total of the absolute values of the impacts assigned events by

Table 12
Correlations of Personality Domains and Facets with the Overall
Occurrence of Life Events, the Occurrence of Potentially Dependent
Life Events, and the Occurrence of Independent Life Events ^a

Domain or Facet of Personality	Overall Occurrence of Life Events	Occurrence of Potentially Dependent Life Events	Occurrence of Independent Life Events
Neuroticism	ns	ns	ns
Anxiety	ns	ns	ns
Hostility	ns	ns	ns
Depression	.2023	.1797	ns
Self-Consciousness	ns	ns	ns
Impulsiveness	ns	ns	ns
Vulnerability	ns	ns	ns
Extroversion	.2029	.1878	ns
Warmth	.1881	.1641	ns
Gregariousness	ns	ns	ns
Assertiveness	.2617	.2145	.2132
Activity	.2444	.2598	ns
Excitement-Seeking	.1971	.1795	ns
Positive Emotions	.1533	.1421	.1700
Openness	.2547	.2196	ns
Fantasy	ns	ns	ns
Aesthetics	.1935	.1638	ns
Feelings	.2650	.2321	.1385
Actions	ns	ns	ns
Ideas	.1730	.1623	ns
Values	ns	ns	ns
Agreeableness	ns	ns	ns
Conscientiousness	ns	ns	ns

a Only significant ($p < .05$) values are reported, all others are designated as non-significant (ns).

was correlated with the total weights for identical events on the Social Readjustment Rating Scale (Holmes & Rahe, 1967), yielding a coefficient of .8323. There seems to be strong accordance between the objective and subjective appraisals of the overall impact of various life events.

Path Analytic Models

Correlations used in the following path analytic models are presented in Table 13. Correlations for coping style use, problem-solving effectiveness, emotional effectiveness, life satisfaction, and life event impact were based on composite scores, the raw scores of items within each scale summed to form a total. Correlations for the personality domains were based on the sum of facet scores for each domain. A summary of the variables used in the path analytic models is presented in Table 14.

LISREL VI (Joreskog & Sorbom, 1984) was used to test path analytic models in which multiple indicators represented coping use and effectiveness constructs and composite measures represented the remaining constructs. Improvements to initially ill-fitting models were attempted through additional model-fitting procedures on the basis of various sources of information (eg. residual matrices, modification indices, goodness-of-fit statistics, first order derivatives).

Table 13
Correlation Matrix for LISREL Analysis

		1	2	3	4	5	6	7	8	9
Coping Style Use										
ACTDID	1	1.00								
PASDID	2	.524	1.00							
DENDID	3	.422	.538	1.00						
Problem -Solving Effectiveness										
ACTPS	4	.873	.460	.363	1.00					
PASPS	5	.538	.813	.433	.609	1.00				
DENPS	6	.369	.414	.761	.500	.550	1.00			
Emotional Effectiveness										
ACTEE	7	.862	.453	.368	.965	.603	.526	1.00		
PASEE	8	.504	.791	.433	.578	.947	.548	.602	1.00	
DENEE	9	.374	.395	.730	.467	.503	.953	.528	.547	1.00
Satisfaction With Life										
SAT	10	.051	-.053	-.148	.132	.068	-.023	.157	.132	.013
Demo- graphics										
AGE	11	-.203	-.198	-.023	-.204	-.157	-.069	-.201	-.187	-.086
MSTAT	12	-.195 a	-.189 a	-.112 a	-.235 a	-.236 a	-.176 a	-.203 a	-.233 a	-.194 a
Life Event Impact										
IMPA	13	-.143	-.180	-.129	-.068	-.091	-.102	-.058	-.006	-.038
Personality Domains										
NEUROT	14	.009	.169	.104	-.023	.122	-.038	-.064	.074	-.067
EXTRO	15	.036	-.013	.097	.027	.019	.175	.050	.007	.160
OPEN	16	.084	-.021	.078	.707	-.021	.071	.123	-.017	.097
AGREE	17	.084	.087	-.031	.111	.024	-.019	.113	.010	-.012
CONS	18	.165	.040	-.026	.103	-.026	-.041	.101	-.047	-.053

Table 13 (Continued)

		10	11	12	13	14	15	16	17	18
Satisfaction With Life										
SAT	10	1.00								
Demo- graphics										
AGE	11	-.055	1.00							
MSTAT	12	-.243 a	-.249 a	1.00 a						
Life Event Impact										
IMPA	13	.350	-.081	-.057	1.00					
Personality Domains										
NEUROT	14	-.391	-.083	.184	-.167	1.00				
EXTRO	15	.123	.182	-.027	-.178	-.257	1.00			
OPEN	16	-.118	.174	.025	-.235	-.005	.342	1.00		
AGREE	17	.208	.129	.019	.003	-.117	.121	.043	1.00	
CONS	18	.099	.021	-.004	.008	-.277	.175	-.013	.157	1.00

a Marital status was recoded for the LISREL analysis, *****

Table 14

Descriptions of Variables Used in Path Analytic Models

<u>Exogenous Variables</u>	<u>Description</u>
MARI (x1)	Marital status, married coded 1, single, widowed, separated, and divorced coded 0
IMPA (x2)	Total of the negative impacts of life events (other than unemployment) experienced by respondents in the last 12 months. Items are reverse coded (since they were originally negative numbers) so a small number indicates many or severe impacts
NALL (x3)	Total of the facet scores, on the NEO-PI, for the domain of <u>neuroticism</u> .
EALL (x4)	Total of the facet scores, on the NEO-PI, for the domain of <u>extroversion</u> .
OALL (x4)	Total of the facet scores, on the NEO-PI, for the domain of <u>openness to experience</u> .
A (x6)	Total of the facet scores, on the NEO-PI, for the domain of <u>agreeableness</u> .
C (x7)	Total of the facet scores, on the NEO-PI, for the domain of <u>conscientiousness</u> .
<u>Endogenous Variables</u>	<u>Description</u>
ACTDID (y1)	Total of the <u>use</u> scores for <u>active</u> coping items on the Ways of Coping Scale.

Table 14 (Continued)

PASDID (y2)	Total of the <u>use</u> scores for <u>passive</u> coping items on the Ways of Coping Scale.
Exogenous Variable	Description
DENDID (y3)	Total of the <u>use</u> scores for <u>denying</u> coping items on the Ways of Coping Scale.
ACTPS (y4)	Total of the scores on <u>problem-solving effectiveness</u> for <u>active</u> coping items on the Ways of Coping Scale.
PASPS (y5)	Total of the scores on <u>problem-solving effectiveness</u> for <u>passive</u> coping items on the Ways of Coping Scale.
DENPS (y6)	Total of the scores on <u>problem-solving effectiveness</u> for <u>denying</u> coping items on the Ways of Coping Scale.
ACTEE (y7)	Total of the scores on <u>emotional effectiveness</u> for <u>active</u> coping items on the Ways of Coping Scale.
PASEE (y8)	Total of the scores on <u>emotional effectiveness</u> for <u>passive</u> coping items on the Ways of Coping Scale.
DENEE (y9)	Total of the scores on <u>emotional effectiveness</u> for <u>denying</u> coping items on the Ways of Coping Scale.
SATOT (y10)	Total of the scores on the Satisfaction With Life Scale.

Model 1

The initial model, Model 1, presented in Figure 1, proved to be untestable. The LISREL IV program was unable to reconcile the specified relationships with the data provided and crashed. Attempts to improve the fit of this model to the data resulted in Revised Model 1, presented in Figure 2. Revised Model 1 did not yield an acceptable fit to the data, as evidenced in the very large χ^2 ($\chi^2_{(142)}=1040.73, p<.001$). In a LISREL analysis, the χ^2 serves as an overall measure of the fit of the model through a complex evaluation involving the difference between the data-based matrix entered into the analysis and a matrix generated by the program on the basis of the designated relationships among constructs and measures (the Sigma matrix). A well-fitting model will result in the generation of a Sigma matrix that differs from the data-based matrix only to the extent of sampling variation, and will thus result in a χ^2 that fails to reach statistical significance. It must be noted that while a χ^2 that fails to reach significance is the ideal, it is common practice to accept, as valid, models whose χ^2 are marginally significant (Hayduk, 1987).

