

THE CONTENTMENT WITH LIFE ASSESSMENT SCALE (CLAS):
A MEASURE OF SELF-REPORTED LIFE SATISFACTION

by

P. Maurine Hatch

B.Sc. (Mathematics / Psychology), University of Victoria, 1974

M.Sc. (Computing Science), University of Alberta, 2003

THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

in

PSYCHOLOGY

THE UNIVERSITY OF NORTHERN BRITISH COLUMBIA

July 2006

© P. Maurine Hatch, 2006



Library and
Archives Canada

Bibliothèque et
Archives Canada

Published Heritage
Branch

Direction du
Patrimoine de l'édition

395 Wellington Street
Ottawa ON K1A 0N4
Canada

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

ISBN: 978-0-494-28406-3

Our file Notre référence

ISBN: 978-0-494-28406-3

NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

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

In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.


Canada

APPROVAL

Name: P. Maurine Hatch

Degree: Master of Science

Thesis Title: THE CONTENTMENT WITH LIFE ASSESSMENT SCALE
(CLAS): A MEASURE OF SELF-REPORTED LIFE
SATISFACTION

Examining Committee:

Chair: Dr. Robert Tait
Dean of Graduate Studies
University of Northern British Columbia

Supervisor: Dr. Loraine Lavallee
Assistant Professor, Psychology Program
University of Northern British Columbia

Committee Member: Dr. Kenneth Prkachin
Professor, Psychology Program
University of Northern British Columbia

Committee Member: Dr. Alex Michalos
Professor Emeritus, Political Science Program
University of Northern British Columbia

External Examiner: Dr. Neil Hanlon, Associate Professor
Natural Resources and Environmental Studies Program
University of Northern British Columbia

Date Approved:

July 11, 2006

Abstract

North Americans typically report that they are satisfied with their lives. I investigated the contention that life satisfaction scores of North Americans should cluster closer to the neutral rather than satisfied mark of measurement scales. In Study 1, the Contentment with Life Assessment Scale (CLAS), which focuses on contentment, fulfillment and self-discrepancies, was developed. Data from three population samples demonstrated that the CLAS produces a close to normal distribution of scores, has excellent reliability, and is sensitive to differences in life conditions. In two daily diary studies I tested whether life satisfaction measures corresponded to people's subjective well-being in daily life. In Study 2, the CLAS was the best predictor among three measures of daily escapist behaviours and stress-related physical symptoms. In Study 3, participants' average daily life satisfaction scores clustered close to the neutral point of the scale and corresponded to participants' scores on the CLAS assessed one-month earlier.

TABLE OF CONTENTS

Abstract.....	ii
List of Tables	v
List of Figures	vi
Acknowledgements.....	vii
CHAPTER I.....	1
Overview.....	1
Literature Review.....	2
Comparison Theories	2
Multiple Discrepancies Theory (MDT).....	3
Absolute Theories	4
Need Satisfaction.....	4
Spiritual/Psychological Approach to Life	5
Theory Summary	6
Research Problem	7
Other Indicators of Well-Being	7
Measurement of Life Satisfaction	9
Measurement Concerns	12
Summary of the Research Problem	13
CHAPTER II.....	14
The Present Research	14
Developing a New Self-Report Measure	14
Affect in the Assessment of Life Satisfaction.....	15
Discrepancies in the Assessment of Life Satisfaction	17
Validation of the CLAS	17
External Validity	18
Sensitivity.....	19
Overview of the Studies.....	21
CHAPTER III	24
Study 1	24
Method	24
Participants	24
Measures.....	25
Results and Discussion	26
CLAS Scale	26
Distributions of Scores on the CLAS and SWLS.....	28
Sensitivity of Life Satisfaction Measures to Demographic Conditions ..	29
Summary	32
CHAPTER IV	33
Study 2	33

Method	34
Participants	34
Questionnaire Measures	35
The Daily Diary	37
Results and Discussion	40
Distribution of Scores for the Life Satisfaction Scales	40
Reliability	40
Convergent / Discriminant Validity	41
Predictive Validity - Escapism	43
Predictive Validity – Psychological and Physical Well-Being	44
CHAPTER V	46
Study 3	46
Method	46
Participants	47
Questionnaire Measures	47
Daily Diary Measures	48
Results and Discussion	49
Financial Difficulties	49
Average Daily Mood	49
Scale Distributions and Convergent Validity of Life Satisfaction Measures	50
CHAPTER VI	52
General Discussion	52
Absolute Levels of Life Satisfaction	52
The CLAS	53
Discriminant Validity	54
Affect	56
Sensitivity and Stability	57
Consequences of Life Satisfaction	58
Limitations and Future Research	59
Conclusions	61
References	64

List of Tables

Table 1	<i>Study 1 Sample Characteristics</i>	25
Table 2	<i>Structural Coefficients and Descriptive Statistics for CLAS Items.....</i>	26
Table 3	<i>Study 1 Scale Statistics</i>	28
Table 4	<i>Life Satisfaction Scores by Gender</i>	30
Table 5	<i>Life Satisfaction Correlated with Age and Income</i>	30
Table 6	<i>Life Satisfaction Scores as a Function of Marital Status.....</i>	31
Table 7	<i>Study 2 Sample Characteristics at Each Stage</i>	34
Table 8	<i>Correlations between LS and Self-Deceptive Enhancement, SE, and NA/PA ...</i>	41
Table 9	<i>Descriptive Statistics for the Diary Variables</i>	43
Table 10	<i>Correlations between Life Satisfaction and Measures of Escapist Coping.....</i>	44
Table 11	<i>LS Measures as Predictors of Psychological and Physical Well-Being.....</i>	45
Table 12	<i>Study 3 Sample Characteristics at Each Stage</i>	47
Table 13	<i>Descriptive Statistics for the Life Satisfaction Pretest and Diary Measures....</i>	51

List of Figures

<i>Figure 1.</i> A sequential framework for the study of SWB (Kim-Prieto et al., 2005).	9
<i>Figure 2.</i> Histograms of the CLAS and the SWLS.	29

Acknowledgements

I gratefully acknowledge the many individuals that assisted me during my thesis research. I especially thank my supervisor, Dr. Loraine Lavallee, for her invaluable feedback, guidance, and support throughout this work. Her encouragement and dedication to my program motivated me to keep on going. Thanks also to A. Nicole Burnett, Shirley Fortin, Alexandra Iliopoulos, Tara McKinley, and Cherise Seaton all from UNBC and Dr. Jacqueline Vorauer of the University of Manitoba for their help in conducting the research.

I would also like to express my appreciation to my committee members, Dr. Ken Prkachin and Dr. Alex Michalos, for their insightful comments and careful consideration of my work. As well, I would like to thank Dr. Alex Michalos for his substantial contribution to this research made through the Institute for Social Research and Evaluation. I have learned a lot about conducting research through working with him and the process was very enjoyable!

In addition, I am grateful to UNBC for a seed grant and a graduate student scholarship that helped support this research and for such a warm, friendly environment in which to study. Every faculty member and graduate student with whom I interacted offered helpful advice and assistance and made my graduate studies more enjoyable. A special thank you goes to Janice Montbriand who shared an office desk with me and helped keep me sane with therapeutic “walks” and “talks”.

Finally, I thank my friends and family for their constant love and support. They encouraged me, understood when I had no time for other activities besides schoolwork, and could be counted on to uplift my spirits and my motivation whenever I needed it. Thank you!

CHAPTER I

Overview

“Happiness is man’s greatest aim in life. Tranquility and rationality are the cornerstones of happiness” (Epicurus, Greek philosopher 341 – 270 B.C.).

“The great end of all human industry is the attainment of happiness” (David Hume, 18th century Scottish philosopher).

Philosophers from the ancient Greeks to more contemporary Western Europeans have advanced the idea that the search for happiness is the supreme endeavor of humankind.

What exactly is “happiness” and how do we understand and measure it? Among behavioural scientists, “happiness” is called subjective well-being (SWB) and represents a person’s level of happiness with his or her own life (Diener, 1994). SWB is usually described as including three components: two emotional components (positive and negative affect) and a cognitive-judgmental component. The cognitive-judgmental component of SWB is called life satisfaction and is most simply defined as a person’s global evaluation of his or her life (Pavot, Diener, Colvin, & Sandvik, 1991). Although two people might rate their lives as equally satisfying it is likely that the basis for that evaluation is different for every person (Diener, Emmons, Larsen, & Griffin, 1985). This thesis is concerned with the concept of life satisfaction, the cognitive-judgmental component of SWB. Specifically, the focus of this thesis is on the validity of the measurement of satisfaction with life as a whole, also called global life satisfaction, among North Americans, who are known to inflate their evaluations of themselves and their lives.

Literature Review

How satisfied are North Americans with their lives? Before we can begin to answer this question, it is useful to consider the factors and processes thought to give rise to life satisfaction. Two important themes emerge from the theories of life satisfaction. One theme is that life satisfaction is relative; that is, that life satisfaction emerges from the process of comparing one's life with the lives of others or with a set of comparison standards. This theme is linked to the idea that people are constantly evaluating the "goodness" or "badness" of their various life circumstances, activities, and events and, consequently, the basis of life satisfaction can change as one's life circumstances change (Diener, 1994). The other theme suggests that life satisfaction is the product of fulfilling specific conditions or of experiencing certain states of being. This theme suggests that people's life satisfaction is not just a function of comparison processes, but is also a function of achieving some absolute state(s). Multiple discrepancies theory (Michalos, 1985) is the most comprehensive theory attempting to explain life satisfaction and it unites these two themes.

