

THE RELATIONSHIP OF AGE AND SUBJECTIVE WELL-BEING:
A TEST OF KOZMA'S THEORETICAL MODEL

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Thesis

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ABSTRACT

The purpose of this study was to examine the relationship between age and subjective well-being while testing hypotheses based on Kozma's model. In multivariate comparisons on predictor variables, age alone was not a significant predictor of well-being. Individuals, however, report that health status, marital status, and subjective satisfactions significantly influenced their overall well-being. Similarly, other predictor variables (activity, living alone, personality, and how often one attends religious services) did influence one's subjective well-being; however only slightly. Suggestions for future research are given.

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	viii
LIST OF FIGURES.....	ix
CHAPTER	
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	3
Historical and Theoretical Context of Research on Subjective Well-being.....	3
Importance of Subjective Well-being on Life Satisfaction.....	4
Definition of Happiness.....	5
Studies Predicting Subjective Well-being.....	6
Age as a Predictor of Subjective Well-being.....	6
Subjective Satisfaction.....	8
Subjective Health.....	9
Housing Satisfaction.....	9
Financial Satisfaction.....	10
Marital Satisfaction.....	10
Job Satisfaction.....	10

Demographic Variables Related to Subjective Well-being.....	11
Health.....	11
Housing.....	11
Income.....	12
Marital Status.....	12
Employment.....	13
Gender.....	13
Race.....	13
Education.....	14
Involvement in Social Activities.....	14
Friends, Family, or Others.....	14
Number of Friends and Frequency of Contact.....	15
Intimacy.....	15
Exercise Participation.....	15
Stressful Life Events.....	16
Death of Spouse/Being Widowed.....	16
Daily Hassles.....	17
The Environment.....	17
Degree of Urbanism.....	17
Institutionalization & Age Concentration.....	18
Cross Cultural Studies.....	18
Personality.....	19
Summary.....	20

III. METHODOLOGY.....	23
Sampling.....	23
Operationalization of Main Variables.....	24
Statistical Analysis.....	29
IV. RESULTS.....	32
Basic Statistics.....	32
Intercorrelation Analysis.....	36
Regression Analysis.....	42
V. DISCUSSION.....	49
Implications for Future Research.....	52
Subjective Well-being and Policy Decisions.....	54
Conclusion.....	55
REFERENCES.....	57
APPENDICES.....	62
APPENDIX 1. STUDIES RELATING SUBJECTIVE WELL-BEING TO HEALTH.....	63
APPENDIX 2. STUDIES RELATING SUBJECTIVE WELL-BEING TO JOB SATISFACTION.....	64
APPENDIX 3. STUDIES RELATING SUBJECTIVE WELL-BEING TO RACE.....	65
APPENDIX 4. STUDIES RELATING SUBJECTIVE WELL-BEING TO SOCIAL ACTIVITY.....	66
APPENDIX 5. STUDIES RELATING SUBJECTIVE WELL-BEING TO ACTIVITY LEVEL.....	67

LIST OF TABLES

Table		Page
1	Means, Standard Deviations, and Subsample Sizes for all Variables.....	33
2	Intercorrelations of Subjective Well-being with the Predictors.....	37
3	Factor Scores for Satisfaction Variables, Normlessness Variables, and Activity Variables - Component Matrix* and Basic Statistics.....	39
4	Regression Analysis: Predicting Subjective Well-being.....	43

LIST OF FIGURES

Figure		Page
1	Schematic Representation of Correlates and Constructs to Subjective Well-being.....	21
2	Trimmed Model of Correlates and Constructs to Subjective Well-being.....	41
3	Modified Theoretical Model of Factors Predicting Subjective Well-being.....	47

CHAPTER I

INTRODUCTION

While the definition of happiness is unique to each individual, researchers have examined the question of what makes people happy since the 1960s. Researchers have concluded that the answer is idiosyncratic to some extent. While one individual may place a high importance on income, religion, work, education, family relations, and/or marriage to be happy, another may hold that his or her environment, age, and health are the major influences.

Aside from what makes people happy and at what level, researchers have also been interested in what Kozma, Stones, and McNeil (1991) refer to as a person's psychological, or subjective, well-being. A state of being rather than an emotion, psychological well-being falls into a "broad area of study that examines quality of life issues" (Kozma et al., 1991, 1). For purposes of this study psychological well-being will be referred to as subjective well-being (SWB), which is commonly used interchangeably with the term life satisfaction in current empirical research studies (e.g. Diener & Lucas, 1999; Hart, 1999; Pavot & Diener, 1993).

Research on SWB in the past has resulted in mixed conclusions on what individuals report as predictors to their life satisfaction. Therefore, a major effort by Kozma et al. (1991) created a theoretical model to explain the different predictors used to determine SWB. The bottom-up approach used by the Kozma model "assumes that

the only way to bring about a change in well-being is to modify predictor characteristics" (Kozma et al., 1991, p. 69). The model, based on an extensive review of the literature, groups predictor variables into six categories: subjective satisfactions, demographic characteristics, social and physical activity, stressful life events, environmental factors, and personality factors. It is the model's implied theoretical assertion that, by taking all six categories into consideration in a multivariate statistical design, more of the true nature of subjective well-being can be discovered. Implicitly stated in the model, and of particular interest here, is the relationship of age to subjective well-being. Specifically, only "removing" the effects of variables in Kozma's six categories can reveal the true relationship of age to SWB.

Thus, the purpose of this thesis was to test hypotheses derived from Kozma's model. Data from the General Social Surveys was used to empirically examine the model in the main. These statistical tests will involve examining the relationship of age, demographics, activity involvement with family and friends, the environment, and personality with SWB.

CHAPTER II

REVIEW OF THE LITERATURE

Historical and Theoretical Context of Research on Subjective Well-being

Historically, Cumming and Henry (1961) suggest that, by their nature, older adults are programmed to achieve a high sense of well-being. The only psychological mechanism at work here, however, was thought to be the process of disengagement. The disengagement theory suggests that it is both normal and practically unavoidable that people will decrease their level of activity and become more passive as they age (Decker, 1980). Not to disengage would result in a decrease in one's sense of well-being. This notion was consistent with society's general tendency to reject the process of aging and aging individuals themselves (Tornstam, 1999-2000). Specifically, Cumming and Henry (1961) define disengagement as "an inevitable process in which many of the relationships between a person and other members of society are severed, and those remaining are altered in quality" (p. 211).

Indeed, as one approaches older adulthood, there is a sense of increasing distance between the individual and others, and a change in the relationship between the individual and his or her societal relationships (Cumming & Henry, 1961).

Disengagement theorists assert that this does not mean all older individuals will cut themselves off from society and only find comfort at home, but that perhaps they are approaching a "laissez-faire attitude that supports and approves of reduced activity on

the part of the older persons, and they argue that older persons usually decrease their level of activity as they adapt to the normal changes that are part of the aging process" (Decker, 1980, p. 138).

In contrast, probably the most widely accepted social theory of aging is activity theory (Decker, 1980), which remains extremely influential within the field of social gerontology (McKee, Harrison, & Lee, 1999). Activity theory states that it is through social activity that one finds true meaning in life for all ages (Decker, 1980; McKee et al., 1999). Further, for the aging individual Decker (1980) believes that activities become an important contribution to the health and social well-being of the aging person. Simply put, this theory implies that active older adults are more satisfied with life (Ferraro, 1997) and that they will be more likely to remain happy longer (Clark, Long, & Schiffman, 1999). Further, activity theorists believe that social activity is so important to life satisfaction that it can determine whether we age "successfully" or "unsuccessfully" (Decker, 1980).

Importance of Subjective Well-being on Life Satisfaction

Life satisfaction has been a topic of interest among Americans for the last four decades (Kozma et al., 1991), due perhaps to the enormous number of Americans moving through midlife to the point that old age is becoming increasingly imminent (Maddox, 1992). Focusing on the older population, Maddox (1992) believes that "old age is the final arena in which we compete for the prizes that reassure us we have aged successfully . . ." (p. 53). Americans today, typically expect a long life, full of both functional and economic independence, and overall happiness. Maddox (1992) refers to the issues surrounding SWB and older individuals as the concepts of "Aging Well." In

order to "age well" practitioners and older adult advocates must first understand the predictors of SWB and the influence it places on all individuals. To understand the predictors, we need to understand happiness.

Definition of Happiness

The simplest composite definition of happiness might be the greater influence of positive over negative affect (Argyle, Martin, & Crossland, 1989; Bradburn, 1969) influenced by daily mood fluctuation (Clark et al., 1999), and historically a state of mind associated with success (Kozma et al., 1991). Shin and Johnson (1978) however believe that happiness "is known to be a peculiarly difficult subject to frame and analyze" (p. 475). Furthermore, researchers believe that happiness is desired among Americans, however they do not know exactly what it is or how it is achieved (Shin & Johnson, 1978). Finally, definitions of happiness are used synonymously with psychological well-being (Kozma et al., 1991) or for this study, subjective well-being (SWB).

An individual's evaluation of his or her life is the definition Diener and Lucas (1999) have assigned to the term SWB. Subjective well-being includes both affective and cognitive components (Hart, 1999; Pavot & Diener, 1993). The "affective" component of SWB centers around the broad definition given above for happiness; positive over negative affect (Hart, 1999) - pleasant versus unpleasant affect (Pavot & Diener, 1993). The "cognitive" component is identified by an individual's overall life satisfaction (Pavot & Diener, 1993). Shin and Johnson (1978) add that happiness is "a global assessment of a person's quality of life according to his own chosen criteria" (p. 478). Pavot and Diener (1993) assert this as well, and include a measure of personal

control - that it is "a conscious cognitive judgment of one's life in which the criteria for judgment are up to the person" that shapes SWB (p. 164).

Studies Predicting Subjective Well-being

Early studies having some form of Subjective Well-being as the dependent variable (e.g., Bradburn, 1969; Bradburn & Caplovitz, 1965; Cantril, 1966; Shin & Johnson, 1978, Larson, 1978) concluded that as individuals aged, their level of happiness and overall life satisfaction decreased. More recent research suggests that people over sixty report much higher levels of satisfaction with their lives than younger and middle aged people (Headey, 1999). The methodological difference between these two conflicting research traditions lies in the examination of several variables that mediate the relationship between aging and SWB. The following review will summarize and critique existing literature on SWB.