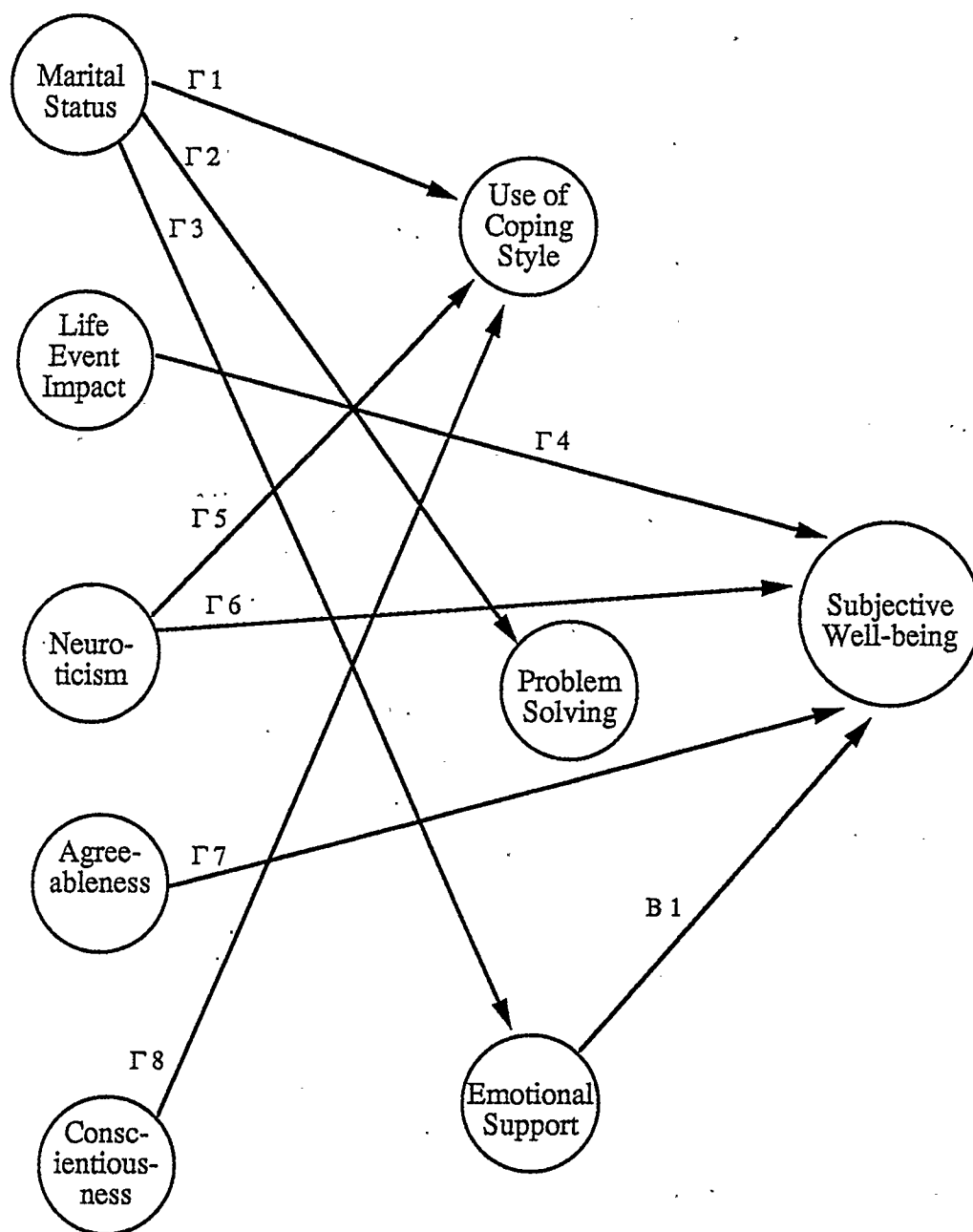


Figure 2
Path Diagram of
Revised Model 1

The structural coefficients of Revised Model 1 are presented in Table 15, the measurement coefficients for this model are presented in Table 16. As can be seen from Tables 15 and 16, only significant paths were included in this model. The structural residuals of Revised Model 1 are presented in Table 17, the measurement residuals for this model are presented in Table 18. As can be seen from Tables 17 and 18, the residuals are very large.

An examination of the modification indices and residuals generated by the LISREL analysis of Revised Model 1 suggested that the major problems in Model 1 were in its conception of coping as being composed of the constructs of use, problem-solving effectiveness, and emotionally supportive effectiveness. A factor analysis of the coping variables' correlations resulted in the identification of two factor structures that led to the formulation of two alternative conceptions of coping. The unrotated factor structure, presented in Table 19, reflects three factors of coping; an overall concept which encompasses all the coping variables (labeled 'skill'), a second factor comprised of all of the active and denial coping variables (labelled 'active/denial'), and a third factor consisting of all of the passive coping variables (labelled 'passive'). This factor structure was used in the formulation of Model 2. The factor structure that resulted from oblique rotation, presented in Table 20, reflects quite a different conception of coping. All the active coping variables loaded on the first factor (labelled 'activist coping'), all the denial coping variables loaded on the second factor (labelled 'denial coping'), and all the passive coping variables loaded on the third (labelled

Table 15
Structural Parameters of Revised Model 1 with Corresponding
Standard Errors and Critical Ratios

<u>Parameters</u>	<u>LISREL Estimate</u>	<u>Standard Error</u>	<u>Critical Ratio</u>
Γ_1	– .200*	.00	0.0
Γ_2	– .247	.052	4.78
Γ_3	– .209	.053	3.96
Γ_4	.302	.074	4.09
Γ_5	.099	.047	2.13
Γ_6	– .329	.073	4.49
Γ_7	.160	.073	2.17
Γ_8	.114	.046	2.47
B1	.111	.034	3.27

* Reference points do not have standard errors or critical ratios

Table 16
Measurement Parameters of Revised Model 1 with Corresponding
Standard Errors and Critical Ratios

<u>Parameters</u>	<u>LISREL</u> <u>Estimate</u>	<u>Standard</u> <u>Error</u>	<u>Critical</u> <u>Ratio</u>
λ_1	.930	.110	8.42
λ_2^*	.700	.00	0.00
λ_3	.583	.104	5.62
λ_4	.894	.076	11.74
λ_5^*	.700	.00	0.00
λ_6	.644	.077	8.39
λ_7	.888	.073	12.00
λ_8^*	.700	.00	0.00
λ_9	.575	.076	7.61
λ_{10}^*	1.00	.00	0.00

*Reference indicators do not have computed standard errors or critical ratios.

Table 17

Residual Matrix ^a for Revised Structural Model 1

	Coping	Perceived Problem Solving Effectiveness	Perceived Emotionally Supportive Effectiveness	Life Satisfaction
Coping Use		.705*		
Perceived Problem Solving Effectiveness	.814*	.798*		
Perceived Emotionally Supportive Effectiveness	.825*	.990 ^b	.854*	
Life Satisfaction				.400 ^b

a. All off-diagonals, except those shown, were fixed at 0.

b fixed reference points

* $p < .01$

Table 18
Residual Matrix ^a for Revised Measurement Model 1

	<u>LISREL Estimate</u>	<u>Standard Error</u>	<u>Critical Ratio</u>
ACTDID	.277	.050	5.66
PASDID	.581	.073	7.95
DENDID	.751	.087	8.19
ACTPS	.251	.031	8.00
PASPS	.502	.056	9.03
DENPS	.611	.067	9.06
ACTEE	.216	.029	7.47
PASEE	.476	.054	8.81
DENEE	.671	.075	8.90
SATOT	.349	.087	3.99

a. All off-diagonals were fixed at 0.

Table 19

Unrotated Factor Matrix of Coping Variables

	Factor 1 Skill	Factor 2 Approach/Avoidance	Factor 3 Passivity
ACTDID	.7745	.4498	.2744
DENDID	.6930	-.5302	.1008
ACTPS	.8135	.4300	.3170
DENPS	.7848	-.5290	.2199
ACTEE	.8363	.3908	.3293
DENEE	.7636	-.5380	.2323
PASDID	.7557	-.0444	-.5354
PASPS	.8483	-.0966	-.4531
PASEE	.8417	-.0577	-.4572

Table 20
Oblique Rotated Factor Structure of Coping Variables

	Factor 1 Activity	Factor 2 Denial	Factor 3 Passivity
ACTDID	.9370	- .0499	- .0385
ACTPS	.9751	.0098	- .0033
ACTEE	.9566	.0617	.0119
DENDID	- .0813	.8675	- .0858
DENPS	.05409	.9577	.0232
DENEE	.0471	.9651	.0483
PASDID	- .0679	- .0169	- .9727
PASPS	.0823	.0023	- .9162
PASEE	.0476	.0417	- .9058

'passivist coping'). This factor structure was used in formulating Model 3. Although passive use (PASDID), problem-solving effectiveness (PASPS), and emotional effectiveness (PASEE) loaded negatively on the factors of passivity (factor 3) in both factor analyses (see Tables 19 & 20), their signs were changed when entered into the LISREL analysis to enhance continuity.

Model 1 specified a construct 'Other Life Events', composed of the number and total impact of negative life events other than unemployment. In the initial attempts at fitting Model 1 to the data, it was found that, while the number and impact of negative events were highly intercorrelated, and very similar in their correlations with other variables, minor differences in their correlations with other variables led to major problems with their defining a single construct. The construct of 'Other Life Events' was, therefore, revised to consist solely of 'Impacts of Other Life Events'.

Model 2

The structure of Model 2, formulated on the basis of the unrotated factor structure of the coping variables, is presented in Figure 3. The measurements of the constructs in Model 2 are presented in Figure 4. As can be seen from Figure 3, Model 2 hypothesizes that the impact of negatively perceived life events other than unemployment ($\Gamma 2$), and the levels of the personality domains of neuroticism ($\Gamma 5$) and agreeableness ($\Gamma 6$) will have direct effects on the level of satisfaction with life. Neuroticism, additionally, is seen to have a direct effect on the use and perceived effectiveness of passive coping strategies ($\Gamma 3$). The use and perceived effectiveness of