Comparison Theories

Comparison theories advance the idea that the greater the perceived discrepancies between people's life-as-it-is and their life as they think it should be, the lower will be their assessment of life satisfaction. The discrepancies or gaps involved in these life comparisons can take many forms such as the gap between what people have and what they want to have or between what they have and what their neighbour has. Most researchers argue that people's notion of what their life should be is based on standards that are constantly being

refined as the person moves through different developmental phases of life or through different social locations.

Multiple Discrepancies Theory (MDT)

Multiple discrepancies theory (MDT, Michalos 1985) is an overarching comparison theory that amalgamates many of the important comparison theories of life satisfaction and was built on the work of Campbell, Converse and Rodgers (1976) and Andrews and Withey (1976). The basic premise of the theory is that satisfaction with life as a whole and with specific domains of life is a function of a person's objective living conditions (e.g., age, income, social support, life events), objective discrepancies (e.g., between what one earns and what one's neighbours earn), perceived discrepancies (e.g., between the life one has and the life one deserves), and actions a person takes to increase their satisfaction. In terms of perceived discrepancies, Michalos has found that seven types of perceived discrepancies are important for understanding a person's level of life satisfaction. These discrepancies include: the difference between what one currently has and: (1) wants (self-wants), (2) what relevant others have (self-others), (3) the best one has had in the past (self-best), (4) deserves (self-deserved), (5) expected to have three years ago by now (self-progress), (6) needs (self-needs), and (7) expects to have after five years (self-future). The above-listed discrepancy types are arranged in the order of those with the most relative impact (self-wants) on satisfaction to those with the least relative impact (self-future) as found by Michalos (1985) in a study of 700 University of Guelph students.

The self-wants gap, which had the most impact on satisfaction, was also found to have the most impact in results from a survey of over 18,000 students in 39 countries with it usually being the strongest predictor of satisfaction with twelve domains of life (e.g.,

satisfaction with friendships, family relations, housing, and spiritual fulfillment) and with global life satisfaction (Michalos 1991a, 1991b, 1993a, 1993b). Where do our “wants” come from that create this discrepancy between what we have and what we desire? Evidence from body image research suggests that body dissatisfaction and the desire for a perceived “ideal” body among women in North America, which in some cases results in eating disorders, is influenced by parents, friends and the media (Keery, van den Berg, & Thompson, 2004). The same process of desiring a perceived “ideal” body and the same trio of influences has been shown to operate among young men in North America, resulting in the use of dangerous muscle-building techniques (Smolak, Murnen, & Thompson, 2005). Sometimes the pervasive influence of the media alone is enough to persuade people to want things as shown by Mok’s (1998) study, which indicated that Asian Americans became dissatisfied with their non-Caucasian appearance and tried to change it to conform to the Caucasian ideal portrayed by the media, which they now desired.

Absolute Theories

There is more involved when people evaluate their life satisfaction than simply the comparison of their current life to self-defined standards. Also affecting people’s assessment of their life is the “good” feeling they get from fulfilling certain conditions such as basic biopsychological needs or experiencing certain spiritual/psychological states a large proportion of the time.

Need Satisfaction

Veenhoven (1991) criticizes the comparison theories for overstating the contribution of conscious comparisons to the assessment of life satisfaction. He states that there are

universal, basic bio-psychological needs that must be fulfilled to achieve maximal life satisfaction. These basic needs are unconscious and instinctive and therefore cannot be equated with comparison standards, which are conscious and individually mind-constructed within variable socio-economic and cultural contexts. Evolution has ensured survival of humankind by linking the fulfillment of these basic needs to pleasant affect, with the pleasant feelings that are aroused encouraging the continuation of the activity. Veenhoven asserts that just having these basic needs fulfilled is enough to make people feel good and thus evaluate their life satisfaction on the positive side.

Spiritual/Psychological Approach to Life

In addition to getting “good” feelings from having their basic needs met, people also get “good” feelings from being in certain mental/spiritual states. Myers (2000) proposes that religious faith provides purpose and hope to the adherent and this spiritual state of mind leads to increased happiness and life satisfaction. He provides correlational evidence of this consistent link between religious faith and life satisfaction. Illustrating this same principle of the importance of religious faith is the following quote from a respondent’s comment to a panel survey on quality of life that was conducted one year after the original survey: “I have no recollection of my answers to the first survey. My life is greater now than it was then, but the primary reason for this is my religion and faith, even more so than finances or ???.” (Michalos, 2006).

Csikszentmihalyi (1999) maintains that the same type of mental state that can be achieved through spiritual/religious means can also be achieved through psychological means. These psychological techniques condition the mind and restructure people’s values and goals thereby leading to greater life satisfaction. The mental state that Csikszentmihalyi

(1991) identified and studied extensively is known as flow, or the autotelic experience.

These experiences are highly enjoyable and totally absorbing states that result from activities that provide immediate rewards just for the performing of the activity rather than for some benefit to be received later. In fact the flow experiences are so enjoyable that following the experience people report that the positive state they experienced could not have been any better. Activities that may produce flow experiences are involvement in religious rituals, creative arts, sports, or music. Csikszentmihalyi contends that the more flow periods people experience in their daily activities, the happier they would be.

Theory Summary

Taken together, the major theories of life satisfaction suggest that people's life satisfaction is a product of meeting basic needs, including perhaps, spiritual or transcendent needs, and of people's ability to reduce a number of different discrepancies in their lives. Specifically, the discrepancies that people attempt to reduce are those between their current achievements and a variety of different comparison standards such as, what they want, what others have, what they have had in the past, and what they feel they deserve. The influence of comparison processes on life satisfaction explains the weak correlation found between wealth and life satisfaction (Diener, Diener, & Diener, 1995; Diener, Sandvik, Seidlitz, & Diener, 1993; Hagerty, 2000). When reflecting on the level of happiness among Americans, Csikszentmihalyi (1999) posed the question "If we are so rich, why aren't we happy?" Building on the notion of relative deprivation, the idea that our satisfaction is not simply linked to fulfilling important needs but is linked to comparison processes, Csikszentmihalyi argued, as many theorists have, that people's expectations or wants shift upward as their nation becomes wealthier. Indeed, this is the premise of the satisfaction (aspiration)

treadmill hypothesis, which maintains that people adapt to their good or bad fortune by adjusting their standards and comparing what they now want to a higher or lower standard than previously (Kahneman, 1999; Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Due to the shifting nature of comparison standards and the flexibility people have in selecting comparison targets, it is difficult to form predictions about the general levels of life satisfaction one would expect among North Americans.

Research Problem

Currently, North Americans report that they are quite satisfied with their lives. Cross-cultural comparisons indicate that people living in the industrialized West including most Western European countries, Australia, the United States, and Canada report the highest per capita life satisfaction and happiness (Diener et al., 1995; Myers, 2000). In fact, in most Western nations, self-report single-item measures of life satisfaction produce a negatively skewed and somewhat narrow distribution of scores that cluster around the 75 percent, or satisfied mark of the measurement scale (Cummins, 1995; Cummins & Nistico, 2002; Michalos, 2004). These relatively high levels of life satisfaction as assessed by current measures, suggesting that North Americans feel content and satisfied with their lives, are discrepant with other indicators of SWB.

Other Indicators of Well-Being

Indicators of well-being, other than self-reported life satisfaction, such as levels of mental health problems, stress, divorce and numbers of self-reported unwell days suggest that North Americans may have less well-being than is indicated by current self-report life satisfaction measures. In the United States, an assessment of office-based physician visits

showed a 46 percent increase for diagnosis of depression, rising from 6.1 per 100 US population in 1990 to 8.9 per 100 US population in 1998 with an even greater increase of 125 percent for the use of antidepressant drugs, rising from 6.7 per 100 US population in 1990 to 15.1 per 100 US population in 1998 (Skaer, Sclar, Robison, & Galin, 2000). With respect to children, average levels of anxiety reported by American children in the 1980s exceed those reported by child psychiatric patients in the 1950s (Twenge, 2000). Canadians are also dealing with increased mental health issues. Twenty per-cent of Canadians are dealing with either mental health or substance abuse problems (Conway, 2003) with the highest levels being among the upcoming generation of youth at almost double the prevalence of adults (Statistics Canada, 2003).

In terms of self-reported health, in 2004 American adults reported that they felt unwell about 27 percent of the time (Centers for Disease Control and Prevention, 2004). Specifically, when asked to indicate the number of days in the previous month that they felt physically and mentally unhealthy, Americans on average reported that they had experienced 3.5 mentally unhealthy days and 3.5 physically unhealthy days. According to the longitudinal studies conducted by the Centers for Disease Control (2004), self-reported health has worsened significantly since 1993. This decrease in subjective health ratings might be linked to increases in levels of stress. Forty percent of Americans report that their job is very or extremely stressful (National Institute for Occupational Safety and Health, 2005). Canadians also report high levels of stress with sixty percent reporting that they are experiencing chronic stress (Statistics Canada, 2003). Indeed, Western countries also have the highest levels of suicide and divorce (Diener, 1994). Certain indicators such as rising levels of personal debt in North America (Maich, 2004) suggest that within Canada, many

people's desires are exceeding their earnings and thus that they are not completely satisfied with their standard of living or income. These indicators of well-being suggest that there is more dissatisfaction than current life satisfaction measures detect.