Age as a Predictor of Subjective Well-being

Does life satisfaction increase or decrease with age? Early research reports that sociodemographic variables such as age, gender, income, and marital status account for the differences in levels of happiness (Mroczek & Kolarz, 1998). Specifically, because many individuals are living longer lives and are becoming increasingly aware of their well-being, age has become a major contributor to the level of SWB. Despite the increases in the likelihood of chronic illnesses, health declines, loss of spouses and social supports, research suggests that older persons do not report being unhappier than their younger peers (Mroczek & Kolarz, 1998). Using data collected from the 1940s through 1976, Witt, Lowe, Peek, & Curry (1980) controlled for enough mediating factors to see the relationship between age and happiness actually change from a

negative to a positive one. Additionally, researchers are reporting that well-being may even increase with age (Lawton, 1989, 1996) and that the level of loneliness can decrease with age (Tornstam, 1990).

Ignoring the methodological advances made in later studies, some continue to report aging to be a largely negative experience that there is a decrease in positive affect among the old-old age group (75yrs +) as compared to the young-old (55-74 yrs) (Ferring & Filipp, 1995), and that there is a decline in happiness as people age (Smith & Baltes, 1993). For those over age seventy, early research findings found that people are less happy than their younger counterparts, is probably true for most people (Bradburn & Caplovitz, 1965). The entire point of contradictory research can be summed up in an argument for change in social policy. If society truly cares about its aging population, taking steps to insure higher quality of life in the areas found to affect happiness and SWB, will allow for healthy and productive individuals to continue to contribute to society well into their later years. Maddox (1994) suggests that:

The perception of subjective well-being among adults as excellent or poor tends to remain fairly stable in the later years even though the components of well-being may change. That is, two basic components of well-being-affect (happiness) and satisfaction (realized expectations)-may reflect a changing balance with age so that age-related declines in positive affect may be countered by increases in the sense of satisfaction with life accomplishments to achieve the observed continuity of perceived well-being in later life. (p. 129).

Larson's (1978) finding that an increase in chronological age was significantly related to SWB lends support to this idea. His research found that many factors were associated with the decline in SWB in older adults, including loss of friends,

widowhood, deteriorating health, decreased activity level, and a decline in financial resources.

Subjective Satisfaction

Self-reports of subjective satisfactions are more commonly used to measure well-being as opposed to objective measures (Kozma et al., 1991). Research, therefore, measures subjective satisfaction by using individual self-reports (Headey, 1999), which are easier to collect and foster stronger predictors as opposed to objective measures (Kozma et al., 1991). Further, demographic factors such as income, education, marital status, and self-reported emotional concepts such as optimism and self-esteem are some of the predictors that influence SWB (Oishi, Diener, Lucas, & Suh, 1999). Five subjective satisfactions have been identified as important here: subjective health, housing satisfaction, financial satisfaction, marital satisfaction, and job satisfaction. The studies focus on perceived satisfaction derived from working (a subjective measure), as opposed to the type of job (an objective measure), housing satisfaction rather than the type of home, and the individual's health satisfaction rather than their medical professional's diagnosis (Kozma et al., 1991). Additionally, various predictors in demographics, activity level, life events, the environment, and personality will also be addressed.

Subjective Health

A decline in health satisfaction as one gets older is culturally expected and seen as unavoidable. However, recent studies have reported a positive relationship between SWB and health (see Appendix 1). Using the Victorian Quality of Life Panel Survey, Headey (1999) interviewed 502 individuals every two years from 1981 to 1989.

Results indicate that older individuals (60+) reported high levels of health satisfaction with their physical activity and the amount of exercise they receive. On the other hand, when focusing on individuals over 80 years of age, there is a clear decline in their level of health satisfaction. Finally, Clark et al., (1999) report that frequent participation, as opposed to infrequent and nonparticipation, in physical activity results in reports of greater life satisfaction.

Housing Satisfaction

Focusing on retired individuals, Headey (1999) suggested that older people are more satisfied with their housing situation. This is because they have more than likely paid off their mortgage, have more room now that the children have grown and left the home, and have established close friendships within the neighborhoods that they have lived in for so many years. Individuals, however, who are institutionalized display lower levels of housing satisfaction as compared to rural, urban, and mixed participants (Kozma et al., 1991).

Financial Satisfaction

Most people expect that as they age their level of financial satisfaction decreases due to lower incomes (retirement), living on a fixed income, and because of increased expenditures for medical expenses (Kozma et al., 1991). This assumption may not always be the case. For example, George (1992) illustrated that research from the 1960s, 1970s, and the 1980s reported most older adults state high levels of financial satisfaction. He asserts there has been no evidence that suggests as older individuals approach retirement their financial satisfaction declines. Who might these very satisfied

older adults be? Were they affluent in the first place? Stones and Kozma (1986) found that prior and current levels of happiness are predictors of levels of financial satisfaction, and that happy individuals are satisfied with their financial situation, just as they are with other predictors.

Marital Satisfaction

Whether an individual is married, single, or widowed, the level of importance that the person places on their marital status indicates their overall marital satisfaction. Kozma et al., (1991) found that although marital satisfaction accounts for a significant portion of a person's life satisfaction, individuals do not place as much importance on marital satisfaction as they do on financial, health, and housing satisfaction.

Job Satisfaction

Research on job satisfaction and its effects on life satisfaction have been examined using different types of relationships (Bernal, Snyder, & McDaniel, 1998), and different models (Steiner & Truxillo, 1987 - see Appendix 2)). Although using different measures, researchers report job satisfaction to be a significant indicator of life satisfaction among both elderly as well as younger age groups (Kozma et al., 1991). Additionally, Steiner and Truxillo (1987) believe that if an individual derives meaning from work, and is satisfied with the independence and challenge of the job, then that person will be more satisfied with life.

Demographic Variables Related to Subjective Well-being

Health

Self-reports of health are more significant determinants of life satisfaction than doctor reports (McCamish-Svensson, Samuelsson, Hagberg, Svensson, & Dehlin,

1999). In other words, the researchers found that "how one feels about one's health influences life satisfaction more strongly than any of the social support measures or doctor-rated health" (McCamish-Svensson et al., 1999, p. 320). On the other hand, poor health in general, influences our "entire being including our life satisfaction" (McCamish-Svensson et al., 1999, p. 320).

Housing

Housing satisfaction is again more significant than the actual type and condition of housing in which an elderly person lives. For example, Larson (1978) found that objective housing (e.g. building characteristics such as size, height, and number of rooms) accounted for a small variance in well-being scores. However, Kozma et al., (1991) found that improved housing conditions did increase the well-being among the elderly, while possibly eliminating the number of daily hassles associated with dilapidated housing. Research has reported mixed results on the impact involuntary moves of elderly individuals have on their well-being (Kozma et al., 1991). For example, when elderly individuals relocated without improvements from their previous housing experience, there was no significant change in their SWB (Borup, 1982). That same year, Damon's (1982) research revealed that involuntary moves decreased SWB whereas voluntary moves had not.

Income

Early research found that income plays an important role in an individual's sense of well-being. For example, Bradburn and Caplovitz (1965) report that as income levels increase, an individual's level of happiness also increases. Kozma et al. (1991) and George (1992) found however, that financial satisfaction is better at predicting

well-being than amount of income because it is not the amount of income but the level of satisfaction with it that influences well-being. Finally, elderly individuals who possess sufficient financial resources have higher levels of life satisfaction (Diener, 1984).

Marital Status

Bradburn & Caplovitz (1965) suggests that individuals who are not married report being less happy than their married peers. However, gender differences are more likely to surface when looking at marital satisfaction. Specifically, single males are twice as likely to be unhappy than single females. Further, the same is true for divorced or separated men, and widowers. However, Kozma et al. (1991) found that when income and social interaction was controlled, there were no differences in well-being between married and previously married individuals.

Employment

When examining employment status among men as compared to women, research has found that there is a difference in levels of happiness. For example, Bradburn and Caplovitz (1965) found that men who were not working were more likely to report that they were not too happy. Further, women found their employment status entirely different. Women who define themselves as being in the work force reported being unhappy when they were looking for work or retired. There are little differences in SWB between women who are currently employed and women who are full-time homemakers (Bradburn & Caplovitz, 1965).

Gender

Research indicates that there is little support for gender differences on well-being (Kozma et al., 1991). Further, Bradburn and Caplovitz (1965) found that there was little to no difference in the percentage of men as compared to women who display positive or negative feelings of happiness. Therefore, gender differences are a poor predictor of well-being (Kozma et al., 1991).

Race

Historically, research suggests that there is an important interaction between race and SWB, with African Americans reporting lower levels of life satisfaction as opposed to Whites (Krause, 1993 - see Appendix 3). This finding is probably a result of methodological error. Once race and life satisfaction are examined using education, socioeconomic status, and occupation as control variables, the racial differences all but disappear (Diener, 1984). To illustrate this, Krause (1993) found that, largely due to their level of education, dependence on others for retirement funds, and financial difficulties, elderly Blacks tend to report lower levels of life satisfaction than Whites. Among members of racial minorities who are more financially independent, life satisfaction is on par with Whites.

Education

Focusing on discrete levels of education, Bradburn and Caplovitz (1965) found that individuals who make more money reported being happier; however having more money is not always related to education. Income and age influence individuals' perceptions of happiness. For example, younger persons report lower levels of unhappiness as opposed to individuals over the age of forty, which might be attributed to the likelihood that younger individuals look toward the future for the chance to

increase their earning power. Kozma et al. (1991) however, suggests "it is not education itself that is important to an elderly person's well-being but the lifestyle that such education can provide (e.g., higher income, better housing, etc.)" (p. 82). Finally, studies have suggested that education may be a better predictor of life satisfaction among males (Kozma et al., 1991).

Involvement in Social Activities

Friends, Family, or Others

Aside from the influences of happiness mentioned above, Bradburn and Caplovitz (1965) report that the most significant factor associated with high positive feelings is a high proportion of time spent in social interaction and engaged interaction with close friends and family members. Moreover, research suggests that activities that are physical and social in nature have the most positive effect on a person's life satisfaction (Peppers, 1976). Specifically, among rural Black elderly social activity is a critical factor that influences levels of life satisfaction (Wilson-Ford, 1993), although a racial difference is not theorized nor expected.

Number of Friends and Frequency of Contact

Research reports that men who were in contact with friends and family displayed a higher level of positive feelings (Bradburn & Caplovitz, 1965) and feelings of belonging (Steinkamp & Kelly, 1987) as compared to those who were not in contact. For women however, frequency of contact was surpassed by the need of being appreciated by family and friends (Steinkamp & Kelly, 1987).

Intimacy

The level of intimacy during social activity is an important predictor of well-being for the elderly (see Appendix 4). Furthermore, research reports that the quality of social activity surpasses the quantity of social activity in its effect on well-being (Kozma et al., 1991). Peppers (1976) however, found that increase in the number of activities engaged in by retirees is a strong predictor of high life satisfaction.