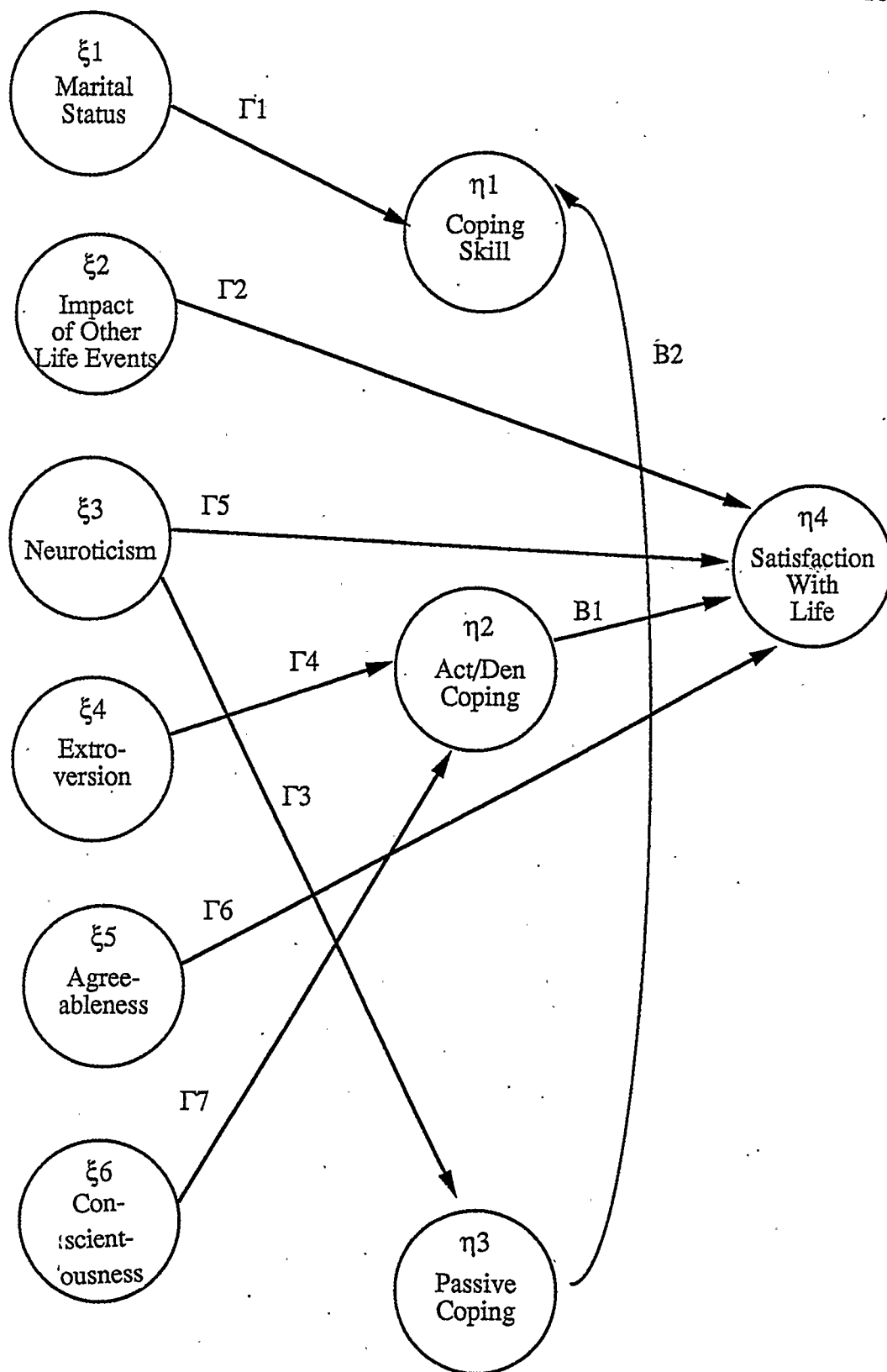


Figure 3
Path Diagram Model 2

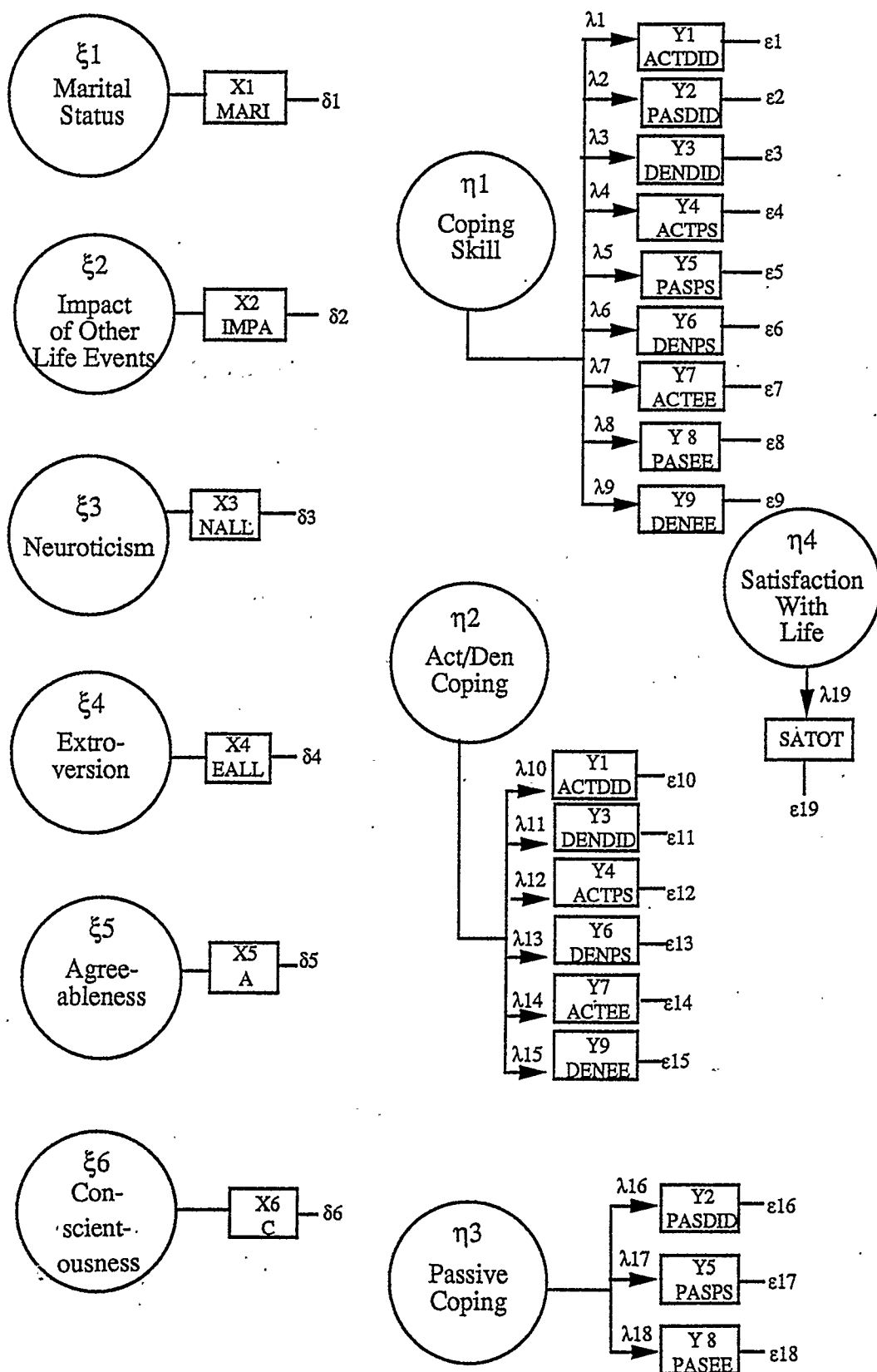


Figure 4
Measurement Model 2

passive coping strategies is hypothesized to have a direct affect on overall coping skill (B2). Extroversion is hypothesized to directly effect the use and perceived effectiveness of active/denying coping strategies (Γ4). The use and perceived effectiveness of active/denying coping strategies is seen to have a direct effect on life satisfaction (B1). Marital status is seen as having a direct effect on coping skill (Γ1). No direct effects on life satisfaction of any of the coping constructs are hypothesized.

The solution of Model 2 appears in Tables 21 and 22. As can be seen from the measurement portion of the results, presented in Table 21, the constructs were well defined. The factor loadings were generally high for each of the constructs investigated. The standard errors of each parameter are low; all parameters were significant ($p < .025$). The structural portion of the results, presented in Table 22, shows that all parameters for the constructs in this model are significant. That Model 2 sufficiently accounted for observed sample variance is further reflected in the overall test of the model, $\chi^2_{(137)} = 119.9$, $p = .850$, and in the goodness of fit index (.92).

The residual variances of the constructs in Model 2 were fixed because the model was too unconstrained if they were not. In order that the model maximize explained variance, residual variances were kept as low as possible. Endogenous links between passive coping strategies and coping skill, and between active/denial coping strategies and satisfaction with life allowed directional effects to be hypothesized between these constructs.

Table 21

Measurement Parameters of Model 2 (Solution for Model 2 Using
Unrotated Factor Structure of Coping Variables) with
Corresponding Standard Errors and Critical Ratios

<u>Parameters</u>	<u>Standard Estimate</u>	<u>LISREL Estimate</u>	<u>Standard Error</u>	<u>Critical Ratio</u>
λ_{1*}	.807	.774		
λ_{2*}	.786	.754		
λ_{3*}	.720	.690		
λ_{4*}	.859	.824		
λ_{5*}	.886	.849		
λ_{6*}	.818	.784		
λ_{7*}	.873	.837		
λ_{8*}	.879	.843		
λ_{9*}	.796	.763		
λ_{10}	.421	.530	.076	6.98
λ_{11}	-.485	-.611	.059	10.36
λ_{12}	.408	.511	.066	7.74
λ_{13}	-.596	-.750	.034	22.05
λ_{14}	.382	.418	.065	7.37
λ_{15}	-.573	-.721	.033	21.95
λ_{16}	.648	.709	.045	15.65
λ_{17}	.732	.800	.041	19.51
λ_{18}	.722	.790	.031	25.57
λ_{19*}	.938	1.00		

*Reference indicators do not have computed standard errors or critical ratios.

Table 22

Structural Parameters of Model 2 (Solution for Model 2 Using
Unrotated Factor Structure of Coping Variables) with
Corresponding Standard Errors and Critical Ratios

<u>Parameters</u>	<u>Standard Estimate</u>	<u>LISREL Estimate</u>	<u>Standard Error</u>	<u>Critical Ratio</u>
$\Gamma 1$	-.250	-.261	.081	3.24
$\Gamma 2$	.313	.294	.066	4.43
$\Gamma 3$	.209	.191	.076	2.50
$\Gamma 4$	-.166	-.132	.067	1.96
$\Gamma 5$	-.346	-.325	.067	4.43
$\Gamma 6$	.162	.152	.066	2.32
$\Gamma 7$	.180	.143	.067	2.13
B1	.143	.169	.083	2.03
B2	-.323	-.368	.090	4.10

The strongest effect observed in Model 2 is the negative effect of the use and perceived effectiveness of passive coping strategies on coping skill (-.368). Higher levels of neuroticism negatively affect satisfaction with life (-.325) and, less strongly, lead to an increase in the use and perceived effectiveness of passive coping strategies (.191). Neuroticism also has a very weak, indirect effect on overall coping skill (-.070) through its effect on the use and perceived effectiveness of passive coping strategies. Higher levels of agreeableness have a positive effect on life satisfaction (.152). Conscientiousness moderately affects the use and perceived effectiveness of active/denial coping strategies (.143). Extroversion has a direct, negative effect on the use and perceived effectiveness of active/denying coping strategies (-.132), and a very weak negative, indirect effect on life satisfaction (-.022) through its effect on the use and perceived effectiveness of active/denying coping strategies. Being single leads to a greater degree of coping skill than being married (-.261). The impact of negative life events is reverse coded, hence the direct effect of them on satisfaction with life (.294) indicates that an increase in the number or severity of negative life events reduces life satisfaction. The use and perceived effectiveness of active/denial coping strategies resulted in a moderate increase in life satisfaction (.169).

Despite the goodness of fit of Model 2, it becomes evident that this model fails to fully conceptualize coping when the residual matrix of the measured variables for endogenous concepts is examined. This matrix is presented in Table 23. As can be seen in Table 23, the residuals for the use scores of active, passive, and denying coping

Table 23

Residual Matrix ^a for Measurement Model 2

		1	2	3	4	5	6	7	8	9	10
ACTDID	1	.219*									
PASDID	2	.123*	.320*								
DENDID	3	.149*	.207*	.421*							
ACTPS	4				.028*						
PASPS	5				.005	.032*					
DENPS	6				.002	.016	.017				
ACTEE	7							.039*			
PASEE	8							.025*	.074*		
DENEE	9							.032*	.030*	.077*	
SATOT ^b	10										

a. All off-diagonals, except those shown, were fixed at 0.

b. The diagonal theta epsilon for SATOT was fixed at 0.