Measurement of Life Satisfaction

According to Kim-Prieto, Diener, Tamir, Scollon, and Diener (2005), the process of making a global appraisal of life satisfaction involves many factors and many interacting processes. They argue that the global evaluation of one's life is the final stage of four interrelated and temporally sequenced stages of SWB. The three stages that lead up to and affect the global life satisfaction evaluation are: (1) objective life circumstances and events, (2) emotional reactions to these events, and (3) memory of these emotional reactions (see Figure 1).

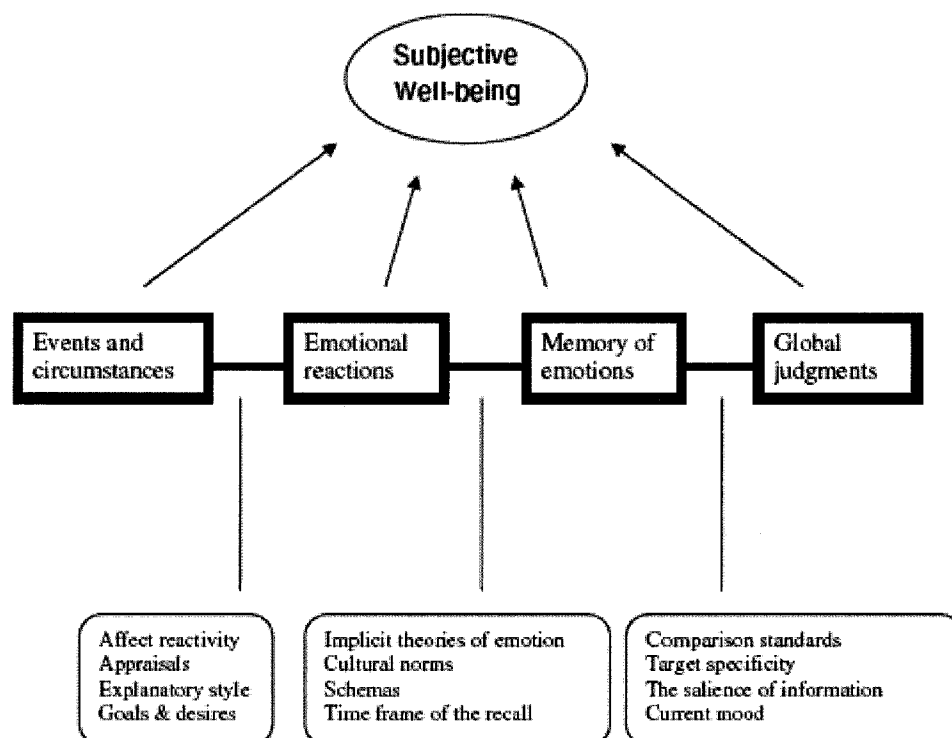


Figure 1. A sequential framework for the study of SWB (Kim-Prieto et al., 2005).

This is an ever-continuing process with new life conditions triggering a new round of the sequential framework and with later temporal stages influencing these new life conditions and people's reactions to them. For example, people's recalled emotional reactions to past events can influence the occurrence of new life events as evidenced by Wirtz, Kruger, Scollon, and Diener (2003). In their study of students' willingness to repeat their spring-break vacation, they measured both the participants' emotional reactions (positive affect and negative affect) and their overall subjective experience before, during, and after their current spring-break vacations. The same set of questions was used for the three time-periods with the verb tense being changed to reflect predicted (before: "I will be satisfied with this vacation") experiences, the actually-occurring (during: "I am satisfied with this break") or on-line experiences, and the recalled (after: "I was satisfied with this vacation") experiences. Wirtz et al. found that only recalled experiences directly predicted the desire to repeat the vacation. Their findings suggest that future events can be better predicted by recalled emotions than by the actual on-line experience. As well as this effect of each stage influencing the other stages, additional factors (as shown in Figure 1) also influence SWB at each stage, with personality having a strong influence on all of the stages. Thus, when people evaluate their global life satisfaction it is a procedure involving many diverse variables with the resultant rating being a cognitive summary of the complex interactions between circumstances, affect, recalled affect and cognition.

The measurement of global life satisfaction has mainly been accomplished with self-report measures (Diener, 1994), either single-item scales such as the Delighted-Terrible scale described below or multi-item scales. Even though single-item scales are generally lower in reliability than the multi-item scales, they are the most widely used due to their convenience

(Andrews & Robinson, 1991). One of the earliest single item measures used to assess global life satisfaction was Andrews and Withey's (1976) Delighted-Terrible scale, which asks the question, "*How do you feel about your life as a whole?*" (7-point scale, 1=delighted to 7=terrible). This question was asked to the respondents two times (about 20 minutes apart) during the interview with the instructions to consider what had happened during the past year and what they expected in the near future before answering. Michalos (1980, 1985) revised the Delighted-Terrible scale several times resulting in the single item measure, "*How satisfied are you with your life as a whole?*" assessed on a 7-point Likert scale ranging from 1=very dissatisfied to 7=very satisfied. The test-retest reliability and validity of the single-item measure has been established in Andrews (1984). There are, however, several problems with the single-item measures: the scores tend to be negatively skewed with the majority of responses falling in the satisfied portion of the scale (Andrews & Withey, 1976) and with a single question that cannot include different aspects of SWB, participants must pull together the various aspects of SWB themselves to arrive at a single answer (Diener, 1984).

The most widely used multi-item measure of global life satisfaction is the Satisfaction with Life Scale (SWLS, Diener et al., 1985), which has been in use for over 20 years. The SWLS is composed of 5 positively-keyed Likert items: (1) *The conditions of my life are excellent*; (2) *So far I have gotten the important things I want in life*; (3) *In most ways my life is close to my ideal*; (4) *I am satisfied with my life*; and (5) *If I could live my life over, I would change almost nothing*. Respondents indicate the extent to which they agree or disagree with the items on a 7-point scale on which 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neutral*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*. Thus, the SWLS scores may range from 5 to 35. The SWLS is very well validated with extensive work

demonstrating its internal consistency, test-retest reliability, and discriminant and predictive validity (see Lucas, Diener, & Suh, 1996; Pavot & Diener, 1993). Global life satisfaction scores as assessed by the SWLS are typically significantly lower than those assessed by single-item measures (Cummins, 2003). Pavot and Diener reported data from several studies using the SWLS. The mean of the six studies with North American college student samples was 24 (64% of the measurement scale) and the mean of the three studies with North American general adult samples was 26 (70% of the measurement scale). More recently, Diener and Seligman (2002) recorded a SWLS mean of 23.6 (62% of the measurement scale) with an American college student sample.

Measurement Concerns

There is evidence that North Americans raised within a Western belief system tend to inflate their global satisfaction ratings in a positive direction. This evidence is provided by cross-cultural research comparing people's global satisfaction ratings for a particular time period (e.g., how good was the last week) with their daily satisfaction ratings for the same time period. For seven consecutive days, Oishi (2002) had a sample of Asian-American and a sample of European-American university students rate how they felt about their day (terrible, very bad, bad, good, very good, excellent). At the end of this daily diary study, participants rated retrospectively their level of satisfaction for the week as a whole on the same 6-point scale. In terms of the daily ratings, European- and Asian-Americans' weeks did not differ. Furthermore, when comparing average daily ratings with retrospective ratings for the week, Asian-American students showed a high degree of consistency; that is, their average daily ratings did not differ from their evaluation of their week as a whole. In contrast, European-Americans' retrospective ratings were significantly inflated in a positive

direction. Thus, the global satisfaction ratings of European-Americans showed less correspondence to their day-to-day level of satisfaction than did the ratings of Asian-Americans.

According to Oishi (2002), global judgments of well-being are highly influenced by cultural theories. In the West the dominant theory is that “life is good”, while in the East the dominant theory is that “good and bad things happen in life”. Apparently, and not surprisingly, the Eastern theory is closer to daily experiences. Oishi demonstrated that these theories have a significant influence over global ratings. These kinds of validity problems with global judgments have led a number of researchers to question the validity and utility of global well-being measures (Kahneman, 1999; Schwarz & Strack, 1999).

Summary of the Research Problem

Currently, North Americans report that they are quite satisfied with their lives. Indirect indicators of well-being, however, suggest that North Americans might have significant levels of dissatisfaction. Consistent with the indirect indicators, Oishi (2002) demonstrated that European-Americans tend to inflate self-reported life experiences. Although current self-report measures do a good job of distinguishing between relatively satisfied and relatively unsatisfied people within cultural groups (e.g., Diener, 1994; Pavot et al., 1991), very little research has attempted to validate absolute levels of self-reported life satisfaction.

CHAPTER II

The Present Research

Based on the indicators of subjective well-being, other than self-reported life satisfaction, I contend that life satisfaction scores of North Americans should cluster closer to the neutral rather than satisfied mark of measurement scales. To investigate this assertion, the present research has four purposes, to: (1) develop a new self-report global life satisfaction measure that more accurately represents the level of life satisfaction experienced in daily life, (2) validate this new measure of life satisfaction, (3) evaluate this measure of life satisfaction, along with the SWLS and a single-item life satisfaction measure, against daily experiences, and to (4) attempt to validate absolute levels of self-reported life satisfaction. In the following sections I describe the background research related to these specific purposes. I begin by discussing the development of the new life satisfaction measure. Then I discuss the procedures involved in validating a new measure and in validating my assertion about absolute levels of life satisfaction.