Exercise Participation

There has been limited research and mixed results (see Appendix 5) focusing on physical activity and life satisfaction of older individuals (Clark et al., 1999). For example, Peppers (1976) found that older males who were more physically active than their sedentary peers reported a higher level of life satisfaction. Blumenthal and colleagues (1989) however, reported that there were no objective changes in life satisfaction of either males or females who participated in an exercise and yoga class, while being compared to a control group.

However, these findings are limited to voluntary participation. When individuals are forced into activities (e.g., fixing the car, mowing the lawn, etc.) the relation between exercise and well-being appear to be unrelated (Reich, Zautra, & Hill, 1987). Furthermore, research reports that retirees who engage in their favorite type of activity had significantly higher scores on life satisfaction (Peppers, 1976). Kozma et al. (1991) believe that if an individual desires or wants to engage in physical activity, then his or her sense of well-being will improve.

Stressful Life Events

Death of Spouse/Being Widowed

When discussing SWB, the death of a spouse not only will fall under stressful life events, but also under marital satisfaction. It has been reported that levels of well-being are lower for widowed persons than for married persons (Kozma et al., 1991). Additionally, Kozma et al. (1991) reported that the lower levels of widowed persons might largely contribute to their decrease in social interactions, poor health, and their older age. Therefore, the effect of widowhood, becoming widowed, and living alone on SWB maybe explained by many possible contributing factors.

Daily Hassles

While “timely” and somewhat trendy, daily hassles as a researchable concept have been discussed quite often in the literature. Daily hassles are simply normally stressful components of daily living life (e.g., financial problems, work related stress, family disagreements, light bulbs go out when you need them most, there’s never quite enough money at the end of the month, etc.). Because of the hardships associated with aging, one would expect older individuals to resent daily hassles more, and report lower levels of SWB in the process. Although all adults experience stressful components of daily life, older adults may at once, experience fewer hassles in these areas than their younger counterparts, and find hassles more maddening (Kozma et al., 1991). Therefore, in terms of well-being and life satisfaction, an argument can be made that the pros and cons of aging cancel out any effect (Mroczek & Kolarz, 1998).

The Environment

Degree of Urbanism

The impact of rural versus urban living on SWB among aging individuals has been of interest to sociologists, gerontologists, and others. Although research between urbanism and life satisfaction has not been conclusive, some studies have reported greater life satisfaction is by rural elderly (Liang & Warfel, 1983). Hendricks and Turner (1988) however, found that rural life has many disadvantages. For example, the researchers found that the rural elderly have lower incomes, low levels of education, poor housing conditions, poor transportation opportunities, and less access to health care (Hendricks & Turner, 1988). However, Kozma et al., (1991) believe that the increase in crime in the urban area may offset the disadvantages of living in a rural area. Finally, because of the multiple positives and negatives of living in rural and urban areas, it is not surprising that Larson (1978) found little significance between community and well-being.

Institutionalization & Age Concentration

In addition to examining the degree of urbanism, researchers have focused on whether or not elderly are institutionalized and if so, whether or not people surround them their own age. First, Kozma and Stones (1983) report that compared to rural elderly, individuals who are institutionalized have lower levels of life satisfaction. Additionally, when the researchers compared predictors of life satisfaction (i.e., housing satisfaction, marital status, and financial satisfaction), the institutionalized elderly score were significantly lower. Second, Kozma et al. (1991) also report age concentration is not a significant predictor of well-being.

Cross Cultural Studies

Based on Maslow's (1970) need-gratification theory, Oishi et al., (1999) found that safety needs were strongly associated with life satisfaction in poorer nations, and love and self-esteem needs were placed as high predictors in wealthier nations. The researchers found that satisfaction with life does differ across nations while solely depending on salient needs and values. Secondly, Cantril's (1966) cross-cultural research asked individuals to express their feelings of satisfaction based on personal, material, and social goals. The research reports that older individuals across all societies worldwide expressed a higher degree of satisfaction than any other age group and an overall optimistic view of their future.

Personality

Aside from the numerous predictors mentioned above, research has also focused attention on the relationship between personality and well-being. Research today shows that personality, in the psychological sense, remains constant and stable throughout a person's life (Deiner & Lucas, 1999; Labouvie-Vief & Diehl, 1999). One could therefore conclude from this research that the relationship between a person's personality and their SWB will also remain constant throughout their life. Headey (1999) however, suggests that the environment influences personality. For example, older generations today may have grown up in a less prosperous period; while working long hours and having little to no time for leisure activities (Headey, 1999).

Personality traits can be an excellent measure of stability and possible change through adulthood (Labouvie-Vief & Diehl, 1999). Extraversion is positively associated with well-being, while neuroticism is negatively associated (Chan & Joseph, 2000). Furthermore, Headey (1999) believes that older individuals are perhaps less

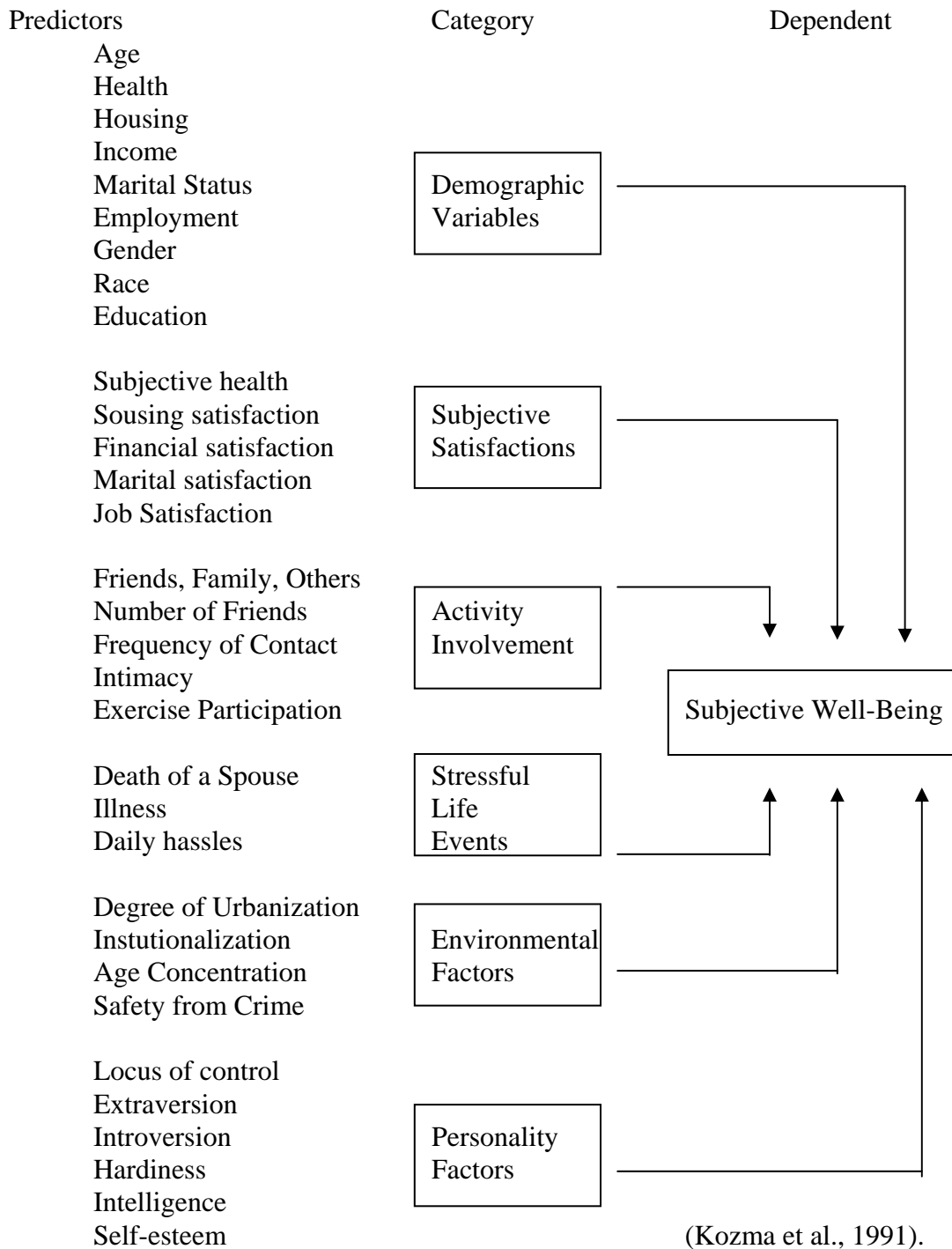
extraverted than younger people. Researchers found "differential association between aspirations and well-being," community feelings being associated with happiness, self-acceptance being associated with self-actualization, and financial success being associated with self-esteem (Chan & Joseph, 2000, p. 353).

Research has reported that when reports of self-esteem have been positive among individuals, their well-being is also positive (Deiner & Lucas, 1999). Additionally, research does in fact illustrate that positive self-esteem is correlated with measures of SWB (Lucas, Diener, & Suh, 1996). Researchers however have struggled with the idea that self-esteem may not in fact cause happiness, but that happiness and a sense of positive life satisfaction actually influences a person's self-esteem (Deiner & Lucas, 1999). Therefore, researchers have found that questions regarding personality and the SWB relationship remain (Deiner & Lucas, 1999).

Summary

The empirical literature on SWB stated above encompasses various conflicting results. One study may reflect that age has a positive influence on a person's SWB (Lawton, 1989, 1996; Maddox, 1994), while another may report that an increase in age only leads to a decrease in SWB (Smith & Baltes, 1993). Most researchers would probably be in agreement on one point - research is clearly needed to explain the relationships between age, the numerous predictors mentioned above and SWB. Kozma et al. (1991) have developed a theoretical representation of correlates and constructs, based on a thorough review of the literature and the bottom-up approach to psychological well-being, which would adequately serve as a beginning point for theory testing (see figure 1).

Figure 1.
 Schematic Representation of Correlates and Constructs to Subjective Well-being



With the dependent variable SWB, predictors displayed in the figure are grouped into six theoretical categories: demographic variables, subjective satisfactions, activity involvement, stressful life events, the environment, and personality factors. Variables in all six of the mentioned categories have been shown in past research to assert influence the SWB of individuals, either in theory or actual research findings. Thus, the present study takes variables from each of the six categories into account in its analysis of SWB, with the demographic variable age given special importance.

CHAPTER III

METHODOLOGY

This chapter focuses on the methodological and procedural techniques applied in the study. The discussion will include a description of the General Social Surveys, sampling techniques, operationalization of variables and measurement, statistical treatment and hypotheses testing.