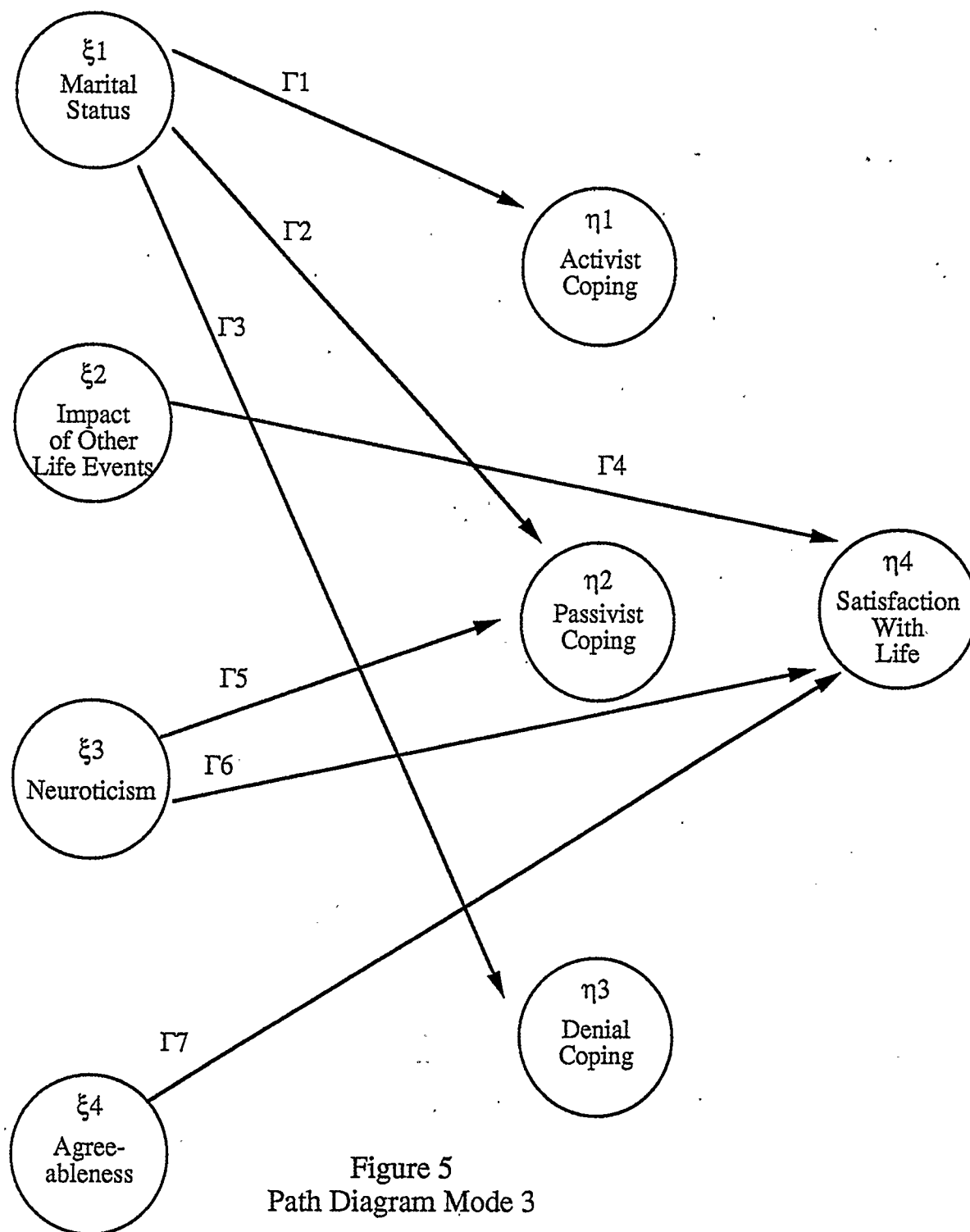
* $p < .05$

styles are much larger than those for other coping variables, suggesting that this model lacks a concept that would encompass the general use of coping strategies. Model 2 also represents coping in a restricted manner in that it posits few relationships between the coping constructs and life satisfaction.

Model 3

The structure of Model 3, formulated on the basis of the oblique rotation of the factors of the coping variables, is presented in Figure 5. The measurements of the constructs in Model 3 are presented in Figure 6. As can be seen from Figure 5, Model 3 hypothesizes that marital status has a direct effect on the use and perceived effectiveness of each of the coping strategies, activist ($\Gamma 1$), passivist ($\Gamma 2$), and denial ($\Gamma 3$). Negatively perceived life events are seen to affect satisfaction with life ($\Gamma 4$). Neuroticism is hypothesized to directly affect the use and perceived effectiveness of passive coping strategies ($\Gamma 5$) and life satisfaction ($\Gamma 6$). Agreeableness is seen as affecting satisfaction with life ($\Gamma 7$). There are no effects hypothesized among any of the coping constructs, or between any coping construct and life satisfaction.

The solution of Model 3 appears in Tables 24 and 25. The measurement portion of the results for Model 3, presented in Table 24, suggests the constructs were well defined. The factor loadings were generally high for each of the constructs investigated. The standard errors of each parameter are low; all parameters were significant ($p < 0.025$). The structural portion of the results, presented in Table 25, shows that all parameters for the constructs in this model are significant. The ability of Model



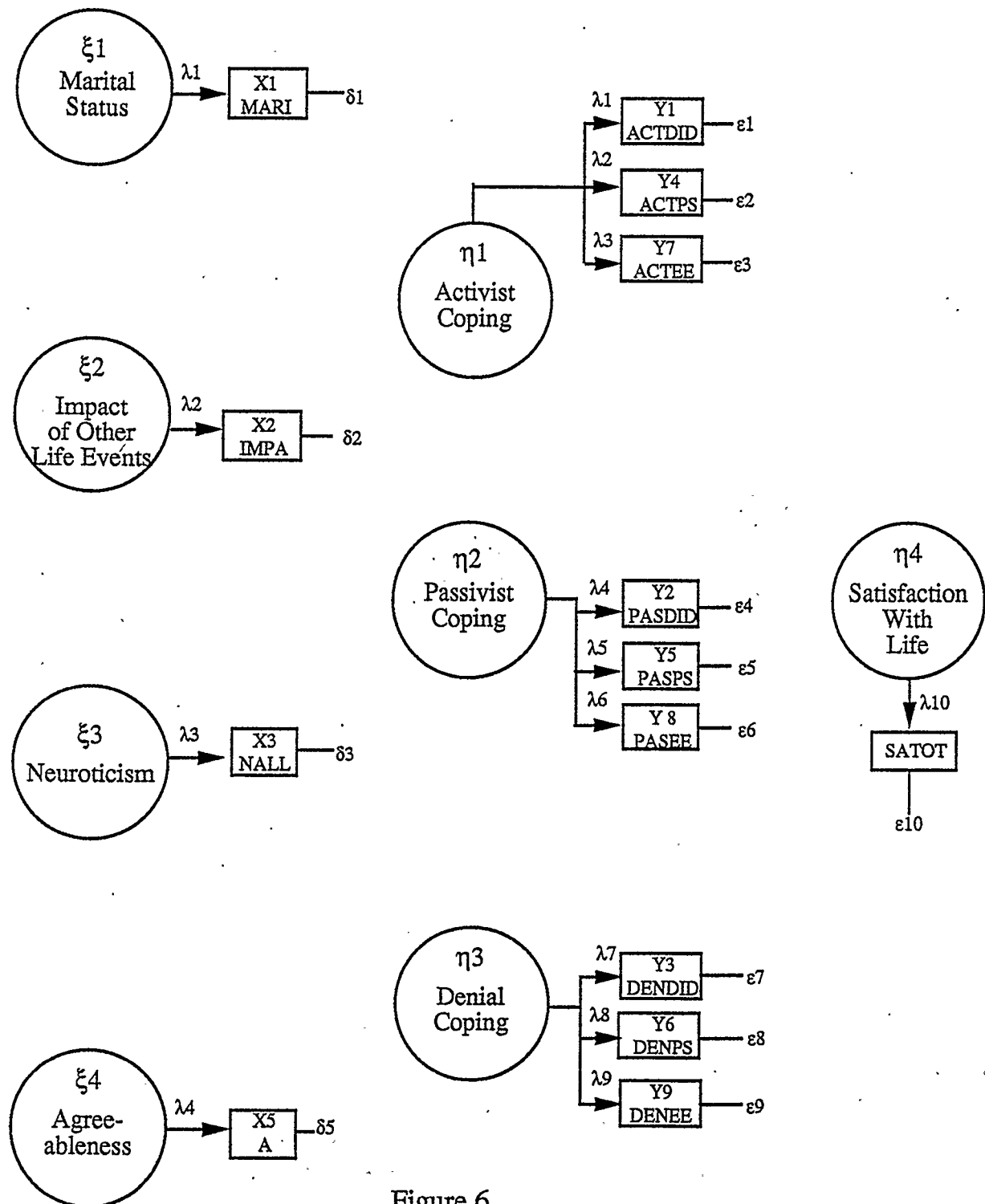


Figure 6
Measurement Model 3

Table 24

Measurement Parameters of Model 3 (Solution for Model 3 Using
Obliquely Rotated Factor Structure of Coping Variables) with
Corresponding Standard Errors and Critical Ratios

<u>Parameters</u>	<u>Standard Estimate</u>	<u>LISREL Estimate</u>	<u>Standard Error</u>	<u>Critical Ratio</u>
λ_1^*	.863	.937		
λ_2^*	.898	.975		
λ_3^*	.892	.957		
λ_4	.764	.807	.046	17.65
λ_5	.897	.947	.029	32.77
λ_6^*	.858	.906		
λ_7	.762	.793	.051	15.58
λ_8^*	.877	.958	.00	0.00
λ_9	.821	.897	.030	30.32
λ_{10}^*	.942	1.00		

*Reference indicators do not have computed standard errors or critical ratios.

Table 25

Structural Parameters of Model 3 (Solution for Model 3 Using
Obliquely Rotated Factor Structure of Coping Variables) with
Corresponding Standard Errors and Critical Ratios

<u>Parameters</u>	<u>Standard</u> <u>Estimate</u>		<u>Standard</u> <u>Error</u>	<u>Critical</u> <u>Ratio</u>
Γ_1	– .240	– .221	.076	2.91
Γ_2	– .306	– .290	.077	3.75
Γ_3	– .212	– .194	.076	2.56
Γ_4	.336	.316	.077	4.08
Γ_5	.188	.178	.062	2.86
Γ_6	– .339	– .319	.067	4.80
Γ_7	.177	.166	.067	2.48

3 to sufficiently account for observed sample variance is further reflected in the overall test of the model, $\chi^2_{(108)}=118$, $p=.148$, and in the goodness of fit index (.91). The fit of Model 3 to the data is somewhat less good than that of Model 2, but is still acceptable.

The strongest effect observed in Model 3 is that higher levels of neuroticism have a negative effect on life satisfaction (-.319). The direct effect of the impact of negative life events on satisfaction with life (.316) indicates that an increase in the number or severity of negative life events reduces life satisfaction. Marital status has a consistent, though more moderate, influence on each of the three coping strategies (active -.221, passive -.290, denying -.194). Being single led to greater use and higher perceptions of effectiveness than being married, regardless of coping style. Neuroticism increased the use and perceived effectiveness of passive coping strategies (.178). Agreeableness moderately increased satisfaction with life (.166).