Developing a New Self-Report Measure

The newly developed self-report scale is called the Contentment with Life Assessment Scale (CLAS). To improve on life satisfaction measurement and better capture existing feelings of dissatisfaction, the CLAS items included content that tapped into self-discrepancies and included more affect content (specifically contentment and fulfillment) than previous measures. I speculated that positivity bias in the measurement of life satisfaction might be linked to researchers' efforts to separate the cognitive from the affective aspects of subjective well-being. For example, the five item Satisfaction with Life Scale

(Diener et al., 1985) has an item that taps more objective evaluations: “The conditions of my life are excellent”. This item asks people to evaluate what they have rather than how they feel about what they have. In other words, it has more to do with objective rather than subjective well-being. Measures of subjective satisfaction should distinguish between people who look at their life and say, “I should be satisfied with this life” and people who feel satisfied because they have the life they want. Analyses of the psychological structure of attitudes have shown that attitudes can be differentially influenced by cognition, affect and past behaviour (Zanna & Rempel, 1988). The weight of each of these sources in influencing attitudes toward an object can differ for different types of attitude objects (e.g., Ford Taurus versus hunting baby seals). While attitudes toward hunting baby seals will tend to be heavily affect-laden for the general population, attitudes toward practical automobiles will be influenced more by cognitive sources. I contend that an evaluation of the “goodness of one’s own life” is likely to be a hot (affect-laden) rather than cold attitude.

Affect in the Assessment of Life Satisfaction

The important role of affect in global evaluations of life satisfaction has been demonstrated empirically. In the most frequently cited paper from *Social Indicators Research* in the first 30 years of that journal’s existence (Michalos, 2005), Andrews and Withey (1974) used their 7-point, Delighted-Terrible scale which specifically mixed words that tended to capture more or less affect (e.g., “pleased”, “unhappy”) and cognition (e.g., “mostly satisfied”, “mostly dissatisfied”). Andrews and McKennell (1980) showed that these different measures of perceived life as a whole revealed different affect-cognition ratios, with items that employ the term ‘satisfaction’ and items that involve comparisons with implicit or explicit criteria having the lowest affect to cognition ratios. Exploring the role of core affect

in ratings of life satisfaction, Davern and Cummins (2005) demonstrated through structural equation modeling that, relative to cognition and personality, affect was the dominant component of life satisfaction ratings. More specifically, they demonstrated that six affects (including contented, satisfied, and happy) explain 64 percent of the variance in the item “How satisfied are you with your life as a whole?” The emotion “contented” predicted the most variance of the six. Content is a core affective state that reflects highly pleasurable feeling and moderate levels of arousal (Russell, 2003).

I, along with six other members of an advanced social psychology research methods class, identified the role of affect as a means of tapping into dissatisfaction after conducting an initial item selection study in the fall of 2003. For this study, we generated an item pool of 50 items in accordance with the instructions to develop items that would capture our existing feelings of dissatisfaction with our lives. The items were tested on a sample of introductory psychology students ($N = 122$) and the distribution of scores for the items was examined. Life satisfaction items that produced a normal or positively skewed distribution of scores were considered good indicators of feelings of dissatisfaction. Relatively normal distributions were found for an item that referred to being “contented with life” and an item that referred to living “a fulfilling life”. The items have been modified since this initial study. The CLAS item “I am very content with my life” blends affective experiences of contentment with cognitive evaluations of one’s life. The CLAS item “I am living my life to the fullest”, while designed to tap feelings of fulfillment, also involves comparison with implicit criteria and thus likely has a somewhat lower affect to cognition ratio.

Discrepancies in the Assessment of Life Satisfaction

Based on the comparison theories, the second approach to more accurately capture feelings of dissatisfaction was to include items that assess discrepancies from standards. In the CLAS, two items directly assess self-discrepancies, both of which are negatively-keyed: (1) “I feel dissatisfied because I’m not doing everything that I want to be doing in my life” and (2) “When I examine my life as a whole, I feel I am not meeting my aspirations”. The fifth item in the scale is a positively-keyed item that indirectly assesses people’s belief that they have what they want in life: “Nothing is currently lacking in my life”. Slightly different preliminary versions of the two negatively-keyed items, along with the final versions of the three positively-keyed items, were tested on a community sample of 393 residents of the City of Prince George and a sample of introductory psychology students ($N = 815$) at the University of Manitoba in Canada. The research reported in this thesis was limited to the studies that used the final versions of the 5-items that make up the CLAS.

Validation of the CLAS

Given the existence of a widely used and well-validated measure of life satisfaction, the Satisfaction with Life Scale (SWLS, Diener et al., 1985), the CLAS must demonstrate that it improves upon this current gold standard. The content of the CLAS differs in a number of ways from the SWLS. While the CLAS is focused on contentment, fulfillment, and discrepancies, the SWLS makes more reference to satisfying material conditions of life, to regrets, and to meeting ideals. In addition to the SWLS, I also compare the validity of the CLAS to a commonly used single item life satisfaction measure: “*How satisfied are you with your life as a whole?*”.

External Validity

In developing a measure of life satisfaction, one of the challenges is finding manifestations of life satisfaction against which one can validate the self-report test scores (i.e., criterion validity). In establishing this criterion validity, the extent to which scores on the CLAS correlate with non-test manifestations of life satisfaction needed to be considered. As well, a method to test the somewhat controversial contention that valid life satisfaction scores should be relatively normally distributed needed to be developed. To accomplish both these objectives, daily reports of level of life satisfaction across a two-week period were used as a non-test criterion of life satisfaction and as a means of exploring the shape of the distribution of life satisfaction scores. As discussed previously, Oishi (2002) demonstrated that Westerners' global ratings of the goodness of the week as a whole were significantly inflated relative to daily ratings of the "goodness" of the day averaged over a week. To estimate people's life satisfaction without using a global evaluation, participants were asked to rate, on a single-item, their satisfaction with their life each day for 14 days. An average life satisfaction rating was generated based on the 14 days and compared with the global measures of life satisfaction. I predicted that average daily ratings would be normally distributed and would not differ significantly from participants' scores of life satisfaction on the CLAS, but would be significantly lower than scores on the SWLS.

To generate a non-test manifestation of life satisfaction that does not rely on self-report life satisfaction, the second criterion of people's level of life satisfaction is the extent to which, in their daily lives, they were actively engaged in efforts to escape their life. It seems reasonable to assume that people who are feeling content and satisfied with their lives should not be spending a lot of time trying to distract themselves from the circumstances of

their life. A number of studies have shown that unhappy people who are not satisfied with their lives watch more television (Kubey & Csikszentmihalyi, 1990; Morgan, 1984) because television diverts attention away from uncomfortable self-discrepancies (Moskalenko & Heine, 2003). I predicted that life satisfaction scores would be significantly negatively correlated with daily levels of television watching and with other escapist coping behaviours such as alcohol consumption.

When people are living fulfilling lives and are feeling as if they are satisfying their aspirations, this life satisfaction is expected to act as a psychological resource that can buffer them against depression and stressful events and can improve immune functioning (Penley, Tomaka, & Wiebe, 2002). For example, people who report higher levels of life satisfaction report fewer symptoms of depression (Diener, 1984). In addition to assessing self-report symptoms of depression, the daily levels of perceived stress and daily physical health were also assessed by having university students report the physical symptoms such as sore throat, headaches, and fatigue that they experienced daily for two weeks. Because the positivity-biases that influence global life satisfaction ratings likely also influence other self-report indicators of subjective well-being such as perceived stress, I expected that the predictive validity of the CLAS would be distinguished from the SWLS and single-item measure on the more objective measures of well-being such as physical symptoms and amount of television watching.

Sensitivity

One of the central issues in the measurement of life satisfaction is ensuring that the measure is sensitive to meaningful changes in life circumstances and yet not so sensitive as to be indistinguishable from measures of emotion or mood states (Lucas et al., 1996). To test

the CLAS' sensitivity to aspects of life known to influence life satisfaction, in both general population and university samples, life satisfaction scores as a function of age, income, financial hardship, and marital status were examined. Most researchers argue that life satisfaction and trait affect are distinct but correlated components of subjective well-being (e.g., Lucas et al., 1996). I accept this model of subjective well-being and thus test the CLAS' discriminant validity from trait affectivity. This is a particularly important objective given that affective content has been added to the items.

In addition to establishing discriminant validity, examining life satisfaction scores in relation to trait affectivity also provides another opportunity to assess the scales' construct validity. People who report a high level of life satisfaction should also experience high levels of contentment and satisfaction affect in their daily lives. Two measures of affect were included: (1) the positive and negative affectivity scale (PANAS, Watson, Clark & Tellegen, 1988) and (2) the affect grid (Russell, Weiss, & Mendelsohn, 1989). The PANAS assesses two independent (i.e., uncorrelated) dimensions of emotion using 10 positive and 10 negative emotion adjectives. High negative affectivity is characterized by emotions such as irritable, scared, distressed, and ashamed; high positive affectivity is characterized by positive emotions such as excited, enthusiastic, and inspired. On the PANAS, contentment and satisfaction, which are low arousal positive emotional states (Yip, Russell, & Feldman Barrett, 1999), are not assessed directly and are represented by low NA rather than by the PA dimension. The affect grid (Russell et al., 1989) provides a more direct measure of satisfaction and contentment affect. Similar to the PANAS, the affect grid assesses two dimensions of emotion, arousal and pleasure, with contentment indicated by high levels on the pleasure dimension. The affect grid dimensions represent a 45 degree rotation of the

PANAS dimensions, with arousal and pleasure falling midway between PANAS' positive affect and negative affect.