Sampling

The data used here come from the General Social Surveys, which consist of non-institutionalized, English-speaking persons, 18 years and older who reside within the continental United States. The GSS, underwritten by the Roper Public Opinion Corporation, has been conducted every even year since 1972 with the latest survey taken in 1998. The early surveys, which usually contained responses from over 1500 people for each year, were a multi-stage area probability sample to the block level. Quota sampling at the block level was used in early surveys, with quotas based on age, sex, and employment status. In the surveys since the late 1980s, pure probability sampling replaced the quota method. The General Social Surveys are viable data sets, because of the rather large numbers of respondents (n=37,000+ total), because the GSS reaches both rural and urban citizens, minorities, and people of all adult age groups, and because of the exceptionally wide variety of questions contained in interview schedules.

Operationalization of Main Variables

Hypothesis 1: There is a negative relationship between age and SWB.

The measurement of age in this survey was accomplished by asking the participants their date of birth. The survey recorded the participants' answers by date of birth, as well as by the first digit of the participant's chronological age. Recoded birth years result in age in years at the time of interview.

Hypothesis 2: There are predictable relationships between demographic variables and SWB. Further the age/SWB relationship will change with the inclusion of demographic variables.

Individual's health was measured using responses focusing on the status of their health. Responses were on a five-point scale from “not very healthy” to “very healthy” with missing responses coded accordingly.

The type of housing was measured by having the participants pick from a list of responses. The responses are as follows: trailer (01), detached single family house (02), 2-family house, 2 units, side-by-side (03), 2-family house, 2 units one above the other (04), detached 3-4 family house (05), row house (3 or more units in an attached row) (06), apartment house (5 or more units, 3 stores or less) (07), apartment house (5 or more units, 4 stories or more) (08), apartment in partly commercial structure (09), other (10), and no answer (99). These responses were recoded to single family dwellings or multi-family dwellings.

Income was measured in this study by asking the participants to indicate from "these groups, did your total family income, from all sources, fall last year before taxes?" The responses ranged from under \$1,000, \$1,000 to \$2,999, \$3,000 to \$3,999,

\$4,000 to \$4,999, and so on until it reached \$10,000. Once the response reached \$10,000, the responses jumped every \$5,000, until the final choice of \$25,000 and over.

Marital status was collapsed from a standard question (i.e., single, married, divorced, separated, widowed, never married) to a dichotomous variable with categories 1=married and 2=not married. Employment meant the respondent was either 1=working full or part time or 2=not working.

Race was measured in this study by asking the participants (if there was no doubt in the interviewers mind) "what race do you consider yourself?" Three choices were given, White, Black, and other. These responses were recoded into a dummy variable with categories of White or non-White. Additionally, the measurement of the participant's gender was recorded. Male was coded as one and female was coded as two.

Level of education was measured by asking the participants to indicate highest degree earned or years completed in school. The responses included less than high school (0), high school (1), associate/junior college (2), bachelors (3), graduate (4), don't know (8), and no answer (9).

Hypothesis 3: There are predictable relationships between subjective satisfaction variables and SWB. Further the age/SWB relationship will change with the inclusion of subjective satisfaction variables.

Subjective well-being is measured by asking the question: "for each area of life I am going to name, tell me the number that shows how much satisfaction you get from that area; (A.) the city or place you live in; (B.) your non-working activities--hobbies and so on; (C.) your family life; (D.) your friendship; and (E.) your health and physical

condition." The responses ranged along a Likert type scale from "a very great deal" (scored one) to "none" (scored seven). Again, the participants may have also answered, "don't know" or given no answer.

The measurement of marital satisfaction was determined by asking the participants: "taking things all together, how would you describe your marriage? Would you say that your marriage is very happy, pretty happy, or not too happy?" The responses stated above were assigned a one for the highest response; while numerically decreasing

The measurement of financial satisfaction was determined by asking the participants two different questions. The first question focuses on the participants' financial situation: "we are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?" The highest response on the scale again was coded using the number one (e.g., pretty well satisfied). The second question draws from the individuals responses to a work satisfaction question: "on the whole, how satisfied are you with the work you do--would you say you are very satisfied, moderately satisfied, a little dissatisfied, or very dissatisfied? Response categories mentioned above were again assigned a one for the highest response.

To avoid cluttering the analysis with spurious and extraneous coefficients, all of the subjective satisfaction variables were entered into a principle components factor analysis, which resulted in a single ratio measure of subjective satisfaction with a mean of zero and a standard deviation of one.

Hypothesis 4: There are predictable relationships between activity involvement with family and friends and SWB. Further, the age/SWB relationship will change as a result of the addition of activity involvement variables.

Activity level with family was measured using a number of questions. First the questions began with "is your mother still alive" and followed with "how often do you see or visit with your mother," "about how long would it take you to get to where your mother lives," and then "how often do you have any other contact with your mother besides visiting, either by telephone or letter?" The series of questions continued on to ask the same questions pertaining to the participants father, sister(s) and brother(s) (if the participants have siblings), in addition to children.

The measurement of activity with friends was measured by asking a series of questions following: "thinking now of close friends - not your husband or wife or partner or family members - but people you feel fairly close to . . . (A.) how many close friends would you say you have?" Participants could answer 0 to 96 or more. The question continued on to ask, (B.) "how often do you see or visit with your friend (the friend you feel closest to)?" and (C.) "how often do you have any other contact with this friend besides visiting, either by telephone or letter?" Responses ranged from live in same household (question B.) from daily, to several times a year or less often. The response with the most frequent level of contact was marked one.

Hypothesis 5: There are predictable relationships between the environment and SWB. Further, the age/SWB relationship will change as a result of the addition of activity environment variables.

The measurement of environmental satisfaction was safety from crime measured by asking a yes/no question: "is there any area right around here--that is, within a mile--where you would be afraid to walk alone at night?" Yes was coded using one, and no was assigned a two. Size of place was used to place population size on a continuous scale from rural to urban settings. Finally, a proxy – whether or not the respondent lived alone or not – was used to gauge intimacy/aloneness.

Hypothesis 6: There are predictable relationships between personality factors and SWB. Further, the age/SWB relationship will change as a result of the addition of activity personality variables.

Perhaps the weakest portion of this test of Kozma's model is here in hypothesis six. The only variable in the datasets that approaches psychological state of being was the set of anomie measures – the degree of agreement to statements of normlessness (i.e., people can't be trusted). Five such statements were coded and placed into principle component factor analysis to produce a single measure of normlessness.

Statistical Analysis

Ideally, to test each hypothesis, some form of multivariate analysis is needed, since the major methodological weakness of much of the literature lies in the absence of such rigorous statistical treatment. Multiple regression analysis will ultimately be needed here; however, some prior statistical steps are necessary.

In multiple regression analysis, variables in the theoretical model hypothesized to influence or predict the dependent variable must first have a significant zero order correlational relationship to the dependent variable. If they are not related in this way, they cannot produce statistical prediction in regression equations. Thus, zero order

correlations must be run between all variables in the model. This step solves two potential problems. First, the correlations between the independent variables and the dependent variable are scanned for statistically significant relationships. Those independent variables that do not emerge as significant will be dropped from the analysis since they are essentially without empirical value. This first analysis may have consequences for some or all of the hypotheses.

The second solution to a potential problem solved by correlational analysis is that of multicollinearity. Multicollinearity is the condition in which independent variables are highly correlated with each other. Such a condition introduces error into any further regression equation, since the researcher is unable to unconfound that portion of variance prediction that may be occupied by the intercorrelated independent variables. For example, if two of the demographic variables are highly correlated with both the dependent variable and each other, the first independent (demographic) measure introduced into regression analysis will account for some of the variance in the dependent variable that might be the actual result of the other demographic factor. Multicollinearity is specifically a problem for independent measures that were intended to be used as items in a larger scaled measure. This accounts for the use of an aggregation technique such as factor analysis that combines variables intended to measure different aspects of a theoretical concept into a single, powerful measure. In anticipation of this situation, measures of subjective satisfaction, activity involvement, and normlessness have already been combined using this method and are explained in the next chapter.

After reporting basic statistics and frequencies for the variables in each of the hypotheses, correlations will be presented to accomplish the aforementioned goals of selecting variable candidates for regression analysis and guarding against multicollinearity. At this point a “trimmed” model is presented which will serve as a methodological guide to specific hypothesis testing, and regression analysis can begin.

Each hypothesis will be represented in regression as a single equation, the first being the prediction of SWB using a single independent variable – age. This step establishes the relationship of age to SWB. The test for the second hypothesis will be identical to the previous regression equation with the addition of all the demographic variables at once. This step not only shows the combined and individual factor influences on SWB; comparisons can also be made to the previous regression, illustrating any hidden relationships revealed by the added variables. The strategy here is to add new independent factors, according to the model being tested, for each successive hypothesis until the model is completely tested.

In summary, the General Social Surveys will be used to test a total of six hypotheses derived from Kozma's model. Using a multivariate analysis, multiple regression analysis, correlational analysis and regression analysis, will be used to test the model.

CHAPTER IV

RESULTS

Results reported in this chapter reflect the systematic analysis of Kozma's model of influential factors predicting subjective well-being (see Figure 1, p. 21). Each of Kozma's factor categories consists of specific variables found in the General Social Surveys and substituted here for his original predictors.

Basic Statistics

The means, standard deviations, and sample sizes for the independent and dependent variables are displayed in Table 1. Focusing on demographic variables, the average age of the participants is 45.08 years, and a majority are female (N=21,417) while the number of males is 16,699. The sample consists of 83.5% White respondents. Participants have an average of 4.18 siblings, and have 2.00 children. Over half (57.2%) of the participants are married and are working full-time (48.9%). Regarding socioeconomic status variables, participants indicate they are in-between the working class and the middle class (mean of 2.53 on a 4-point scale). Also, their average income falls between \$10,000 and \$20,000 a year. Participants reported that they were happy (mean 3.01) with their health status. Finally, the average number of educational years is 12.42.

Table 1.

Means, Standard Deviations, and Subsample Sizes for All Variables.

Variable	M	SD	NSize
Demographic Variables			
#sibs	4.18	4.53	38037
#children	2.00	1.84	37982
healthsub	3.01	0.86	29449
subclass	2.53	0.65	36325
income	9.67	3.02	34795
marstat	0.57	0.50	38109
workstat	3.14	2.51	38113
sex	1.56	0.50	38116
age	45.08	17.55	37982
educ	12.42	3.19	37998
Subjective Satisfactions			
shealth	5.42	1.49	24121
scity	5.08	1.51	24133
shobby	5.29	1.57	24034
sfrnd	5.76	1.24	24128
sfam	5.90	1.37	24070
finsat	2.04	0.74	37946
marhap	2.61	0.54	20502
sjob	3.29	0.82	29959
Activity Involvement			
actrel	4.51	1.62	23249
actcomm	3.57	2.03	23222
actfrnd	4.03	1.62	23233
actbar	2.41	1.78	23199
actpars	4.01	1.88	9520
actsib	3.69	1.74	12193
howrelig	3.11	0.91	33699
attend	3.94	2.68	37724

Table 1 (continued).
Means, Standard Deviations, and Subsample Sizes for All Variables.