Unlike Model 2, Model 3 allowed the residuals of the coping constructs to be correlated with each other. This matrix is presented in Table 26. As can be seen in Table 26, these residuals are quite large and suggest that the model lacks at least one construct of coping that would explain this residual variance.

The residual matrix of the measured variables for endogenous concepts of Model 3, presented in Table 27 suggests that this model, like Model 2, lacks a concept that would encompass the general use of coping strategies. Once again, the residuals of the "coping use" variables are much larger than those of the other coping variables.

Table 26
Residual Matrix ^a for Structural Model 3

	Activist Coping	Passivist Coping	Denial Coping	Life Satisfaction
Activist Coping	.800 ^b			
Passivist Coping	.433*	.800 ^b		
Denial Coping	.338*	.374*	.800 ^b	
Life Satisfaction				.600 ^b

a. All off-diagonals, except those shown, were fixed at 0.

b The diagonals of this matrix are fixed reference points

* $p < .05$

Table 27

Residual Matrix ^a for Measurement Model 3

	1	2	3	4	5	6	7	8	9	10
ACTDID 1	.277*									
PASDID 2	.125*	.322*								
DENDID 3	.151*	.204*	.416*							
ACTPS 4				.023*						
PASPS 5				-.002	.022*					
DENPS 6				-.005	.012	.011				
ACTEE 7							.045*			
PASEE 8							.032*	.084*		
DENEE 9							.040*	.035*	.084*	
SATOT ^b										

a. All off-diagonals, except those shown, were fixed at 0.

b. The diagonal theta epsilon for SATOT was fixed at 0.

* $p < .05$

Model 2 and Model 3 posit a number of similar relationships. In both, being single results in more use and higher perceived effectiveness of all styles of coping with unemployment. In each, the impact of negative life events, other than unemployment, reduces life satisfaction. In both Model 2 and Model 3, higher levels of neuroticism increases the use and perceived effectiveness of passive coping strategies. Higher levels of agreeableness consistently result in increased life satisfaction, whereas higher levels of neuroticism consistently reduce it. Model 2 and Model 3 are also similar in that they both appear to lack a construct that isolates coping strategy use, as can be seen from the residual matrices in each measurement model.

Model 2 examines a broader range of personality domains in relationship to coping use, perceived effectiveness, and life satisfaction than does Model 3. In Model 2, conscientiousness is seen as increasing the use and perceived effectiveness of active/denying coping strategies, extroversion as decreasing their use and perceived effectiveness. Model 2 posits direct links between coping concepts, and between coping constructs and life satisfaction. This allows a more in depth investigation of the relationships among aspects of coping, to each other, and to satisfaction with life than does Model 3, in which this variance is carried as a disturbance term of the constructs. One drawback in Model 2 is that the same measured variables of coping are used to define more than one construct. Active use, perceived problem-solving effectiveness, and perceived emotional effectiveness variables, for example, contribute to the overall "skill" construct as well as that of "activity/denial".

The most obvious difference between Model 2 and Model 3 is the way in which coping use and perceived effectiveness is conceived. Model 3 is stylistically based, combining use and perceived effectiveness in each of the three strategies, but separating the strategies from each other. Model 2 posits an overall coping construct of use and perceived effectiveness (skill), and two constructs composed of more stylistically based variables (active/denial and passive).

DISCUSSION

Past research in the areas of personality (Costa & McCrae 1976, 1978, 1980, 1984b), coping use and perceived coping effectiveness (Folkman & Lazarus, 1980, 1988), and subjective well-being (Emmons & Diener, 1985), and the relationships among these areas (Fleishman, 1984; Zika & Chamberlain, 1987; Holahan & Moos, 1987), particularly that of McCrae and Costa (1986a), led to the formulation of the original model (Model 1), investigated in this study.

Exhaustive attempts to fit Model 1 to the data failed, primarily because it tried to impose a system in the constructs of coping that would not hold. Folkman and Lazarus' proposed separation of coping into constructs of use, perceived problem-solving effectiveness, and perceived emotional effectiveness, was not supported by the data from the current study.

It was recognized from the outset that a comprehensive model of the relationships among personality, coping use and its perceived effectiveness, and subjective well-being would, by necessity, fall in the category of empirical problems labelled "I-wonder-what-would-happen" by Underwood (1949, p.12). Model 1 represented estimations of these complex relationships based on the evidence of research in which individual aspects were investigated, largely, in isolation. Model 1 failed, not because the data lacked relationships between the

variables (at the measurement level of the analysis), but because the concepts were incorrectly defined (at the structural level of the analysis) Once Model 1 proved untenable, exploratory factor analyses were conducted which identified the strong relationships among the coping variables and suggested alternate structural conceptions of coping.

The subsequent formulations of Models 2 and 3 were based on these factors, employing the LISREL program to confirm the factors and to suggest potential relationships between the constructs of personality, coping and well-being. The use of constructs, and inclusion of relationships that were generated in this way, was guided by the same body of theory that led to the formulation of the original model. Any modifications to Models 2 and 3, suggested by the analytical program, that did not fit with this theoretical base were not made. The process employed in this study mirrors the cyclical interaction between inductive and deductive reasoning that pervades empirical research.

In the current study, the two factor structures of coping identified reflect two major perspectives in this area. The structure underlying Model 2 mirrors the psychodynamically-oriented defensive polarity classifications. The concept of activity/denial is very similar to that of sensitization/repression. The structure underlying Model 3 is similar to the more cognitive-behaviouristic view of coping, which emphasizes styles of coping strategies, proposed by such authors as Billings and Moos (1981).

Models 2 and 3 are themselves hypotheses, made on the basis of an analysis of the data originally collected to test Model 1. Consequently, some measurements specific to the constructs proposed in Models 2 and 3 are lacking. In particular, this study lacked measurements of coping skill independent of those employed to identify coping styles. This resulted in the same variables loading on the skill construct and one of the style constructs in Model 2. In Model 3, 'skill' variance was carried in the residuals of the constructs. In consequence, the strong links at the measurement level were not clearly reflected by structural paths. No bidirectional effects among coping constructs or between coping constructs and life satisfaction were found to be significant in Model 2. No significant path coefficients at all among coping constructs or between coping constructs and life satisfaction were found in Model 3, since there could be no directionality attributed to the variance in the residuals. In addition, both models lack measurements (for example, an independent measurement of 'coping use'), that would allow the inclusion of additional constructs which could more completely explain the relationships among personality, coping use and perceived effectiveness, and life satisfaction.

Despite these shortcomings, useful information concerning the relationships among personality, coping choice and perceived coping effectiveness, and life satisfaction can be recovered.

Models 2 and 3 generally support the hypotheses put forth in Model 1 concerning the relationships between personality domains and coping strategy choice and perceived effectiveness and between personality domains and life satisfaction.

It was posited that there would be differential, unidirectional effects of the domains of personality on coping style use (hypothesis 1). This was partially supported in both models, though the coping constructs in each combine use with perceived problem-solving and emotionally supportive effectiveness. Neither model found significant relationships between all five of the personality domains and the coping constructs. A positive direct effect of neuroticism on the use and perceived effectiveness of passive coping strategies was identified in both Model 2 and Model 3. It seems that the more nervous, worrying women in this sample were more likely to accept the situation or to look to others to solve their problem of unemployment. Through this enhancement of the use and perceived effectiveness of passivity in coping, Model 2 found higher levels of neuroticism to marginally reduce overall coping skill. Model 2 also found a negative effect of extroversion on the use and perceived effectiveness of active/denying coping strategies. The more optimistic women in this sample seem to use, and perceive as effective, denying coping strategies; the more sober, task-oriented women to use active coping strategies and perceive them as effective in coping with unemployment. In Model 2, increased use and perceived effectiveness of active

coping strategies was found to partly depend on higher levels of conscientiousness.

The effects of the personality domains on life satisfaction were also partially supported by both models (hypothesis 2). Once more, neither model found significant effects for all five personality domains. In each model, low levels of neuroticism and high levels of agreeableness led to increased satisfaction with life. It is really no surprise that calm, secure, good-natured, and straightforward women were more satisfied with their lives than those who were nervous, insecure, irritable, and manipulative.

The hypothesis that there would be indirect effects of personality domains on life satisfaction through the perceived effectiveness of coping strategies (hypothesis 3) was partially supported in Model 2 where extroversion was seen to have an indirect effect on life satisfaction through its effect on the use and perceived effectiveness of active/denying coping strategies. The indirect effect of higher levels of extroversion in the women studied was to marginally reduce life satisfaction, through its effect on enhancing the use and perceived effectiveness of denying coping strategies. No indirect effects among the personality constructs and life satisfaction were specified by Model 3.

The hypothesis that the severity of negative life event impacts, other than those of unemployment, would have a direct effect on life satisfaction (hypothesis

4) was supported in both models. In each, an increase in total negative impacts of life events, other than unemployment, led to reduced life satisfaction.

Contrary to hypothesis 5, no effects were found between the impact of life events and the use and perceived effectiveness of coping strategies or between the impact of life events and overall coping skill.

The impact of negative events other than unemployment was included in the original model for two reasons. The first was a recognition that no single life event occurs in a vacuum; that life satisfaction, conceived as the cognitive, global, appraisal of subjective well being (Emmons & Diener, 1986) will be affected by every aspect of the individual's life. This supposition is supported by both Models 2 and 3. Secondly, the impact of other life events was included in light of Folkman and Lazarus' (1980) contention that the appraisal of available resources is a central part of the coping process. It was felt that an index of the demands on resources, beyond those of unemployment, was required to determine the resources that remained available to cope with unemployment. There was no support for the supposition that resources to cope with unemployment would be depleted by other life events. The total impact of negative life events was found to be unrelated to the use and perceived effectiveness of coping strategies in both Models 2 and 3.

Hypotheses 6 through 8 highlighted the interactive nature of the relationships among coping use, perceived problem-solving and emotionally

supportive effectiveness, and life satisfaction, put forth by Folkman and Lazarus (1988), by proposing bidirectional relationships among these concepts. No bidirectional links were found to be significant in either Model 2 or Model 3. As shown by the patterns of the residuals, no strong links existed in the data between emotional effectiveness variables or problem-solving effectiveness variables across the three styles of coping. This problem, which contributed greatly to the failure of Model 1, also may have suppressed bidirectionality of effects in Model 2 and Model 3. The strength of the associations between the residuals for the "use" variables of the three coping styles at the measurement level suggests a construct of coping use could possibly be a bidirectional link between coping constructs across coping styles.

McCrae and Costa (1986a) noted little relationship among the ranked use and perceived efficacy of the coping strategies they investigated. The classification of coping items into strategies they employed differed greatly from those used in the current study, precluding direct comparisons. It is possible, however, that their findings reflected weak links between the effectiveness concepts similar to those found in the current research project.