Most life satisfaction measures have been validated against the PANAS.

Researchers, however, have not adequately dealt with the somewhat problematic findings that life satisfaction measures often correlate more highly with PA than they do with NA (e.g., Lucas et al., 1996). These findings suggest that people who more often experience excitement and alertness are more satisfied with their lives than people who generally feel satisfied and content. One possible explanation for this pattern is that state PA inflates the relation between life satisfaction and trait PA. When people are in a high arousal PA state (e.g., feeling excited or enthusiastic), this will likely inflate their trait PA scores by making other instances of PA emotions more accessible in memory and might also lead people to evaluate their life in a more positive light. To avoid any confounding effect of state PA, the affect and life satisfaction data were collected on different days and daily diary methodology was used to assess trait affect. I expected that the life satisfaction measures would predict lower average daily levels of NA more than higher levels of PA and, with the affect grid dimensions, predict pleasure more than arousal.

Overview of the Studies

In three studies I report the development of the 5-item CLAS and explore its reliability and validity. The CLAS was compared to the SWLS in all three studies and to a popular single-item measure in Study 2. Although scale development research is often limited by the reliance on university samples (e.g., Robinson, Shaver, & Wrightsman, 1991), the development of the CLAS, described in Study 1, was based on three general population samples. The Institute for Social Research and Evaluation (ISRE) at the University of

Northern British Columbia regularly conducts quality of life surveys at the community and provincial levels. Study 1 is based on three ISRE surveys: one community-level (Prince George, British Columbia) and two provincial-level (British Columbia).

Assessing the construct validity of a new scale consists of demonstrating that its pattern of correlations with measures of other constructs conforms to (a) the conceptual specification of the life satisfaction construct and (b) the expected antecedents and consequences of life satisfaction (Wiggins, 1973). In terms of antecedent conditions, I expected that participants' level of life satisfaction would be affected by significant pre-existing life conditions such as financial hardship. The sensitivity of the life satisfaction measures to these life conditions was examined in Studies 1 and 3, with Study 1 testing age, income and marital status and Study 3 testing financial hardship.

In terms of investigating the consequences of life satisfaction, both Studies 2 and 3 contained a daily diary component to investigate whether the global life satisfaction measures predicted subjective well-being experienced in daily life. In Study 2, participants who reported lower levels of life satisfaction relative to those high in satisfaction were expected to experience more daily NA, perceived stress, and stress-related physical symptoms and to engage in more escapist activities such as television watching and alcohol consumption in daily life. In addition to predictive validity, discriminant validity tests were conducted in Study 2. Life satisfaction, as a component of subjective well-being, was expected to be correlated with other indicators of subjective well-being such as self-esteem and affect, but to also be discriminant from these constructs.

The primary purpose of Study 3 was to investigate the contention that levels of life satisfaction as experienced in daily life fall closer to the neutral or mid-point of the

measurement scale than at the satisfied or three-quarters mark. To do this, participants rated their level of life satisfaction daily on the single-item measure for a two-week period. The average daily life satisfaction scores were then calculated and the resultant distribution of scores was examined and compared to that of the CLAS and the SWLS. Study 3 thus provides a test of criterion validity.

CHAPTER III

Study 1

The development of the CLAS was based on three general population samples, one at the community level (Prince George, British Columbia) and two at the provincial level (British Columbia). The surveys were administered out of the Institute for Social Research and Evaluation (ISRE) at the University of Northern British Columbia. The community survey and first provincial survey were conducted in February 2005; the second provincial survey was conducted in May 2005.

Method

Participants

For each of the mail-out surveys, simple random samples were generated from a provincial telephone directory service. The characteristics of the samples and response rates are provided in Table 1. According to the 2001 census, the demographic composition of the city of Prince George differs from that of the province in three main ways. The residents of Prince George are younger (median age of 33.9 versus 38.4) and less highly educated, and more residents are of aboriginal descent (Statistics Canada, 2001). In terms of the representativeness of these samples, relative to the 2001 census, in all three samples married people, people with university degrees, employed people, and older people are over-represented, and women were slightly over-represented in the Prince George sample (55 percent vs. 50 percent).

Table 1
Study 1 Sample Characteristics

Study	Number of surveys sent out	Number of respondents	Response rate (percent)	Age range	Age mean (SD)	Number of males	Number of females
1a (PG)	2500	494	20	19 - 88	49.24 (14.37)	220	273
1b (BC)	5000	780	16	18 - 95	52.84 (15.48)	377	398
1c (BC)	5000	713	14	19 - 92	53.96 (16.45)	330	379

Note. Study 1a = February 2005 Prince George community; Study 1b = February 2005 British Columbia; Study 1c = May 2005 British Columbia.

Measures

On the questionnaire it was stated that the research was being conducted out of the Institute for Social Research and Evaluation of the University of Northern British Columbia. Any member of the household aged 18 years or older was asked to complete the questionnaire and return it in the enclosed stamped envelope within a month of receiving the questionnaire. The participants were informed that the 5-page questionnaire should take no more than 20 minutes to complete. The questionnaire consisted of six sections each investigating different aspects of quality of life. In the last two sections of the questionnaire, participants completed two measures of life satisfaction, the CLAS and the SWLS, and demographic variables.

Life satisfaction. Both the CLAS and the SWLS (Diener et al. 1985) are composed of 5 Likert items. Respondents indicate the extent to which they agree or disagree with the items on a 7-point scale on which 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neutral*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*. The 5-items of the CLAS are listed in Table 2. To facilitate comparisons among the CLAS, the SWLS and the single-item

life satisfaction measure used in Studies 2 and 3, instead of reporting the sum of the 5 items that make up the CLAS and the SWLS I report the mean score across items.

Demographic variables. Participants reported their age, gender, highest level of education completed, employment status, marital status and gross household income.

Table 2
Structural Coefficients and Descriptive Statistics for CLAS Items

Item	Factor loading	Corrected item-total correlation	<i>M</i>	<i>SD</i>
1. I am very content with my life.	.87	.77	4.79	1.64
2. I am living my life to the fullest.	.87	.76	4.34	1.67
3. When I examine my life as a whole, I feel I am not meeting my aspirations. ^a	.68	.56	4.19	1.66
4. I feel dissatisfied because I'm not doing everything that I want to be doing in my life. ^a	.75	.63	4.06	1.79
5. Nothing is currently lacking in my life.	.84	.72	4.02	1.74

Note. *N* = 1,987. Scale ranges from 1(*strongly disagree*) to 7(*strongly agree*).

^a Reverse-keyed item.

Results and Discussion

First, I examine the data relevant to the internal consistency and factor structure of the CLAS, and then examine the distribution of scores of the CLAS and SWLS. Given that the component factor analyses and reliability analyses yielded highly similar results in the three data sets, I combined the data from all three samples (*N* = 1987) to provide the description of the psychometric properties of the CLAS and SWLS. Finally, for both the CLAS and the SWLS, I examine the sensitivity of these measures to life circumstances including age, income and marital status.

CLAS Scale

The items for the CLAS (rank ordered by mean scores) and their descriptive statistics are presented in Table 2. The items “*nothing is currently lacking in my life*” and “*I feel*

dissatisfied because I'm not doing everything that I want to be doing in my life" were the items on which respondents reported the lowest average scores, with the mean score falling virtually at the mid-point of the measurement scale. The highest average score was obtained on the item *"I am very content with my life"*. The mean score for this item fell closer to the response choice of *slightly agree*.

Internal consistency. With the combined sample, the item analyses indicated that each of the CLAS items was highly correlated with the total scale (see Table 2). The corrected item-total correlations ranged from .56 to .77, with an average of .69. The negatively keyed items produced the lowest item-total correlations. An examination of the combined sample inter-item correlation matrix revealed that all of the items were positively inter-correlated, with correlations ranging from .39 to .79 (see Table 3). The average alpha reliability coefficient for the scale across the three samples was .87 (see Table 3). The alphas, item-total correlations, and inter-item correlations all indicate that the CLAS exhibits a high level of internal consistency.

Evidence for a general factor. In addition to the reliability data, factor analyses of the five items yielded strong evidence of a single, general factor. Principal-components factor analyses in each sample yielded only one factor with an eigenvalue greater than 1.0. In each sample, every item loaded positively on the first unrotated factor, with a minimum item loading of .66. In the combined sample, the minimum item loading was .68 (see Table 2). Scree tests also supported the unidimensionality of the scale. In the combined sample, the first factor accounted for 65 percent of the variance.

Table 3
Study 1 Scale Statistics

Study scale	Total		<i>t</i> (<i>df</i>)	Interitem <i>r</i>		Skew	α
	<i>M</i> (<i>N</i>)	<i>SD</i>		<i>x</i>	<i>Range</i>		
Combined							
CLAS	4.30 (1973)	1.37		.56	.39 - .79	-.17	.87
SWLS	4.68 (1982)	1.39		.65	.51 - .80	-.55	.90
1a							
CLAS	4.23 (491)	1.30	10.64 (490) ***	.54	.32 - .73	-.15	.85
SWLS	4.65 (493)	1.32		.63	.51 - .80	-.45	.89
1b							
CLAS	4.28 (776)	1.38	11.19 (775) ***	.57	.42 - .82	-.17	.87
SWLS	4.62 (778)	1.44		.67	.54 - .80	-.48	.91
1c							
CLAS	4.36 (706)	1.40	12.26 (704) ***	.57	.41 - .79	-.18	.87
SWLS	4.76 (711)	1.39		.65	.49 - .82	-.68	.90

Note. CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale.