Variable	M	SD	NSize
Stressful Life Events			
evdiv	0.82	0.39	25546
brkn16	0.73	0.44	38095
The Environment			
livealone	0.78	0.42	32623
sizeplace	396.92	1301.52	38116
fear	xxx	xxx	xxx
Personality (normlessness)			
altlife	2.40	0.59	24613
altpeopl	2.06	0.97	26116
altfair	1.78	0.95	26041
altrust	1.84	0.97	25832
wordnum	5.98	2.18	18925
Dependent Variable			
mwbeing	2.20	0.65	37834

Looking at the Subjective Satisfaction, respondents reported that they are moderately satisfied (mean 5.42 on a 7-point scale) with their health and that they are moderately happy with living in the city (mean 5.08). Furthermore, reports on individual hobby satisfaction indicated moderate satisfaction (mean 5.29), while on satisfaction with friends and with family, individuals reported that they are satisfied with their relationships (mean 5.75 and mean 5.90, respectively). The data on financial satisfaction indicated that participants are satisfied with their financial situation (mean 2.03 on a 3-point scale). Reports on marital happiness indicated that participants are

very happy with their marriage (mean score of 2.61). Finally, participants reported that their level of satisfaction with their job was high (mean 3.28).

Two variables under stressful life events were measured. Over half (54.7%) of the participants reported that they had gone through a divorce. A majority (73.3%) of the individuals reported that they were living with their parents at age sixteen.

Focusing on the participants' living environment, over three quarters (77.6 %) of the sample surveyed did not live alone. Finally, the community size in which participants lived averaged around 3,960 people.

There are numerous variables measuring level of Activity Involvement. First, the participants reported that their activity level with family and relatives was moderately high (mean 4.51). Secondly, participants indicated low levels of involvement within the community (mean 3.56). Again, activities with friends were reported moderately high (mean 4.03), while their level of activity visiting bars is significantly low (mean 2.41). Level of activity with parents indicated a moderately high level of activity (mean 4.01), however, level of activity with siblings is slightly less (mean 3.69). Focusing on how religious participants believe themselves to be, they reported a mean of 3.1, indicating that they are very religious. Finally, a mean of 3.94 for religious attendance indicated that participants attend religious services once a month.

Personality is measured using normlessness variables. First, participants reported that they possess a positive outlook on life (mean 2.40 on a 3 point scale). Secondly, reports indicate that they have faith in other people (mean 2.05).

Participants, however feel that life is not fair (mean 1.78) and that they cannot trust other people (mean score of 1.83).

For the dependent variable of subjective well-being, the proxy variable known as the global happiness item is used. In the surveys, the mean score was 2.20 on a three-point scale, indicating a moderate level of well-being (Witt et al., 1980).

Statistically healthy numbers of respondents exist for each of the variable categories, allowing each variable's further usefulness in analysis.

Intercorrelation Analysis

For variables to qualify as predictors of subjective well-being, each must pass a correlation test. That is, there should be a statistically significant zero order correlation between each independent variable and the dependent variable subjective well-being before allowing the independent variable to remain in the analysis. The reasons for this requirement have to do with statistical integrity as it pertains to regression analysis.

First, all issues of multicollinearity must be settled. This means independent variables that are highly intercorrelated without a theoretical basis for the relationship need to be combined. Second, regression requires that a significant zero order correlation be significant before it will be entered into multivariate analysis. The intercorrelations are listed in Table 2.

Table 2.
Intercorrelations of Subjective Well-being with the Predictors

SCITY	SHOBBY	SFAM	SFRIEND	SHEALTH	SJOB
.274**	.260**	.333 **	.285**	.279**	.286
FINSAT	MARHAP	SIBS	CHILDS	HEALTH	SUBCLASS
.292**	.464**	-.037**	.011*	.252**	-.169*
MARSTAT	WRKSTAT	INCOME	SEX	AGE	RACE
.221**	-.022**	.153**	.007	.037**	.121**
EDUC	ACTREL	ACTCOMM	ACTFRND	ACTPARS	ACTSIBS
.087**	.056**	.033**	.036**	.013	.013
HOWREL	ATTEND	LIVALONE	SIZE	ALTLIFE	ALTPEOPLE
.089**	.135**	-.123**	-.067**	.346*	.145**
ALTFAIR	ALTRUST	WORDSUM	BRKN16		
-.155**	.134**	.066**	.076**		

Note. Ns for these values vary because of missing data.
All Ns were >23,000 except italicized variables, N<21,000.
**.Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations with the dependent variable indicate a low expectation of
predictability from the following variables:

- number of siblings
- number of children
- work status
- sex
- education
- how religious
- size of their community
- vocabulary test
- broken home at age sixteen

Thus, this list of variables is removed from the regression analysis. The remaining

variables should perform better in regression analysis:

- satisfaction variables
- health status
- social class
- marital status
- age
- income
- race
- how often one attends religious services
- if one lives alone
- activity
- normlessness

Although age indicates a low level of predictability (.037**), it is a statistically significant one. Further, the main focus of the study is to examine how age influences individual's subjective well-being as additional independent factors are added to the accounting. Therefore, age remains a main variable to be tested.

Regarding issues of multicollinearity, the activity variables (i.e., activity with relatives, with community, with friends, with parents, and with siblings) were combined into a single independent variable called activity (mean of 0, standard deviation of 1). Similarly, the subjective satisfaction variables (satisfaction with city, hobby, family, friend, health, job, finances, and marriage) were similarly combined into subjective satisfaction in addition to the four normlessness variables. This was accomplished using principle component factor analysis (see Table 3).

Table 3.

Factor Scores for Satisfaction Variables, Normlessness Variables, and Activity Variables - Component Matrix* and Basic Statistics

Variable	Component 1 Correlations	Component 2 Correlations
SCITY	.577	.000
SHOBBY	.652	-.236
SFAM	.671	-.220
SFRIEND	.717	-.243
SHEALTH	.575	-.211
SJOB	.352	.649
FINSAT	.365	.658
MARHAP	.369	.245
<i>Satisfaction Variable</i>	<i>Mean = 0</i> <i>Nsize=38116</i>	<i>Std. Dev. = 1</i>
		no second factor resulted
<i>Normlessness Variable</i>	<i>Mean = 0</i> <i>Nsize =38116</i>	<i>Std. Dev. = 1</i>
<i>Activity Variable</i>	<i>Mean = 0</i> <i>Nsize =38116</i>	<i>Std. Dev. = 1</i>

*Extraction Method: Principal Component Analysis:
 2 components extracted for Satisfaction Variable
 1 Component extracted for Normlessness Variable
 2 Components extracted for Activity Variable

Results from the multicollinearity analysis display three new factors: Subjective Satisfaction Variable, Normlessness Variable (a personality factor), and Activity

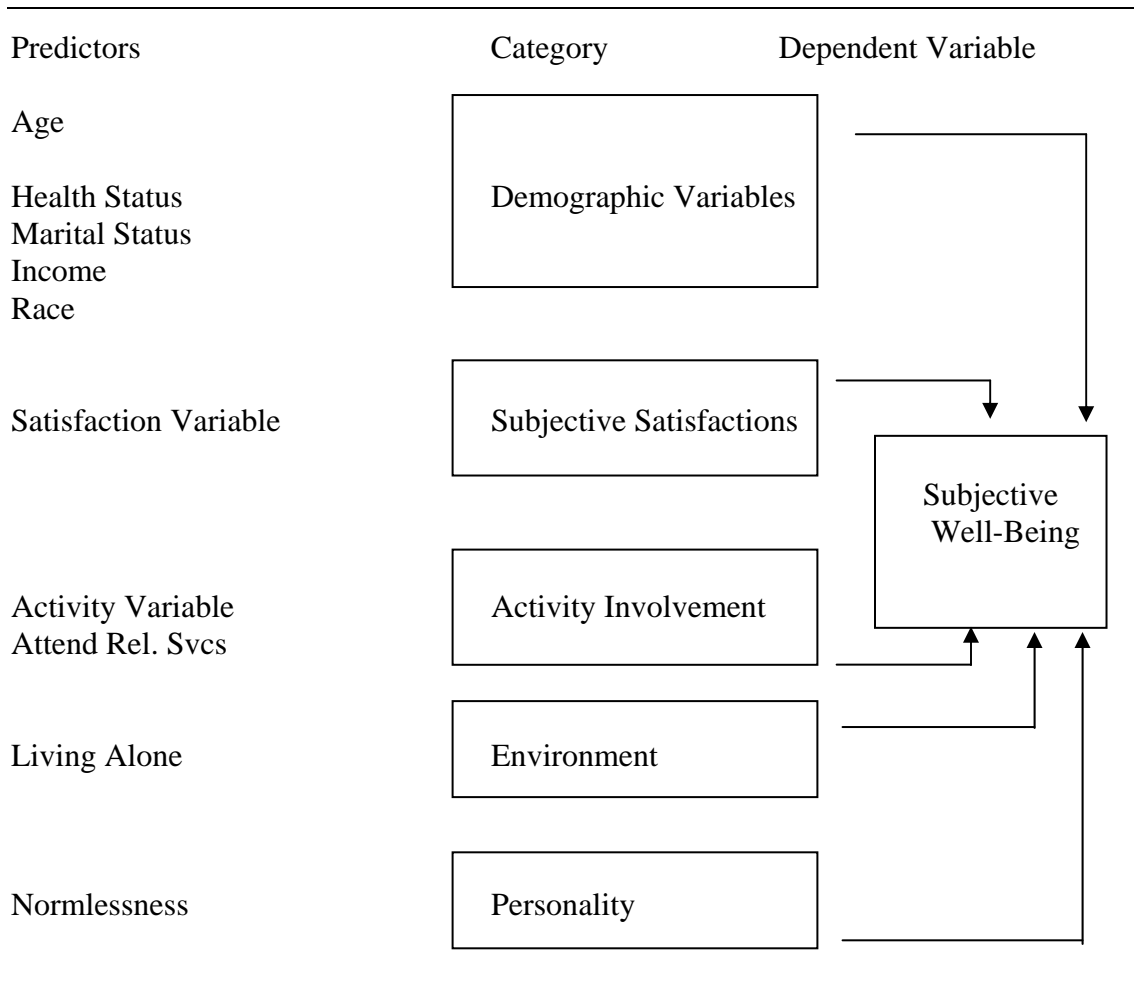
Variable. Subjective Satisfaction variable combines the following eight variables: subjective health, city, hobby, friend, family, finances, marriage, and job. The four variables that are used to make up the normlessness variable are how one feels about life in general, how one feels about people, if they think life is fair, and if they trust others. Furthermore, the activity variable consists of level of activity with relatives, with community, with friends, with parents, and with siblings. Using metric measures, the three variables have been assigned standard scores of mean 0 and standard deviation of 1.