The interrelationships proposed by predicting bidirectional effects between the use and perceived efficacy of coping strategies (hypotheses 6 & 7) are partially supported by the factor analysis of coping items that led to the formation of Model

2 and Model 3. In each of these models, there are strong links between the use and perceived effectiveness' within each coping style.

The bidirectional links between the perceived effectiveness' of coping styles and life satisfaction (hypothesis 8) were included in the original model on the basis of Folkman and Lazarus' (1988) contention that coping and life satisfaction have a dynamic, reciprocal relationship. No support for this was found in either Model 2 or Model 3. The only significant path coefficient identified between any coping construct and life satisfaction was found in Model 2, in the enhancing effect of the use and perceived effectiveness of an active coping strategy on life satisfaction.

A more detailed re-examination of the work of McCrae and Costa (1986a) concerning the relationships among the facets of the personality domains, and the use and perceived effectiveness of coping strategies was allowed through zero-order correlations between the personality domains and facets, and the use and effectiveness scores for the three coping styles. Generally, the findings of McCrae and Costa (1986a) concerning the domains of neuroticism and extroversion were marginally upheld, though the relationships found in the current study were, for the most part, moderate at best. In addition, the possibility of type one error (false rejection of the null hypothesis) is strong in this instance. Consequently, the support for the hypotheses based on these correlations (hypotheses 10 through 12) is tentative at best.

The hypothesis that neuroticism and its facets would demonstrate a strong

positive relationship with denying coping strategies (hypothesis 10 a) was only weakly supported at the level of the domain, and moderately supported at the facet level by the link between denying and depression. The contention that neuroticism and its facets would show more moderate positive relationships with passive coping strategies (hypothesis 10 b) was supported both at the domain level and for the facets of depression and self-consciousness. The hypothesized negative relationship of neuroticism and its facets with active coping strategies (hypothesis 10 c) was not supported except for a weak link between the facet of anxiety and the perceived problem-solving effectiveness of activity.

The proposed relationship between extroversion and its facets and the use and perceived effectiveness of active coping strategies (hypothesis 11 a) was partly supported by the moderate relationships found between the facet of positive emotions and active use scores, and that between vulnerability and the perception that actions were emotionally supportive. Extroversion and its facets' hypothesized positive relationship to passivity (hypothesis 11 b) was supported in terms of both kinds of effectiveness by those with high levels of the facet of positive emotions. As well, those women demonstrating low levels of assertiveness found passive strategies to be an aid in problem-solving. The contention that the domain of extroversion and its facets would be linked to reduced use and perceived effectiveness of denying coping strategies (hypothesis 1

c) was not supported.

Very little support was found for the hypotheses concerning the relationships among the use and perceived effectiveness of the three coping styles and the domain of openness and its facets (hypotheses 12 a - 12 c). A weak relationship was found between the facet of values and the use of active strategies. In opposition to the proposed negative relationship between openness and denying coping strategies, a moderate positive relationship was found between the facet of fantasy and the perceived problem-solving effectiveness of denial.

The hypothesis that the occurrence of dependent, but not independent, life events would be related to the domains of personality and their facets (hypothesis 13) was supported through differential patterns of weak to moderate correlations. The finding that there were more, and stronger, significant relationships between personality variables and dependent life events than between personality variables and independent life events, supported the contention that behaviour, and therefore events dependent on behaviour, is related to personality. The results of this study suggest that strongly assertive, emotionally aware, and positive people experience, and report, more life events of both dependent and independent natures than do their compliant, emotionally blocked, and negative counterparts. The former constellation of personality aspects would likely result in a life-style that led to the occurrence of more life events, and to an awareness conducive to the reporting of them.

The hypothesis that life satisfaction levels would remain temporally stable over the short term (hypothesis 14) was strongly supported by high test-retest correlation. This lends support for the model of subjective well-being proposed by Diener and Larson (1984) in suggesting that well-being is more than a temporary affective state, or mood.

The high correlation between an objective assessment of the impact of life events (Holmes & Rahe, 1967) and the subjective evaluation by respondents to the current study (hypothesis 15) supports the philosophy of the current research project that respondents have the ability to identify and evaluate behaviours and their effects.

It is important in any interpretation of research findings to acknowledge the factors that limit the generalizability of the conclusions which can be drawn. Such limitations of the current research project fall into three categories: the nature of the population sampled, the specificity of the event studied, and the kind of analysis employed. This study's sample consisted solely of Caucasian women between the ages of 45 and 65 years. The latter two constraints (women and mature age) were intentional, they focussed this work on a segment of the general population which has been under-represented in the literature (Gilligan, 1982; Kandel et.al, 1985). It was not intended that participation in this study would be confined to Caucasian women. This potentially limits the generalizability of this study's findings to

Caucasian women raised in North American and Western European cultures.

The investigation of coping in light of a single life event was intended to address concerns that part of the variability in coping responses attributed to personality characteristics in such studies as that of McCrae and Costa (1986a) was actually due to differences in the situation requiring the coping response (Thoits, 1982). The life event of unemployment was chosen because it has demonstrated strong and consistent effects on well-being (Campbell, 1981) and, hence, was highly likely to elicit coping responses. There is evidence, however, that coping strategies which are effective in occupational role areas are not equally effective in other, more interpersonal role areas such as marriage or child-rearing (Pearlin & Schooler, 1978). Thus, conclusions resulting from this study of coping with unemployment may not be applicable to coping with life events in other role areas.

The analytical technique (LISREL VI) employed in the current research project to test the original model and formulate the two subsequent models of the relationships among personality, coping use and perceived coping effectiveness, and subjective well-being, further limits the generalizability of the results of this study. The directions and relative strengths of the effects identified in these analyses are specific to the models tested. Since each model reflects the simultaneous solutions of all the regression equations specified, any change, at either the structural or measurement level of the model, can greatly affect the

estimations of effects.

A number of issues are raised by the results of the current study concerning the conception and measurement of coping and personality, and the choice of outcome variables in studies of this kind. As previously mentioned, coping research is not based on a single body of theory (Folkman, 1984). The current study exemplifies the problems that arise in building comprehensive models that integrate research across different areas when the concepts in those areas are not adequately defined. For example, it suggests the need to better integrate the psychodynamic and the cognitive-behavioural perspectives of coping research. One aspect of coping left untouched in this study, but central to the cognitive-behavioural models of coping, is appraisal, both of the situation requiring a coping response, and of the resources available to the individual responding (Folkman & Lazarus, 1985).

Clear definitions are necessary, but not sufficient, conditions for building comprehensive models. Concepts must be capable of reliable measurement as well. It seems, from the results of the current study, that such concepts as denial and skill are important aspects of coping. Denial is, by its very nature, difficult to measure directly. As well, independent measures of coping use and coping skill (which are also independent of outcome measures) are required. Finally, in light of the dynamic nature of the coping process, measures of cognitions and

behaviours used to cope must be repeated over the course of the coping process (Lazarus & DeLongis, 1983).

The use of overall domain scores, rather than facet scores, in measuring the personality constructs of the models investigated in the current study may have reduced the ability of the model to identify links among personality characteristics, coping, and subjective well-being. Mershon and Gorsuch (1988) conducted a meta-analysis of previous studies that had employed Cattell's 16PF, first using the 6 higher order factors, then all 16 factors in multiple regression analyses. They found that when factors were increased from 6 to 16, 88% of the studies showed a significant increase ($p < .01$) in the magnitude of correlation coefficients, and that the percentage of variance accounted for was doubled (Mershon and Gorsuch, 1988, p.679). While some researchers have tried to reduce the number of factors defining personality (Tupes & Christal, 1961; Norman, 1963; McCrae & Costa, 1984a), the increased effort required to organize and process the increased volume of data generated by structures composed of larger numbers of factors may be worthwhile because that effort greatly increases the power available to the psychologist (Mershon and Gorsuch, 1988).

Another issue raised by the current study is that of the choice of appropriate outcome variables. While subjective well-being is one of the more common outcome variables used in the research of coping in community samples (Lawton, 1983; Schwartz & Clore, 1983; Diener, 1984), it may not be sentient enough to

measure the effects of coping responses. Costa, McCrae, and Zonderman (1987) found substantial stability, over four years, for well-being scales for a large national sample. More relevant to the current issue, stability coefficients were found to be as high for those who had experienced changes in marital or employment status, or state of residence as for those who had not (Costa, McCrae, & Zonderman, 1987). These authors feel that environmental effects on subjective well-being appear to be limited in magnitude, duration, and scope (Costa, McCrae, & Zonderman, 1987). It appears that studies like the current one require an outcome measure falling somewhere between the stability of subjective well-being and the transience of mood.

Another way to measure the effect of coping responses would be to evaluate their success or failure in terms of the situation that required that coping response. This would require longitudinal projects that traced coping responses and outcomes over fairly long periods, and definitions of success pertinent to each situation requiring a coping response. Complete success in coping with unemployment, for example, would be relatively straightforward, consisting of becoming employed, but also of feeling satisfied with the job found and staying in it for a reasonable length of time. Partial success could be defined as identifying specific areas in which to search for employment, filling out applications, or being granted interviews with prospective employers. Defining successful outcomes in

other situations, such as bereavement, would be more problematic.

The issue of appropriate outcome measures discussed here highlights the difficulty in choosing outcome variables that are sensitive enough to react to coping responses yet general enough to allow the comparison of outcomes across situations. It seems no single construct can satisfy both these requirements, suggesting that multiple outcome measures are preferable.

Despite the aforementioned limitations, a number of conclusions can be drawn from the current study. Links between personality domains and the use and perceived effectiveness of coping strategies were identified in two causal models such that personality characteristics affected the use and perceived effectiveness of coping strategies. For the women sampled, personality does seem to direct the use and perceived effectiveness of coping strategies, lending support to the contention of McCrae and Costa (1986a) that personality characteristics determine, at least in part, choices of coping responses. Similarly, there were identified links between personality domains and life satisfaction such that personality characteristics affected perceptions of well-being. This is in line with the suggestion of McCrae and Costa (1986a) that personality characteristics directly affect subjective well-being. Both Models 2 and 3 support the idea that coping strategies can be conceived as a combination of use and perceived effectiveness. As well, both models suggest the existence of a concept of "coping use" which crosses stylistic boundaries. This does not hold for perceived problem-solving effectiveness or

emotional effectiveness of coping responses, which do not demonstrate links across styles. These findings support those of Fleishman (1984) that personality variables display a specificity of influence on coping behaviours that does not coincide with the problem-solving/emotionally focussed dichotomy.