Combined Study = Studies 1a, 1b, and 1c; Study 1a = February 2005 Prince George community; Study 1b = February 2005 British Columbia; Study 1c = May 2005 British Columbia.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Distributions of Scores on the CLAS and SWLS

Table 3 provides the means, standard deviations, and skewness of the CLAS and SWLS for the combined-sample as well as for each of the separate samples. The mean scores on the CLAS and on the SWLS remained consistent across the three samples, with somewhat higher scores reported in the second provincial study conducted in May relative to the two samples collected in February. This slight difference suggests that life satisfaction ratings on both the CLAS and SWLS are slightly sensitive to season, with higher scores being reported in the spring than in the winter. Similar seasonal influences on ratings of subjective well-being have been reported by other researchers (Andrews & Withey, 1976).

As can be seen in Table 3, the average life satisfaction ratings were lower on the CLAS ($M = 4.30$, $SD = 1.37$) than on the SWLS ($M = 4.68$, $SD = 1.39$). Paired sample *t*-tests conducted on each data set indicated that these differences were statistically significant: 1a, *t*

(490) = 10.64, $p < .001$; 1b, $t(775) = 11.19$, $p < .001$; 1c, $t(704) = 12.26$, $p < .001$. The difference in the distribution of the scores is provided in Figure 2, where it can be seen that SWLS is considerably more negatively skewed (skew = $-.55$) than the CLAS (skew = $-.17$). Despite the different distributions, the standard deviations of the CLAS and the SWLS were very similar and the two scales were significantly correlated in all three samples: Study 1a, $r = .78$; Study 1b, $r = .82$; Study 1c, $r = .82$, all $ps < .001$. Thus the CLAS and SWLS have a significant amount of conceptual overlap.

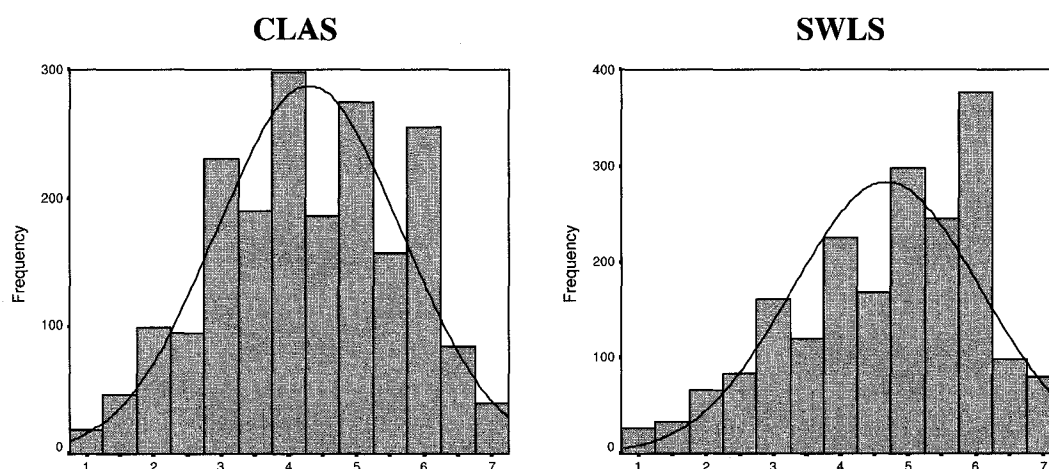


Figure 2. Histograms of the CLAS and the SWLS.

Sensitivity of Life Satisfaction Measures to Demographic Conditions

Gender. Average levels of life satisfaction reported by men and women in the three samples are shown in Table 4. Consistent with previous research (e.g., Diener, 1984), there were no gender differences in levels of life satisfaction on either the CLAS or SWLS (all $ts < 1.5$).

Table 4
Life Satisfaction Scores by Gender

Study scale	Males		Females	
	<i>M (N)</i>	<i>SD</i>	<i>M (N)</i>	<i>SD</i>
1a				
CLAS	4.31 (219)	1.27	4.17 (272)	1.32
SWLS	4.68 (220)	1.28	4.62 (273)	1.35
1b				
CLAS	4.29 (375)	1.37	4.27 (401)	1.39
SWLS	4.64 (376)	1.44	4.61 (402)	1.43
1c				
CLAS	4.44 (328)	1.40	4.28 (378)	1.39
SWLS	4.80 (330)	1.38	4.72 (381)	1.41

Note. CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale. Combined Study = Studies 1a, 1b, and 1c; Study 1a = February 2005 Prince George community; Study 1b = February 2005 British Columbia; Study 1c = May 2005 B.C.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Age. Many researchers have found that older people report slightly higher levels of life satisfaction than younger people (e.g., Argyle, 1999; Cummins, Okerstrom, Woerner, & Tomin, 2005; Michalos, Hubley, Zumbo & Hemingway, 2001). Consistent with these findings, the CLAS was positively correlated with age in all three samples (see Table 5) indicating that older people consistently reported somewhat higher life satisfaction than younger people. The SWLS, however, was only positively correlated to age in the February provincial sample. Thus, the CLAS was more sensitive to age differences than was the SWLS.

Table 5
Life Satisfaction Correlated with Age and Income

Study	Age <i>r</i>		Income <i>r</i>	
	CLAS	SWLS	CLAS	SWLS
1a	.20***	.06	.16**	.21***
1b	.20***	.12**	.15***	.23***
1c	.14***	.07	.20***	.23***

Note. CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale. Combined Study = Studies 1a, 1b, and 1c; Study 1a = February 2005 Prince George community; Study 1b = February 2005 British Columbia; Study 1c = May 2005 B.C.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Marital status. Past research has found that people who are living in long-term romantic relationships report more life satisfaction than people who are single (Arrindell, Meeuwesen, & Huyse, 1999; Diener, Gohm, Suh, & Oishi, 2000). To test for these differences I compared life satisfaction scores of people who reported that they were married to those of people who were single. In all three samples, people who were married reported significantly higher life satisfaction than those who were single (see Table 6).

Table 6
Life Satisfaction Scores as a Function of Marital Status

Study scale	Married		Single		<i>t</i> (<i>df</i>)
	<i>M</i> (<i>N</i>)	<i>SD</i>	<i>M</i> (<i>N</i>)	<i>SD</i>	
1a					
CLAS	4.38 (302)	1.22	3.66 (47)	1.37	3.68(347)***
SWLS	4.84 (303)	1.21	4.03 (48)	1.46	4.20(349)***
1b					
CLAS	4.54 (409)	1.34	3.99 (78)	1.34	3.32(485)**
SWLS	4.94 (409)	1.35	4.27 (78)	1.40	4.02(485)***
1c					
CLAS	4.58 (369)	1.35	3.87 (66)	1.27	3.96(433)***
SWLS	4.99 (372)	1.29	4.26 (66)	1.38	4.16(436)***

Note. CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale. Combined Study = Studies 1a, 1b, and 1c; Study 1a = February 2005 Prince George community; Study 1b = February 2005 British Columbia; Study 1c = May 2005 B.C.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Income. The importance of level of income in increasing life satisfaction is one of the more heavily debated issues in the life satisfaction literature. Generally a positive but weak correlation is obtained between life satisfaction and income (Diener & Biswas-Diener, 2002; Easterlin, 2001). Consistent with past findings, income was a significant but modest predictor of life satisfaction on both scales (see Table 5). The average correlation across the three samples was $r = .17$ for the CLAS and $r = .22$ for the SWLS. The slightly higher correlation found with the SWLS is likely due to item content: while the CLAS does not

specifically refer to material conditions of one's life, the SWLS has two items that can be linked to material wealth: "*the conditions of my life are excellent*" and "*so far I have gotten the important things I want in life*".

Summary

The results of Study 1 indicate that life satisfaction as assessed with the CLAS is a unidimensional construct that is relatively normally distributed in the population. People reported significantly lower levels of life satisfaction on the CLAS than on the SWLS. Nevertheless the SWLS and CLAS were highly correlated suggesting that the measures are assessing the same underlying construct and differ primarily in estimates of absolute levels of satisfaction. Both the CLAS and SWLS were sensitive to life conditions including marital status and income such that married and higher income people reported somewhat higher levels of life satisfaction than single or lower income people. With respect to changes in life satisfaction over the life span, aging was associated with increasing life satisfaction on the CLAS, but this developmental pattern was not found reliably with the SWLS.

CHAPTER IV

Study 2

A central aim of the present research was to ensure that the validity of the global life satisfaction measures was verified against daily experiences of subjective well-being not simply verified against other global measures of subjective well-being. To do this, both studies 2 and 3 included a pretest questionnaire and a two-week daily diary component in which participants completed a structured diary at the end of the day. Daily diary methodology allows for relatively on-line evaluations of daily life states and thus decreases distortions due to delayed recall. In the diary component of Study 2, I included a measure of daily NA and PA. While I predicted that life satisfaction would be moderately correlated with daily affect, I also predicted that the global life satisfaction measures would be more highly correlated with average daily NA than with PA because feeling content and satisfied is closer to low NA than high PA. To examine the predictive validity of the life satisfaction measures against daily experiences, the daily diary also included measures of perceived stress, stress-related physical symptoms, and escapism.