The following variables will be used in regression analysis having survived this initial statistical test:

- satisfaction variable
- normlessness
- activity variable
- health status
- marital status
- income
- age
- race
- how often one attends religious services
- and live alone.

With hypothesis 4 (stressful life events) having no correlational purchase, it has to be rejected. Figure 2 represents the model of factors that survived initial correlational analysis.

Figure 2.
Trimmed Model of Correlates and Constructs to Subjective Well-being



Regression Analysis

Coefficients and other results from regression analysis are found in Table 4.

All six hypotheses will be restated here, followed by a discussion of the findings from regressions. Table 4 presents unstandardized (B) and standardized (Beta) regression coefficients. In the regression equation itself, standardized regression coefficients can be taken to mean magnitude and direction for that particular sample. Thus, beta weights are comparable across samples, provided the samples are exactly the same, and the reader should focus attention on them. The R^2 entries for each regression signify the amount of variance explained by the entire equation, and are roughly the same as a metric or percentage measure. Thus, with an R^2 of 0.184, roughly 18.4% of the variance in the dependent variable is explained with the equation. Beta weights are best used for estimates of independent variables' relative magnitude or predictive power, while R^2 coefficients are best thought of as overall predictive ability of the equation.

Hypothesis 1: There is a negative relationship between age and SWB.

The relationship age has to subjective well-being is significant, but low (Beta = .037***). Taken alone, age appears to be slightly positive in its predictive power for subjective well-being. Additionally, age doesn't explain much of the total variation in SWB ($R^2 = .001$). Hypothesis one is rejected as stated: however, the conflicting findings regarding age and SWB in the literature necessitate that age remains in subsequent analyses.

Table 4.
Regression Analysis: Predicting Subjective Well-being

Variable	Hypothesis 1 Age Only		Hypothesis 2 Age & Demo.		Hypothesis 3 +Subj. Sat.		
	B	Beta***	B	Beta*	B	Beta*	
Age	.0001	.037	.0003	.091	.0003	.090	
Class	-----	-----	-.0099	-.102	-.0094	-.097	
Race	-----	-----	.0085	.050	.0068	.040	
Marstat	-----	-----	.2340	.183	.2100	.164	
Health	-----	-----	.1790	.241	.1420	.191	
Income		-----		.0004	.020	.0002	.009
Subjective Satisf.	-----	-----	-----	-----	.1370	.215	
Activity	-----	-----	-----	-----	-----	-----	
Attendance Rel. Svcs	-----	-----	-----	-----	-----	-----	
Live Alone	-----	-----	-----	-----	-----	-----	
Normlessness	-----	-----	-----	-----	-----	-----	
R ²		.001		.131		.173	
Variable	Hypothesis 4 +Activ/Attendance		Hypothesis 5 +Environment		Hypothesis 6 +Personality		
	B	Beta*	B	Beta*	B	Beta*	
Age	.0003	.081	.0003	.086	.00028	.078	
Class	-.0091	-.093	-.0091	-.094	-.0085	-.086	
Race	.0085	.050	.0086	.051	.0068	.040	
Marstat	.2020	.157	.1890	.148	.1870	.146	
Health	.1390	.187	.1400	.188	.1340	.181	
Income		.0002	.011	.0002	.010	.00013	.006
Subjective Satisf.	.1310	.207	.1310	.206	.1240	.196	
Activity	.0014	.023	.0014	.022	.0014	.023	
Attendance Rel. Svcs	.0018	.074	.0018	.074	.0017	.070	
Live Alone	-----	-----	-.0025	-.016	-.0028	-.018	
Normlessness	-----	-----	-----	-----	.0047	.073	
R ²		.179		.179		.184	

Hypothesis 2: There are predictable relationships between demographic variables and SWB. Further the age/SWB relationship will change with the inclusion of demographic variables.

When demographics were added to the regression analysis, the age/well-being relationship tripled in size to a quite respectable and significant Beta value of .091. By accounting for several traditionally important demographic variables, regression analysis reveals more of the true statistical relationship between the two variables of interest - age and SWB. Specifically, health has a significant influence on SWB (Beta = .241***). Better health means higher SWB. Likewise, marital status is also an important variable when added to the predictive model (Beta = .183***). Being married throughout life adds to one's life satisfaction. Both income (Beta = .020**) and race (Beta = .050***), while significant, have little real importance in predicting SWB when other demographics are taken into account. Thus, a person's annual income and race have little affect on SWB. Finally, self reported social class was moderately important as a predictor with a Beta weight of -.102***. The overall predictive power of the equation with demographics included ($R^2 = .131***$) is greatly improved.

Hypothesis 3: There are predictable relationships between subjective satisfaction variables and SWB. Further the age/SWB relationship will change with the inclusion of subjective satisfaction variables.

Adding the satisfaction variable removes only a small portion of the explanation for the age/well-being relationship (Beta weight changes from .091 to .090***); slightly smaller than demographics influence, yet still significantly important. The impact of the subjective satisfaction measure itself is significantly

important in influencing SWB (Beta = .215***). Satisfaction with the city one lives in, hobbies, family, friends, health, job, finances, and marriage contribute significantly to SWB. The added explanatory power of subjective satisfaction (i.e., increasing the R^2 from .131 to .173***) is the primary function of the new dependent measure. Since subjective satisfaction variable did not dramatically add or subtract from the other variables' behavior in this equation, it is safe to assume the new variable is truly independent of other measures.

Hypothesis 4: There are predictable relationships between activity involvement with family and friends and SWB. Further, the age/SWB relationship will change as a result of the addition of activity involvement variables.

When the activity measure and attendance at religious services are added in the fourth regression, the age/SWB Beta weight dropped to .081***, signifying that some of age's earlier explanation was really a function of the activity domain of variables. Because the relationship between activity measure and SWB was significantly and low (Beta = .023***) while the relationship between attending religious services and SWB was over three times greater (Beta = .074***), church attendance was most likely the variable responsible for shifts in this step. Finally, the activity variable and how often one attends religious services only slightly changed the Beta weights of the previous variables, indicating unique contributions, especially regarding church attendance, adding only a fraction of a percentage point to overall prediction ($R^2 = .179$ ***).

Hypothesis 5: There are predictable relationships between the environment and SWB. Further, the age/SWB relationship will change as a result of the

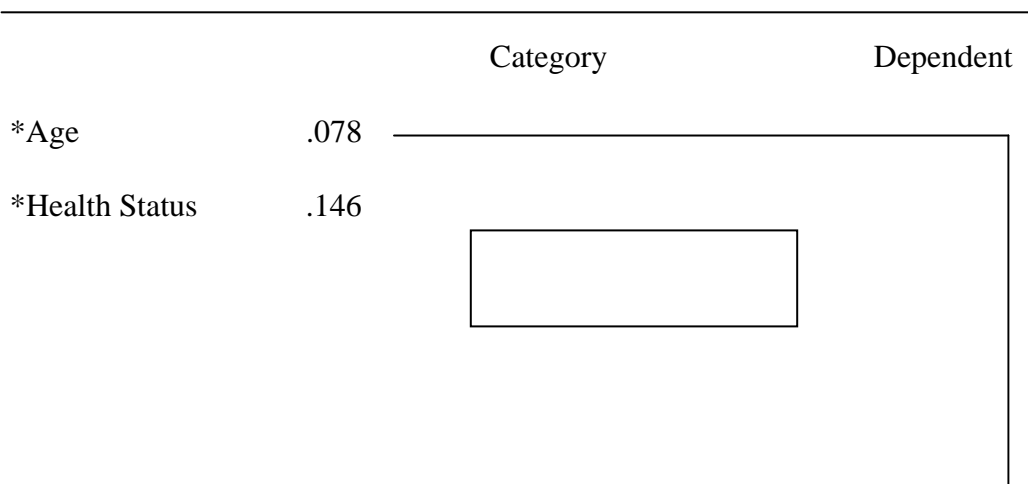
addition of activity environment variables.

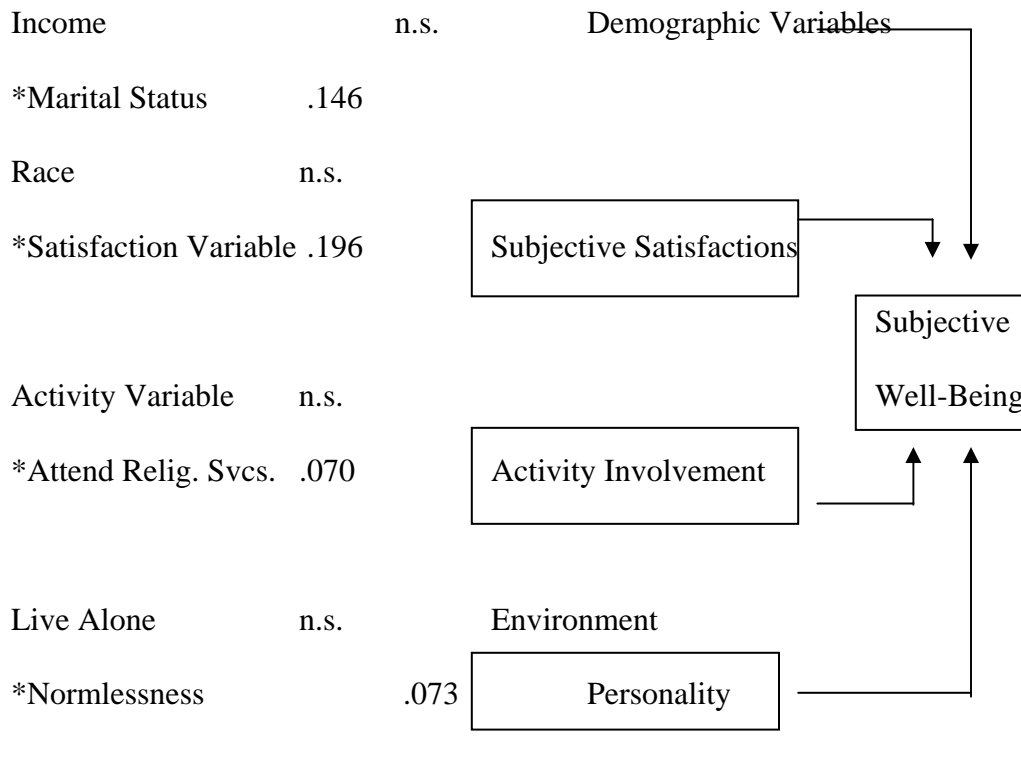
The variable, live alone, increased the influence age had on SWB slightly to standardized regression coefficient of .086***. However, living alone is not a very important factor on overall SWB (Beta = -.016**) aside from further fleshing out the explanation for the age/SWB interaction. The sole environment factor measured here did not significantly add or subtract from the other variables and added nothing to the total explanation.