A hypothetical structural model of relationships among personality, coping, and subjective well being, incorporating the results of the current study with the points raised in the preceding discussion, is presented in Figure 6. The individual personality constructs are combined in the construct labeled "Personality". This reflects space constraints in composing the figure and in no way indicates that personality is considered a unitary construct. In Figure 6, solid lines represent relationships based on the findings previous research and those of the current study; dashed lines represent purely hypothetical relationships, guided by theory and intuitive logic. The valence of some of the path coefficients are designated "neg" to indicate a strong probability that these constructs would have inverse relationships.

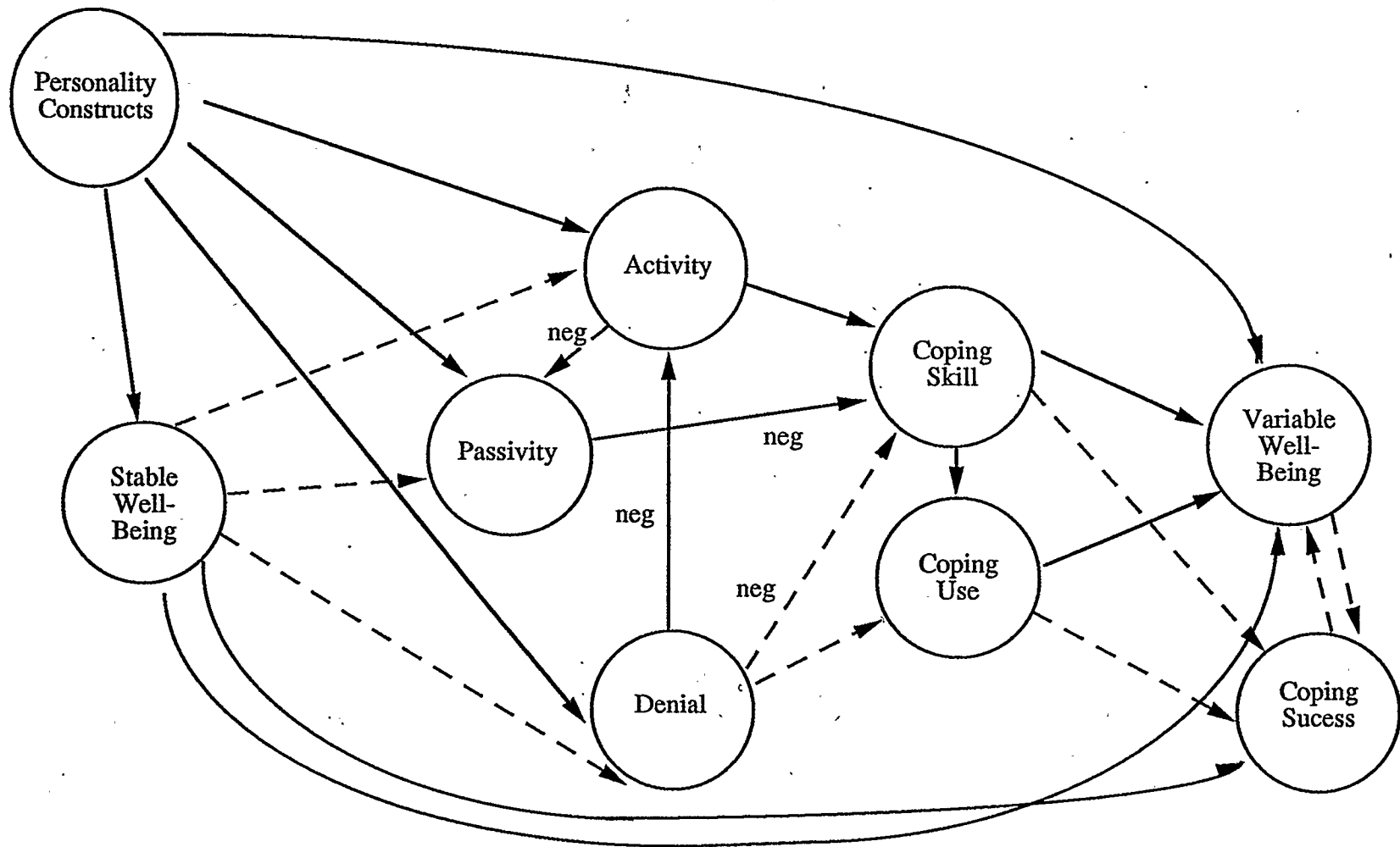


Figure 7
Hypothetical Model

REFERENCES

- Abella, J. R. S. (1984). Equality in employment: A royal commission report. Supply and Services Canada.
- Allen, M. J., & Yen, W. M. (1979). Introduction to measurement theory. Monterey, California: Brooks/Cole.
- Allport, G. W. (1961). Pattern and Growth in Personality. New York: Holt, Rinehart, & Winston.
- Andrews, F. M., & Withey, S. B. (1974). Developing measures of perceived life quality: Results from several national studies. Social Indicators Research, 1, 1-26.
- Bracketman, C., & Magnusson, D. (1981). Longitudinal stability of personality characteristics. Journal of Personality, 49, 148-160.
- Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioural Medicine, 4(2), 139-157.
- Brown, G. W., & Harris, T. (1976). Social Origins of Depression. London: Travisock Publications.
- Burks, N., & Martin, B. (1985). Everyday problems and life change events: Ongoing versus acute sources of stress. Journal of Human Stress, 11(1), 27-35.
- Buss, A. H., & Finn, S. E. (1987). Classification of personality traits. Journal of Personality and Social Psychology, 52(2), 432-444.
- Campbell, A. (1981). The sense of well-being in America: Recent patterns and trends. New York: McGraw-Hill.
- Clarke, L. A., & Watson, D. (1988). Mood and the mundane: Relations between daily life events and self reported mood. Journal of Personality and Social Psychology, 54(2), 296-308.

- Costa, P. T. J., & McCrae, R. R. (1976). Age differences in personality structure: A cluster analytic approach. Journal of Gerontology, 31, 564-570.
- Costa, P. T. J., & McCrae, R. R. (1978). Objective personality assessment. In I. S. M. Storandt & M. Elias (Ed.), The clinical psychology of aging (pp. 119-143). New York: Plenum.
- Costa, P. T. J., & McCrae, R. R. (1980). Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people. Journal of Personality and Social Psychology, 38, 668-678.
- Costa, P. T. J., & McCrae, R. R. (1984a). Concurrent validation after 20 years: The implication of personality stability for its assessment. In N. W. Shock (Ed.), Normal human aging: The Baltimore Longitudinal Study of Aging (pp. 105-128). Washington, D.C.: N.I.H. Publication No. 84-2450.
- Costa, P. T. J., & McCrae, R. R. (1984b). Personality as a life-long determinant of well-being. In C. M. & C. Izard (Ed.), Emotion in adult development (pp. 141-157). Beverly Hills: Sage Publications.
- Costa, P. T. J., & McCrae, R. R. (1985a). Hypochondriasis, neuroticism, and aging: When are somatic complaints unfounded? American Psychologist, 40(1), 19-28.
- Costa, P. T. J., & McCrae, R. R. (1985b) The NEO personality inventory manual. Odessa Florida: Psychological Assessment Resources Inc.
- Costa, P. T. J., & McCrae, R. R. (1985c). The NEO personality inventory. Odessa, Florida: Psychological Assessment Resources Inc.
- Costa, P. T. J., McCrae, R. R., & Arenberg, D. (1980). Enduring dispositions in adult males. Journal of Personality and Social Psychology, 38, 793-800.
- Costa, P. T. J., McCrae, R. R., & Arenberg, D. (1983). Recent longitudinal research in personality and aging. In K. W. Schaie (Ed.), Longitudinal studies of adult psychological development (pp. 222-265). New York: Guilford Press.
- Costa, P. T. J., McCrae, R. R., & Holland, J. L. (1984). Personality and vocational

- interests in an adult sample. Journal of Applied Psychology, 69, 390-400.
- Costa, P. T. J., McCrae, R. R., & Norris, A. H. (1981). Personal adjustment to aging: Longitudinal predictions from neuroticism and extroversion. Journal of Gerontology, 36, 78-85.
- Costa, P. T.J., Zonderman, A. B., McCrae, R. R., Barbano, H. E., Libowitz, B., & Larson, D. M. (1986). Cross-sectional studies of personality in a national sample: 2. Stability of neuroticism, extroversion, and openness to experience. Psychology and Aging, 1(2), 144-149.
- Costa, P. T. J., McCrae, R. R., & Zonderman, A. B. (1987). Environmental and dispositional influences on well-being: Longitudinal follow-up of an American national sample. British Journal of Psychology, 78(3), 299-306.
- Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95(3), 542-575.
- Diener, E., Emmons, R., Larson, R., & Griffen, S. (1985). The satisfaction with life scale. Journal of Personality Assessment, 49(1), 71-75.
- Diener, E., Larson, R. J., Levine, S., & Emmons, R. A. (1985). Intensity and frequency: Dimensions underlying positive and negative affect. Journal of Personality & Social Psychology, 48, 447-455.
- Dohrenwend, B. S., & Dohrenwend, B. P. (1978). Some issues on stressful life events. The Journal of Nervous & Mental Disease, 166(1), 7-15.
- Emmons, R. A., & Diener, E. (1985). Personality correlates of subjective well-being. Personality & Social Psychology Bulletin, 11(1), 89-97.
- Emmons, R. A., & Diener, E. (1986). An interactional approach to the study of personality and emotion. Journal of Personality, 54, 371-384.
- Finn, S. E. (1986). Structural stability of the MMPI in adult males. Journal of Consulting and Clinical Psychology, 54, 703-737.
- Fleishman, J. A. (1984). Personality characteristics and coping patterns. Journal of Health and Social Behaviour, 25, 229-244.

- Folkman, S. & Lazarus, R. S. (1980). An analysis of coping in a middle-age community sample. Journal of Health & Social Behaviour, 22, 219-239.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. Journal of Personality & Social Psychology, 46, 839-852.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping in three stages of college examination. Journal of Personality and Social Psychology, 48, 150-170.
- Folkman, S., & Lazarus, R. S. (1988a). Coping as a mediator of emotion. Journal of Personality and Social Psychology, 54(3), 466-475.
- Folkman, S., & Lazarus, R. S. (1988b). The relationship between coping and emotion: Implications for theory and research. Social Science and Medicine, 26(3), 309-317.
- George, L. K., Okun, M. A., & Landerman, R. (1985). Age as a moderator of the determinants of life satisfaction. Research on Aging, 7(2), 209-223.
- Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, Massachusetts: Harvard University Press.
- Goldberg, L. R. (1982). From ace to zombie: Some explorations in the language of personality. In C. D. Spielberger, & I. N. Butcher (Ed.), Advances in Personality Assessment (pp. 203-234). Hillsdale, New Jersey: Erlbaum.
- Haan, N. (1977). Coping and defending. New York: Academic Press.
- Hayduk, L. A. (1987). Structural equation modelling with LISREL. Baltimore, Maryland: John's Hopkins University Press.
- Hergenrather, E. R. (1985). The older worker: A golden asset. Personnel, 62(8), 56-60.
- Holahan, C. J., & Moos, R. H. (1986). Personal and contextual determinants of coping strategies. Journal of Personality and Social Psychology, 52(5), 946-953.

- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment scale. Journal of Psychometric Research, 11, 213-218.
- Johnson, J. H., & Sarason, I. S. (1979). Moderator variables in life stress research. In I. G. Sarason, & C. D. Spielberger (Ed.), Stress and anxiety (pp. 151-167). Washington, D.C.: Hemisphere.
- Joreskog, K. G., & Sorbom, D. (1984). LISREL VI: Analysis of linear structural relationships by maximum likelihood, instrumental variables and least squares methods. Mooresville, Indiana: Scientific Software Inc.,
- Kaloupek, D. B., White, H., & Wong, M. (1984). Multiple assessment of coping strategies used by volunteer blood donors: Implications for preparatory training. Journal of Behavioural Medicine, 7(1), 35-60.
- Kandel, D. B., Davies, M., & Raveis, V. H. (1985). The stressfulness of daily social roles for women: Marital, occupational, and household roles. Journal of Health and Social Behaviour, 26(1), 64-78.
- Kellam, S. G. (1974). Stressful life events and illness. In B. S. Dohrenwend, & B. P. Dohrenwend (Ed.), Stressful life events: Their nature and effects (pp. 207-214). New York: John Wiley & Sons.
- Larson, R. J., Diener, E., & Emmons, R. A. (1986). Affect intensity and reactions to daily life events. Journal of Personality and Social Psychology, 51(4), 803-814.
- Lawton, M. P. (1983). The varieties of well-being. Experimental Aging Research, 9(2), 65-72.
- Lazarus, R.S. & DeLongis, A. (1983). Psychological stress and coping in aging. American Psychologist, 38(2), 245-254.
- Lazarus, R. S. & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer Publishing Co.
- Lazarus, R. S., Averill, J. R., & Opton, E. M. J. (1984). The psychology of coping: Issues in research and assessment. In R. S. Lazarus, & S. Folkman (Ed.), Stress, appraisal, and coping (pp. 249-316). New York: Springer Publication Co.

- Leon, G. R., Gillum, B., Gillum, R., & Gouze, M. (1979). Personality stability and change over a 30 year period: The problem of confounded measures. Journal of Consulting and Clinical Psychology, 47(3), 517-524.
- Lipps, H. M., & Colwill, N. L. (1988). Psychology addresses women and work: Canadian research in the 1980's. Canadian Psychology, 29(1), 57-68.
- Loehlin, J. C. (1987). Latent variable models. Hillsdale: New Jersey: Lawrence Earlbaum Associates.
- McCrae, R. R. (1984). Situational determinants of coping responses: Loss, threat, and challenge. Journal of Personality and Social Psychology, 46(4), 919-928.
- McCrae, R. R., & Costa, P. T. J. (1982). Aging, the life course, and models of development. In T. Field (Ed.), Review of Human Development (pp. 602-613). New York: Wiley and Sons.
- McCrae, R. R., & Costa, P. T. J. (1983a). Joint factors in self-reports and ratings: Neuroticism, extroversion, and openness to experience. Personality and Individual Differences, 4(3), 245-255.
- McCrae, R. R., & Costa, P. T. J. (1983b). Psychological maturity and subjective well-being: Toward a new synthesis. Developmental Psychology, 9, 243-248.
- McCrae, R. R., & Costa, P. T. J. (1985). Updating Norman's "Adequate Taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. Journal of Personality and Social Psychology, 49, 701-721.
- McCrae, R. R., & Costa, P. T. J. (1986a). Personality, coping, and coping effectiveness in an adult sample. Journal of Personality, 54, 385-405.
- McCrae, R. R., & Costa, P. T. J. (1986b). Personality, stress, and coping processes in aging men and women. In R. Andres, E. L. Bierman, & W. R. Hazard (Ed.), Principles in geriatric medicine (pp. 141-149). New York: McGraw-Hill.
- McCrae, R. R., & Costa, P. T. J. (1987). Validation of the five-factor model of personality across instruments and observers. Journal of Personality and Social Psychology, 52, 81-90.

- McCrae, R. R., Costa, P. T. J., & Arenberg, D. (1980). Constancy of adult personality structure in males: Longitudinal, cross-sectional, and times-of-measurement analysis. Journal of Gerontology, 35, 877-883.
- McCrae, R. R., Costa, P. T. J., & Busch, C. M. (1986). Evaluating comprehensiveness in personality systems: The California Q-Set and the five-factor model. Journal of Personality, 54, 430-446.
- McLanahan, S. S., & Sorensen, A. B. (1984). Life events and psychological well-being: A re-examination of theoretical and methodological issues. Social Science Research, 13(2), 111-128.
- McLennan, J., Gotts, G. H., & Omodei, M. M. (1988). Personality and relationship dispositions as determinants of subjective well-being. Human Relations, 41(8), 593-602.
- Menaghan, E. G. (1983). Individual coping efforts and family studies: Conceptual and methodological issues. In H. I. McCubbin, M. B. Sussman, & J. M. Patterson (Ed.), Social stress and the family (pp. 113-135). New York: Haworth Press.
- Mershon, B. & Goresuch, R.L. (1988). Number of factors in personality sphere: Does increase in factors increase predictability of real-life criteria? Journal of Personality and Social Psychology, 55(4), 675-680.
- Miller, P., Dean, C., Ingham, J. G., & Kreithman, N. D. (1986). The epidemiology of life events and long-term difficulties, with some reflections on the concept of independence. British Journal of Psychiatry, 148, 686-696.
- Monroe, S. M. (1983). Major and minor life events as predictors of psychological distress: Further research and findings. Journal of Behavioural Medicine, 6(2), 189-205.
- Neugarten, B. L. (1977). Personality and aging. In J. E. Birren, & K. W. Schaie (Ed.), Handbook of the Psychology of Aging New York: Van Nordstrand Rienhold.
- Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. Journal of

Abnormal and Social Psychology, 66, 574-583.

Norris, F. H., & Murrell, S. A. (1984). Protective function of resources related to life events, global stress, and depression in older adults. Journal of Health and Social Behaviour, 25(4), 424-437.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behaviour, 19, 2-21.

Pervin, L. A. (1985). Personality: Current controversies, issues, and directions. Annual Review of Psychology, 36, 83-114.

Rabkin, J. S., & Struening, E. L. (1976). Life events, stress, and illness. Science, 194, 1013-1020.

Rahe, R. H. (1979). Life events and mental illness: An overview. Journal of Human Stress, 5, 2-10.

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. American Psychologist, 41(7), 813-819.

Rowlison, R. T., & Felner, R. D. (1988). Major life events, hassles, and adaptation in adolescence: Confounding the conceptualization and measurement of life stress and adjustment revisited. Journal of Personality and Social Psychology, 55(3), 432-444.

Ryff, C. D., & Dunn, D. D. (1985). A lifespan developmental approach to the study of stressful life events. Journal of Applied Developmental Psychology, 6, 113-127.

Sarason, I. G., Johnson, J. H., & Seigel, J. M. (1978). Assessing the impact of life changes: Development of the life experiences survey. Journal of Consulting and Clinical Psychology, 46, 932-946.

Schroder, D. H., & Costa, P. T. J. (1984). Influence of life event stress on physical illness: Substantive effects or methodological flaws? Journal of Personality and Social Psychology, 46, 853-863.

Schwartz, N., & Clore, G. L. (1983). Mood, misattribution, and judgements of well-

being: Informative and directive functions of affective states. Journal of Personality and Social Psychology, 45, 513-523.

Sedney, M. A. (1984). Rumination and adaptation following stressful life events. Imagination, Cognition, and Psychology, 4(2), 171-183.

Siegler, I. C., George, L. K., & Okun, M. A. (1979). Cross-sequential analysis of adult personality. Developmental Psychology, 15(3), 350-351.

Starrin, B., & Larsson, G. (1987). Coping with unemployment: A contribution to the understanding of women's unemployment. Social Science and Medicine, 25(2), 163-171.

Tennen, H., & Herzberger, S. (1985). Ways of coping scale. In F. Keysner, & P. Sweetland (Eds.), Tests critiques, 3, 686-697.

Thoits, P. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behaviour, 23, 145-159.

Tupes, E. C., & Christal, R. E. (1961). Recurrent personality factors based on trait ratings (61-97). U.S. Airforce.

Underwood, B. J. (1949). Experimental psychology: An introduction. New York: Appleton-Century Crofts Inc.

Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. Journal of Health and Social Behaviour, 27(1), 78-89.

Zika, S., & Chamberlain, K. (1987). Relation of hassles and personality to subjective well-being. Journal of Personality and Social Psychology, 53(1), 155-162.

Appendix B

Ways of Coping Scale Items Categorized as Active, Passive, and Denying

Items considered to reflect an active coping style:

Just concentrated on what I had to do next, the next step.
Tried to get the person responsible to change his/her mind
I expressed anger to the person(s) who caused the problem
I apologized or did something to make up.
I made a plan of action and followed it.
Talked to someone about how I was feeling
Stood my ground and fought for what I wanted
I changed something about myself.

Items considered to reflect a passive coping style:

I felt that time would make a difference - the only thing to do was wait.
Hoped a miracle would happen.
Went along with fate, sometimes I just have bad luck.
Accepted sympathy and understanding from someone.
I accepted the next best thing to what I wanted.
I reminded myself how much worse things could be.
Tried not to burn my bridges, but leave things open.
I waited to see what would happen before doing anything.

Items considered to reflect a denying coping style:

Turned to work or substitute activity to take my mind off things.
Went on as if nothing had happened.
Slept more than usual.
Tried to forget the whole thing.
Got away from it for a while; tried to rest or took a vacation.
Didn't let it get to me; refused to think about it too much.
Kept others from knowing how bad things were.
Refused to believe that it had happened.

Appendix C

Life Experiences Survey Items Deemed Independent of the Individual

Death of spouse

Became a grandparent

Was a victim of crime

Death of close family member:

- a. mother
- b. father
- c. brother
- d. sister
- e. grandmother
- f. grandfather
- g. other (specify)

Death of a close friend

Serious illness of close family member:

- a. father
- b. mother
- c. sister
- d. brother
- e. grandfather
- f. grandmother
- g. other (specify)

Serious illness or injury of close friend

Son or daughter leaving home (due to marriage, college, etc)