To examine the discriminant validity of the CLAS, the pretest included a measure of self-esteem and a measure of socially-desirable responding called self-deceptive enhancement (Paulhus, 1988, 2002). Given that the CLAS items include content linked to self-discrepancies, I wanted to ensure that the CLAS was distinct from self-esteem. Self-deceptive enhancement is a trait operationalization of positive illusions or the tendency to exaggerate one's positive qualities. People scoring high on self-deceptive enhancement are more likely to make the hindsight bias, to show discrepancies between self-other ratings of adjustment, and to be narcissistic (Paulhus, 2002; Paulhus, Harms, Bruce & Lysy, 2003).

Because people report lower absolute levels of life satisfaction on the CLAS than on the SWLS, I expected that the CLAS would be less highly correlated with self-deceptive enhancement.

Method

Study 2 was conducted in three phases: a pre-test questionnaire (January 2005), a two-week daily diary (one week before Spring Break and one week after) and a retest questionnaire (March 2005).

Participants

Participants were recruited from introductory psychology classes at the University of Northern British Columbia to participate in a study of student life satisfaction. Students were told that they could complete the questionnaire study, which involved completing two questionnaires (pre-test in January and retest in March) and, if they were interested, they could also participate in a daily diary study investigating daily stress, health and well-being.

Table 7
Study 2 Sample Characteristics at Each Stage

Phase	Number of participants	Age range	Age mean (SD)	Number of males	Number of females
1 Initial Questionnaire	214	17 - 43	20.09 (4.20)	64 (30%)	146 (68%)
2 Daily Diary (two weeks)	75	18 - 40	20.32 (4.26)	17 (23%)	56 (75%)
3 Retest Questionnaire	132	17 - 43	20.22 (4.31)	36 (27%)	94 (71%)

Interested participants picked up a pre-test question and returned it at their next class. Those interested in participating in the diary study provided contact information with the pre-test questionnaire. All students interested in the diary study were contacted either by email or telephone and were asked to participate. All participants received extra course credit for

participation in each stage of the data collection. The characteristics of the sample for each phase are provided in Table 7.

Questionnaire Measures

The pre- and retest questionnaires each took approximately 25 minutes to complete. Both included three measures of life satisfaction. The pre-test questionnaire also included measures of socially-desirable responding, self-esteem, and general physical health. The retest questionnaire included a measure of depressive symptoms. The questionnaires and diary included additional measures to those listed below, but only the measures relevant to the present hypotheses are described below.

Life satisfaction. The three measures of global life satisfaction included: the CLAS and SWLS, and a popular single-item measure: “*how satisfied are you with your life as a whole*” (7-point scale, 1=very dissatisfied to 7=very satisfied, Michalos, 1985).¹ The test-retest reliability and validity of the single-item measure has been established in Andrews (1984).

Self-esteem. Self-esteem was measured with the 10- item Rosenberg Self-Esteem Scale (Rosenberg, 1965), which assesses generalized feelings of self-acceptance or self-worth. I used a 7-point Likert format with values ranging from *strongly disagree* (1) to *strongly agree* (7).

Socially desirable responding. Socially desirable responding was assessed using the Self Deceptive Enhancement scale of the Balanced Inventory of Desirable Responding (BIDR version 6 – Form 40A, Paulhus, 1991). This measure consists of 20 items assessed on a 7-point Likert scale with values ranging from *not true* (1) to *very true* (7). A sample item is “*I never regret my decisions*”. Socially-desirable responding is indicated by strong

endorsement of the items. Participants receive one for each item on which they rate a “6” or “7”. Thus, scores can range from 0 to a maximum of 20. The construct validity of self-deceptive enhancement has been established by Paulhus (1998a, 1998b).

General physical health. I assessed participants’ general level of physical health using two of the eight dimensions of the Short-Form-36 Health Survey (SF-36; Ware & Sherbourne, 1992). The dimensions used were level of physical functioning in typical daily activities and amount of bodily pain including its interference with work. The physical functioning dimension consists of ten items concerning activities that you might perform during a typical day, such as *lifting or carrying groceries*. Participants are asked if their health now limits them in these activities: 1. *Yes, Limited A Lot*, 2. *Yes, Limited A Little*, 3. *No, Not Limited At All*. The bodily pain dimension consists of two items concerning the time period of the past four weeks. Participants are asked to rate the amount of bodily pain experienced with values ranging from *none* (1) to *very severe* (6); and the amount that pain interfered with their normal work with values ranging from *not at all* (1) to *extremely* (5). For the scoring of these items, I used the scoring approach proposed by The Health Institute, which assigns different weights to specific responses (as described in Ware & Sherbourne, 1992). After arriving at scores ranging from 0 to 100 for these two dimensions, I converted them into z-scores. I then averaged the z-scores for the physical functioning dimension and the bodily pain dimension to arrive at the initial level of physical health for the participants.

Depressive symptoms. Symptoms of depression were assessed with the Beck Depression Inventory (BDI; Beck, 1967). The BDI is one of the most widely used self-report measures of symptoms of depression. It is a 21-item questionnaire that assesses the presence and severity of cognitive, motivational, somatic, and affective symptoms of depression. In

both psychiatric and non-psychiatric samples, the BDI demonstrates good psychometric properties (Beck, Steer, & Garbin, 1988). Participants rated their level of symptoms during the week prior to assessment.

The Daily Diary

Participants completed a diary survey each day for two weeks: one week before Spring Break (January 27th to February 3rd) and one after (February 24th to March 3rd). At an information session at the start of the first diary segment, participants were given their first set of diary report forms, and were instructed to complete them everyday at bedtime for the next 7 days. The daily diary was three pages in length and took about 5 minutes to complete after participants became familiar with it. Participants first rated their mood, then their degree of escapism and level of stress and, lastly, indicated the occurrence of physical symptoms experienced during the day (described below). After Spring Break, participants were contacted to pick up their second week of diaries.

Although participants were asked to complete 14 diary entries, it was not uncommon for participants to miss some days over the course of a 2-week period. At the information session, participants were strongly instructed to leave the diary record blank if they had forgotten to complete the daily report. Seventy per cent of participants ($N = 52$) submitted complete data. Of the remaining 23 participants, 13 missed 1 day, 7 missed 2 or 3 days, and 3 did not complete the second 1-week diary segment. I generated the diary variables by first calculating the daily index of the variable (e.g., daily NA) for each participant for each day and then I calculated an average score across the days completed by the participant.

Mood. Daily mood was assessed with the PANAS (Watson et al., 1988), which includes ten adjectives to assess positive affect (e.g., *interested*, *enthusiastic* and *inspired*),

and ten adjectives to assess negative affect (e.g., *scared*, *hostile*, and *ashamed*) on a 5-point scale anchored by *very slightly or not at all* (1) to *extremely* (5). Participants were instructed to report the extent to which they felt each of the 20 emotions on average each day. As described above, trait NA was calculated by first generating a daily NA index by averaging their ratings across the ten NA adjectives and then averaging participants' daily NA scores across their completed diary days. The same was done for trait PA.

Escapism. To assess daily escapism, I adapted an escape-coping item from the Ways of Coping Scale (WOC, Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) that assesses behavioural efforts to escape or avoid. The WOC item is: "I tried to make myself feel better by eating, drinking, smoking, etc". Because I wanted a very sensitive measure of escapist activities in daily life, I separated the single item into four items assessing escapist behaviours: eating, drinking alcohol, smoking, and watching television (TV). By changing the instructions, the WOC scale can either assess situational forms of coping (e.g., to what extent did you use _____ to cope with a particular event) or chronic individual differences in ways of coping (to what extent do you generally use _____ to cope). Because I was interested in the extent to which people were generally trying to escape their life rather than their desire to escape a specific event, I asked participants to rate the extent to which they tried to make themselves feel better *that day* by engaging in each of the four activities, using the following scale: *1=not at all; 2=a little, 3=moderate amount, 4=quite a bit, 5=a lot*. Indices for eating, smoking and alcohol use were created by averaging the score for each item across the diary days.

For TV watching, I also asked participants to indicate the number of hours that they watched TV each day (from 0 to 20 hours). Daily, participants watch on average 1.71 hours

($SD = 1.08$) of television. I was then able to calculate an index of TV escapism by combining hours of TV watching with the item assessing TV use as escapist coping. I did not simply use number of hours of TV watching daily because TV is not exclusively an act of escapism, it is sometimes a social activity (especially among students living in university residence) or a means of relaxing at the end of the day. To calculate the daily TV coping index, for each diary day I converted the daily number of hours of TV watched (between 0 and 20) and the daily extent that TV watching was used as a coping strategy (between 1 and 5) to a common 0 to 1 scale and then averaged the two scales to arrive at a daily TV coping index.

Perceived stress. To measure the degree to which participants felt that day-to-day demands exceed their ability to cope I adapted Cohen and Williamson's (1988) *Perceived Stress Scale* (PSS) for daily use. From the original ten-item scale, I selected two positively valenced items and two negatively valenced items. In addition, I changed the wording and the rating choices of the selected items to reflect a daily focus instead of a monthly focus. The four items I used were: *Today, to what extent did you feel (1) that you were unable to control the important things in your life; (2) confident in handling your personal problems; (3) that you could not cope with all the things that you had to do; (4) that you were on top of things.* (5-point scale, 1 = *not at all*, 2 = *a little*, 3 = *moderate*, 4 = *quite a bit*, and 5 = *a lot*). Items 2 and 4 are negatively-keyed.