Hypothesis 6: There are predictable relationships between personality factors and SWB. Further, the age/SWB relationship will change as a result of the addition of activity personality variables.

The normlessness variable has about the same influence on SWB as church attendance (Beta = .073***) and serves to decrease the age/SWB correlation somewhat (the age/SWB Beta is down .08 points to .078). How one views life, if one trusts others, if they believe people are good, and if one thinks life is fair does not have important statistical influence on one's SWB when other theoretically relevant factors are simultaneously considered. Figure 3 illustrates the results of testing Kozma's model using multivariate methods.

Figure 3.
Modified Theoretical Model of Factors Predicting Subjective Well-being.*





* Indicates an important finding. All were significant at least at the $p < .002$.

In conclusion, ranked in terms of statistical importance to SWB, Figure 3 illustrates a simpler, somewhat more straightforward view into the complexities of predicting subjective well-being. The maintenance of higher levels of subjective satisfaction is the most influential contributor to SWB, followed by being married and being healthy. The variable Age is, in fact, a demographic variable, but is separated from the other measures for emphasis in this study only. Age is ranked fourth here in its importance to SWB, but has performed differently at each stage of the analysis, as was hypothesized. The conceptual categories of activity and personality had some impact on SWB, but were more interesting in their impact on the age/SWB relationship.

Our surviving measure of environmental factors emerged from regression analysis with little consequence, and is cautiously rejected.

CHAPTER V

DISCUSSION

This study began with a review of the literature on subjective well-being and the factors that combine to influence its variation or level. From this review, six specific hypotheses were derived from Kozma's conceptual model and a methodological plan was constructed using available data and multivariate statistics to test them.

Hypothesis 1: There is a negative relationship between age and SWB.

Using zero order correlations ($r=.037^{**}$ see Table 1) and multiple regression (Beta = $.037^{**}$ see Table 4) a verifiable, but weak, relationship seems to exist between age and subjective well-being at first glance. This weak initial finding may have led past researchers to erroneously conclude that age is a relatively unimportant variable in the prediction of life satisfaction. That is, the true relationship between the variables may have been more complex than bivariate analysis could reveal. Since a few researchers had inquired more deeply into this relationship to find a more complex reality than the bivariate test revealed, hypothesis one was not rejected.

Hypothesis 2: There are predictable relationships between demographic variables and SWB. Further the age/SWB relationship will change with the inclusion of demographic variables.

Findings from zero order correlations and multiple regression analysis revealed verifiable relationships between demographic variables and SWB. Further, changes in

the age/SWB relationship were revealed when demographics are added as controls. Specifically, health status and marital status are important variables when examining SWB with much weaker relationships among income and race. Thus, hypothesis two was not rejected.

Hypothesis 3: There are predictable relationships between subjective satisfaction variables and SWB. Further the age/SWB relationship will change with the inclusion of subjective satisfaction variables.

The added explanatory power of subjective satisfaction is the main contribution of this variable, which appears to be truly independent of other measures. Adding the satisfaction variable removes only a small portion of the explanation for the age/well-being, however. Thus, the first part of hypothesis three is accepted, while the second part is rejected.

Hypothesis 4: There are predictable relationships between activity involvement with family and friends and SWB. Further, the age/SWB relationship will change as a result of the addition of activity involvement variables.

Adding the factor scores for activity and attendance at religious services as control variables did not contribute greatly to the statistical explanation of SWB or the relationship between age and SWB. This is surprising on an anecdotal level since staying "plugged in" to the community has been a long-standing tenet of disengagement theory. Although little additional explanation of SWB or the age/well-being relationship was found, church attendance was slightly influential in the prediction of

SWB. Thus, hypothesis four was not wholly rejected. Further analysis is needed for this set of concept factors.

Hypothesis 5: There are predictable relationships between the environment and SWB. Further, the age/SWB relationship will change as a result of the addition of activity environment variables.

Interestingly, the initial zero order correlation between living alone and SWB suggested environment to be a stronger contender for prediction than multiple regression analysis proved. The variable neither added, nor took away from the explanation of SWBs variance. Again, loneliness has theoretical import, but lacks great statistical importance as measured here. Hypothesis five was cautiously rejected because it appears to explain little that other variables cannot.

Hypothesis 6: There are predictable relationships between personality factors and SWB. Further, the age/SWB relationship will change as a result of the addition of activity personality variables.

Hypothesis six was not rejected. A factor score for combined normlessness variables performed well in zero order correlations, added a small portion to our understanding of the SWB and age/well-being problems. Better measures of personality factors are needed here.

Implications for Future Research

This research effort was an attempt to test most of Kozma's et al. (1991) call for statistical examination of his theoretical model. The strengths of Kozma's model (see Figure 1) as well as the model used for this study (see Figure 2) "are that it points to new directions in research in addition to encompassing, or providing a

reconceptualization of, many solidly based empirical trends in previous research" (Kozma et al., 1991, p. 119). Admittedly, not all of the factors mentioned in Kosma's model were available for testing in this study. Although it employed a very large and adequately drawn sample, in order for each factor to be tested, the model spans disciplines from psychology to sociology to human development. No known dataset contains every factor and variable.

As researchers continue to explore SWB, different forms of measurement should be used. Although most research on SWB has used cross-sectional surveys (i.e. Lee, 1978; Reich et al., 1987), one could use longitudinal or experimental approaches thus, allowing for understanding of the "causal network leading to SWB" (Diener et al., 1999). Using these approaches will allow for practitioners, social researchers, and gerontologists to determine the needs of older individuals and create programs that will enhance their quality of life; thus meeting the goal of applied research.

The quality of our measures indicates a call for action, especially the three variables that place a high significance to SWB: health status, marital status, and subjective satisfactions. Most importantly in this study, we know that individual health status indicated the highest statistical relation to age and well-being, followed by marital status and finally subjective satisfactions. These results indicate that as one ages his/her health status increases in its predominance, influencing how one feels about life. Also, if older individuals are married and feel positively about their community, hobbies, family, friends, health, job, finances, and marriage they will most likely possess a high life satisfaction. These findings could aid policy makers in creating a more effective social reality for the population as it ages.

Aside from the three variables that significantly influenced SWB, there are a number of variables that did not. Consistent with previous research, race was not a major predictor of higher SWB (Diener, 1984). Furthermore, older individuals tend not to have a large concern with their income, especially if they earn enough on which to comfortably exist. Interestingly enough, while it is part of the culture that material wealth (higher income levels) makes us happy, this finding reveals that this is not the case. Thus, remaining happy through one's older years depends less on material conditions, and more on issues of health, personal intimacy and the quality of the relationships we have with others.

Along with demographic variables, there are predictors associated with activity involvement, the environment, and personality that also were not highly important in predicting SWB. Contrary to activity theorists' belief that social activity is the key to a healthy and successful life (Decker, 1980), statistical results in this study illustrate that activity with relatives, community, friends, parents, and siblings, was of little relative consequence for SWB, and only church attendance showed some promise as a predictor. Finally, individuals living alone did not have a significant influence over their SWB, while a person's personality was somewhat more influential on SWB.

Subjective Well-being and Policy Decisions

Based on the findings, it is hopeful that the direction of policy makers will steer toward establishing better programs and institute new services in many areas. Because the largest predictor of SWB in this model is health status, policy makers should focus their attention on the quality of health care professionals are providing and on lowering costs of medical insurance for older individuals. Services such as creating a visiting

doctors program, community based in-services on various health issues, and establishing free medical advice and lower prescription costs will help meet the health needs of older individuals. Creating these services, and others like them, will enable the individual's health status to increase, therefore, also allowing their level of life satisfaction to increase. This will allow one to continue leading a productive and happy life style well into old age.

This study concluded that older individuals who remain married are happier. Creating policy focused on health issues will not only allow for individuals to be healthier, but will keep older individuals alive, therefore, allowing them to stay married. Again, developing strong health care programs will allow older individuals the opportunity to continue meaningful relationships while living a long and happy life. One's city, hobby, family, friends, health, job, finances, and marriage are significant to their level of happiness. Policy makers thirdly, should focus their attention on the subjective satisfaction variables in this model. Developing cleaner and safer communities for older individuals to live along side of possibly creating community centers to gather with friends while working on various hobbies will only promote positive well-being. Additionally, policy makers may want to instill vacation laws to help promote increased time spent with families and marriages while also boosting one's job enthusiasm.

These findings also bring attention to the quality of life for older individuals who are institutionalized. More than likely those who need skilled or assisted nursing care are in poor health, may not be married (or have less meaningful contact with spouse because of living condition), do not live in their own community, and can not

socialize with their friends or complete hobbies they once enjoyed. Policy makers again, must focus their attention to improving health conditions and health care of older individuals in order to keep people living in their own homes for longer periods of time. Doing so will decrease the chances for loneliness, isolation, and depression among older individuals.

Conclusion

Health, wealth, and love are the basis of happiness, according to ancient folklore (Larson, 1978). The results of this research, however reveals that today health, love (through meaningful relationships), and subjective satisfactions play a major influence in determining individual happiness. Again, many predictors in this research, such as wealth, level of activity, environment, and personality, may influence ones' level of life satisfaction; however only slightly. These findings indicate that if individuals of all ages are satisfied with their health, marital status, and subjective satisfactions then they are more likely to be happy.

REFERENCES

Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas & J. M. Innes (Eds.), Recent advances in social psychology: An international perspective (pp. 189-203). Amsterdam, NY: Elsevier Publishing Company.

Bernal, D., Snyder, D., & McDaniel, M. (1998). The age and job satisfaction relationship: Does its shape and strength still evade us? Journal of Gerontology: PSYCHOLOGICAL SCIENCES, 53B(5), P287-P293.

Blumenthal, J. A., Emery, C. F., Madden, D. J., George, L. K., Coleman, R. E., Riddle, M.W., McKee, D. C., Reasoner, J., & Williams, R. S. (1989). Cardiovascular and behavioral effects of aerobic exercise training in healthy older men and women. Journal of Gerontology: MEDICAL SCIENCES, 44(5), M147-M157.

Borup, J. H. (1982). The effects of varying degrees of interinstitutional environmental change on long-term care patients. The Gerontologist, 22(4), 409-417.

Bradburn, N. M. (1969). The structure of psychological well-being. Chicago, IL: Aldine Publishing Company.

Bradburn, N. M., & Caplovitz, D. (1965). Reports on happiness. Chicago, IL: Aldine Publishing Company.

Cantril, H. (1966). The pattern of human concerns. New Brunswick, NJ: Rutgers University Press.

Chan, R., & Joseph, S. (2000). Dimensions of personality, domains of aspiration, and subjective well-being. Personality and Individual Differences, 28, 347-354.

Clark, S. D., Long, M. M., & Schiffman, L. G. (1999). The mind-body connection: The relationship among physical activity level, life satisfaction, and cognitive age among mature females. Journal of Social Behavior and Personality, 14(2), 221-240.

Cumming, E., & Henry, W. E. (1961). Growing old, the process of disengagement. New York, NY: Basic Books.

Damon, L. E. (1982). Effects of relocation on the elderly. American Family Physician, 26(5), 144-148.

Decker, D. L. (1980). Social gerontology: An introduction to the dynamics of aging. Boston, MA: Little, Brown and Company.

Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95(3), 543-575.

Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), Well-being: The foundations of hedonic psychology (pp. 213-229). New York, NY: Russell Sage Foundation.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. Psychological Bulletin, 125(2), 276-302.

Ferraro, K. F. (1997). Sociology of aging: The micro-macro link. In K. F. Ferraro (Ed.), Gerontology: Perspectives and issues. (pp. 120-137). New York, NY: Springer Publishing Company.

Ferring, D., & Filipp, S. -H. (1995). The structure of subjective well-being in the elderly: A test of different models by structural equation modeling. European Journal of Psychological Assessment, 11, 32.

George, L. K. (1992). Economic status and subjective well-being: A review of the literature and an agenda for future research. In N. E. Cutler, D. W. Gregg, & M. P. Lawton, (Eds.), Aging, money, and life satisfaction: Aspects of financial gerontology (pp. 69-99). New York, NY: Springer Publishing Company.

Hart, P. M. (1999). Predicting employee life satisfaction: A coherent model of personality, work and nonwork experiences, and domain satisfactions. Journal of Applied Psychology, (84)4, 564-584.

Headey, B. (1999). Old age is not downhill: The satisfactions and well-being of older australians. Australasian Journal of Ageing, 18(3), 32-37.

Hendricks, J. & Turner, H. B. (1988). Social dimensions of mental illness among rural elderly populations. International Journal of Aging and Human Development, 26, 169-189.

Kozma, A., & Stones, M. J. (1983). Predictors of happiness. Journal of Gerontology, 38(5), 626-628.

Kozma, A., Stones, M. J., & McNeil, J. K. (1991). Psychological well-being in later life. Toronto, Canada: Butterworths.

Krause, N. (1993). Race differences in life satisfaction among aged men and women. Journal of Gerontology: SOCIAL SCIENCES, 48(5), S235-S244.

Labouvie-Vief, G., & Diehl, M. (1999). Self and personality development. In J. C. Cavanaugh & S. K. Whitbourne (Eds.), Gerontology: An interdisciplinary perspective. (pp. 238-268). New York, NY: Oxford University Press.

Larson, R. (1978). Thirty years of research on the subjective well-being of older americans. Journal of Gerontology, 33(1), 109-125.

Lawton, M. P. (1989). Environmental proactivity and affect in older people. In S. Spacapan & S. Oskamp (Eds.), The social psychology of aging (pp. 135-163). Newbury Park, CA: Sage Publications.

Lawton, M. P. (1996). Quality of life and affect in later life. In C. Magai & S. H. McFadden (Eds.), Handbook of emotion, adult development and aging (pp. 327-348). San Diego, CA: Academic Press.

Lee, G. R. (1978). Marriage and moral in later life. Journal of Marriage and the Family, 40(1), 131-139.

Liang, J., & Warfel, B. L. (1983). Urbanism and life satisfaction among the aged. Journal of Gerontology, 38(1), 97-106.

Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. Journal of Personality and Social Psychology, 71(3), 616-628.

Maddox, G. L. (1992). Aging and well-being. In N. E. Cutler, D. W. Gregg, & M. P. Lawton, (Eds.), Aging, money, and life satisfaction: Aspects of financial gerontology (pp. 53-67). New York, NY: Springer Publishing Company.

Maddox, G. L. (1994). Sociology of aging. In W. R. Hazzard, E. L. Bierman, J. P. Blass, W. H. Ettinger, Jr., J. B. Halter, & R. Andres (Eds.), Principles of geriatric medicine and gerontology (pp. 125-134). New York, NY: McGraw-Hill, Inc.

Maslow, A. H. (1970). Motivation and personality. New York, NY: Harper & Row.

McCamish-Svensson, C., Samuelsson, G., Hagberg, B., Svensson, T., & Dehlin, O. (1999). Social relationships and health as predictors of life satisfaction in advanced old age: Results from a swedish longitudinal study. International Journal of Aging and Human Development, 48(4), 301-324.

McKee, K. J., Harrison, G., & Lee, K. (1999). Activity, friendships and wellbeing in residential settings for older people. Aging & Mental Health, 3(2), 143-152.

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. Journal of Personality and Social Psychology, *75*(5), 1333-1349.

Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. Personality and Social Psychology Bulletin, *25*(8), 980-990.

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. Psychological Assessment, *5*(2), 164-172.

Peppers, L. G. (1976). Patterns of leisure and adjustment to retirement. The Gerontologist, *16*(5), 441-446.

Reich, J. W., Zautra, A. J., & Hill, J. (1987). Activity, event transactions, and quality of life in older adults. Psychology and Aging, *2*(2), 116-124.

Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. Social Indicators Research, *5*, 475-492.

Smith, J., & Baltes, P. B. (1993). Differential psychological ageing: Profiles of the old and very old. Ageing and Society, *13*, 551-587.

Steiner, D. D., & Truxillo, D. M. (1987). Another look at the job satisfaction-life satisfaction relationship: A test of the disaggregation hypothesis. Journal of Occupational Behaviour, *8*, 71-77.

Steinkamp, M. W., & Kelly, J. R. (1987). Social integration, leisure activity, and life satisfaction in older adults: Activity theory revisited. International Journal of Aging and Human Development, *25*(4), 293-307.

Stones, M. J., & Kozma, A. (1986). "Happy are they who are happy...": A test between two causal models of relationships between happiness and its correlates. Experimental Aging Research, *12*(1), 23-29.

Tornstam, L. (1990). Dimensions of loneliness. Aging: Clinical and Experimental Research, *3*, 259-265.

Tornstam, L. (1999-2000). Transcendence in later life. Generations, *23*(4), 10-14.

Wilson-Ford, V. (1993) An assessment of life satisfaction among rural black elderly: Implications for practice. In Y. I. Song & E. C. Kim (Eds.), American mosaic selected readings on america's multicultural heritage, (pp. 65-77). Englewood Cliffs, NJ: Prentice Hall, Inc.

Witt, D. D., Lowe, G. D., Peek, C. W., & Curry, E. W. (1980). The changing association between age and happiness: Emerging trend or methodological artifact? Social Forces, 58(4), 1302-1307.

APPENDICES

APPENDIX 1

STUDIES RELATING SUBJECTIVE WELL-BEING TO HEALTH

	Measure of Well-being	Measure of Predictor	Relation	N	Sample Population	Age
Blumenthal et al., 1989	LSI, self-esteem scale, affect bal. scale, depression scale, trait anxi. scale	Bone Density, Body weight Blood pressure Bicycle Ergometry	positive	97		mean, 67.0
Clark et al., 1999	LSIA	AADL	positive	376	females, north eastern city	65+
Headey, 1999	ISSS/ Australia	VQOL	positive	502	Australia	60-75

APPENDIX 2

STUDIES RELATING SUBJECTIVE WELL-BEING TO JOB SATISFACTION

	Measure of Well-being	Measure of Predictor	Relation	Sample Population	Age
Rice et al., 1985	General Index of well-being	Qual. of Employ. Sur. & Qual. of Am. Life Sur.	positive	1,328	national, 16+ volunteers
Steiner & Truxillo, 1987	MN sat. quest. (Weiss et al., 1967).	job import.		199	French & mean F-American 35.4, employees mean Am-36.1
Hart, 1999	MSQ, non work personality inv.	police daily uplift scale sat. scale, NEO (Hart et al., 1993, 1994), police daily hassles scale	positive	479	police officers

APPENDIX 3

STUDIES RELATING SUBJECTIVE WELL-BEING TO RACE

Measure of Well-being	Measure of Predictor	Relation	N	Sample Population	Age
Krause, LSIA 1993	1) econ. plans for ret. 2) financial strain 3) econ. dependence on family mem.	1) Beta= -.255 2) Beta= -4.30 3) Beta= .167	1,156	national mean 72.3	
McIntosh Danigelis, 1999	pos. aff. scale neg. aff. scale	OLS	1,644	national no significance highest neg. aff. lowest neg. aff.	60+

APPENDIX 4

STUDIES RELATING SUBJECTIVE WELL-BEING TO SOCIAL ACTIVITY

	Measure of Well-being	Measure of Predictor	Relations	Sample Population	Age
Steinkamp & Kelly, 1987	LSI	object. integ. scale	r=.70 65+male r=.21 65+female	400	Peoria, Ill 40+
Johnson & Troll, 1994	Bradburn aff. bal. scale	1) existence of "close friend" 2) freq. of cont. 3) sat. with friends	53% 78% (weekly) 45%	111	San Franc Bay 85+
Davey & Eggebeen, 1998	DAS	intergenerational positive exchanges		2,237 survey	nat., 50+

APPENDIX 5

STUDIES RELATING SUBJECTIVE WELL-BEING TO ACTIVITY LEVEL

	Measure of Well-being	Measure of Predictor	Relations	Sample Population	Age
Peppers, 1976	LSIA	Leisure Participation & Involvement Index	positive	206	retired men mean, in mid western communities 68.8
Reich et al., 1987	Gen. well-being scale, affect bal. scale, & qual. of life scale	demands & desires scale (Reich & Zautra, 1983)	Neg. QoL Neg. Demands Q. Gen. Well-be. + Demands +	40	Arizonia, mean, volunteers 72.4
Everard, 1999	ABS (Bradburn, 1969)	Act. Quest.	positive	249	U of Kentucky Sanders-Brown Center on aging 65-74