Physical symptoms. I measured stress related physical symptoms with the Physical Symptoms Inventory (PSI; Spector & Jex, 1998). The PSI is an 18-item physical symptom checklist that includes bodily symptoms that can be brought on when a person is experiencing high levels of stress. Symptoms on the checklist include fever, shortness of breath, upset stomach, diarrhea, constipation, or fatigue. Participants provided a checkmark

beside the symptom if they had experienced it within the last 24 hours. Daily physical symptoms was the sum of the total number of symptoms experienced.

Results and Discussion

Distribution of Scores for the Life Satisfaction Scales

Paired sample t-tests indicated that mean life satisfaction scores on the CLAS were significantly lower ($M = 4.49$) than on the SWLS ($M = 4.91$), $t(213) = 6.91, p < .001$, and on the single item measure ($M = 5.12$), $t(145) = 9.69, p < .001$. Scores on the SWLS were also significantly lower than on the single-item measure, $t(145) = 4.47, p < .001$. The average scores on the CLAS and SWLS were somewhat higher in this university sample than in the general population samples of Study 1. Consistent with Study 1, the CLAS produced a near normal distribution of scores (skew = $-.21$), while the SWLS and the single-item measure were substantially more negatively skewed (SWLS skew = $-.70$; single-item skew = $-.81$).

Reliability

Order effects. To test the CLAS and SWLS for order effects, I altered the placement of the scales by using two counterbalanced versions of the questionnaire. The CLAS alternated with the SWLS was either the first or fifth scale in the questionnaire. While scores on the CLAS did not differ significantly as a function of scale placement, $t(212) = 1.69$ *ns*, scores on the SWLS did, $t(212) = 2.50, p < .05$. Participants who completed the SWLS at the beginning of the questionnaire reported significantly higher levels of life satisfaction ($M = 5.11$) than participants who completed the scale after completing other measures of subjective well-being ($M = 4.71$). This finding indicates that people's rating of life satisfaction on the SWLS can be influenced by leading them to think about their life

satisfaction on other scales and about other aspects of their subjective well-being such as self-esteem. I did not test the single-item measure for order effects.

Test-retest. All three life-satisfaction measures were significantly correlated with their retest counterparts: CLAS, $r(130) = .72$, SWLS, $r(132) = .70$, and single-item, $r(88) = .67$, all $ps < .001$. These correlations indicate that all three measures showed a similar level of stability across the two-month interval.

Convergent / Discriminant Validity

Life satisfaction. I assessed convergent validity by examining the correlations between the CLAS and the other two life satisfaction measures. The CLAS was significantly correlated with both the SWLS, $r(214) = .72$, and the single-item measure, $r(146) = .72$; and the SWLS and single-item measure were also highly correlated: $r(146) = .79$, all $ps < .001$.

Table 8
Correlations between Life Satisfaction and Self-Deceptive Enhancement, Self-Esteem (SE), and Daily Mood (NA/PA)

Life Satisfaction Measures	SE	Self-deceptive enhancement	Average Daily NA	Average Daily PA
CLAS	.64***	.44***	-.49***	.20
SWLS	.70***	.36***	-.50***	.20
Single-item	.66***	.48***	-.39**	.26

Note. Single-item= single-item life satisfaction measure; CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Self-esteem. Consistent with previous research, all three life-satisfaction measures were highly correlated with self-esteem (see Table 8). While the magnitude of these correlations might raise concerns about the discriminant validity of the life satisfaction

measures, Lucas et al. (1996) tested the discriminant validity of well-being measures, including the SWLS and the Rosenberg self-esteem scale, using a multitrait-multimethod matrix analyses (Campbell & Fiske, 1959). The SWLS met the rigorous discriminant validity criteria with respect to self-esteem. In the present study, among the three life satisfaction measures the SWLS was the most highly correlated with self-esteem.

Self-deceptive enhancement. As reported in Table 8, all three measures of life satisfaction were moderately, but significantly correlated with self-deceptive enhancement. Despite the fact that the CLAS produces lower average levels of life satisfaction than the SWLS and single-item measure, the CLAS item still captured significant variance associated with socially-desirable responding. Paulhus (1988, 2002) has found that Self-deceptive Enhancement, which assesses the tendency to hold an exaggerated positive self-view, is correlated with many self-report measures of adjustment. The present results indicate that transparent self-report measures of subjective well-being are vulnerable to people's desire to present unrealistically positive self-evaluations.

Diary variables: Negative and positive affect. The descriptive statistics for all of the diary variables are presented in Table 9. There were no gender differences (all t s < 1.74). The correlations between the life satisfaction measures and average NA and PA are presented in Table 8. Consistent with my predictions, the three life satisfaction measures were significantly negatively correlated with average daily NA. Thus participants who were less satisfied with their life in January relative to those who were satisfied reported more distress, anxiety, anger, and irritability in their life later in the academic term. Life satisfaction scores, however, did not prospectively predict high-energy positive emotional states such as enthusiasm, pride, interest, and excitement. These findings are consistent with other research

that has shown that life satisfaction is most closely linked to low arousal positive emotions such as contentment (Davern & Cummins, 2005).

Table 9
Descriptive Statistics for the Diary Variables

Diary Variable	<i>M</i>	<i>SD</i>	Range
Mood:			
Negative Affect (NA)	1.74	0.55	1.02 – 3.41
Positive Affect (PA)	2.63	0.66	1.37 – 4.66
Escapism:			
Hours of TV watched	1.71	1.08	0.00 – 5.88
TV coping item	1.65	0.64	1.00 – 3.29
TV coping index	0.21	0.08	0.10 – 0.45
Eating	1.76	0.81	1.00 – 4.36
Drinking Alcohol	1.24	0.50	1.00 – 4.38
Smoking	1.16	0.55	1.00 – 4.86
Well-Being:			
Perceived Stress	2.71	0.63	1.29 – 4.55
Physical symptoms	2.49	1.53	0.14 – 6.50

Predictive Validity - Escapism

Participants indicated the number of hours that they watched TV and rated the extent to which they used TV watching, eating, smoking and drinking alcohol to make themselves feel better during the day. The descriptive statistics for each form of behavioural escapism are provided in Table 9. I predicted that participants low in life satisfaction would be more likely than those high in satisfaction to be engaged in efforts to escape their lives by watching TV, drinking, etc. As shown in Table 10, while all three life-satisfaction measures predicted participants' tendency to smoke or consume alcohol to cope with their day, only the CLAS reliably predicted the tendency to watch TV and to eat as means of coping. Thus, the CLAS predicted all forms of escapism that I examined.

Table 10

Correlations between Life Satisfaction and Measures of Escapist Coping.

Life Satisfaction Measures	TV Coping index	Oral Consumption Coping		
		Eating	Drinking Alcohol	Smoking
CLAS	-.27*	-.23*	-.37**	-.36**
SWLS	-.19	-.21	-.34**	-.36**
Single-item	-.22	-.26	-.40**	-.34*

Note. Single-item= single-item life satisfaction measure; CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale. $N = 75$ for correlations with the CLAS and SWLS and $N = 52$ for correlations with the single-item measure (see Footnote 1)

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Predictive Validity – Psychological and Physical Well-Being

I hypothesized that feeling satisfied with life would act as a psychological resource that buffers people against stressful events and thus protects them from depression or stress-related physical health problems. Levels of perceived stress and physical symptoms were assessed in the daily diary and symptoms of depression were assessed in the retest questionnaire. In the pre-test questionnaire I assessed general level of physical health to control for major health problems when examining the relation between life satisfaction and daily physical symptoms.

Psychological well-being. As can be seen in Table 11, all three life-satisfaction scales were significantly negatively correlated with depressive symptoms and perceived stress indicating that students lower in life satisfaction reported more symptoms of depression and reported higher stress levels in their daily lives.

Physical health. Regression analyses were used to examine the relation between each of the life satisfaction measures and daily physical symptoms controlling for initial levels of general health (the beta weights are shown in Table 11). After controlling for general health, the CLAS significantly predicted average daily stress-related symptoms, ($\beta = -.28$), $t(72) = -$

2.51, $p = .01$, as did the single-item measure, ($\beta = -.30$), $t(49) = -2.33$, $p < .05$, but the SWLS was marginal, ($\beta = -.22$), $t(72) = -1.96$, $p = .05$. In general, participants who reported higher levels of life satisfaction experienced fewer stress-related physical symptoms relative to those who reported low life satisfaction.

Table 11
Life Satisfaction Measures as Predictors of Psychological and Physical Well-Being

Life Satisfaction Measures	Perceived stress r	BDI r	Initial General Health Index r	Physical Symptoms r	Physical Symptoms β (SE β)
CLAS	-.50***	-.38***	.21**	-.35**	-.28 (.13)*
SWLS	-.47***	-.37***	.20**	-.29*	-.22 (.13)
Single-item	-.45**	-.44***	.25**	-.41**	-.30 (.15)*

Note. Single-item= single-item life satisfaction measure; CLAS = Contentment with Life Assessment Scale; SWLS = Satisfaction with Life Scale; BDI = Beck Depression Inventory
* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Summary: In terms of predictive validity, among the three life satisfaction measures the CLAS demonstrated the highest predictive validity and the SWLS the lowest.

CHAPTER V

Study 3

Using a sample of westernized Canadian students, I tested my contention that North Americans would generally feel neutral about their life rather than satisfied when asked to report their life satisfaction daily. To do this, participants rated their life satisfaction daily for two consecutive weeks. I predicted that the average daily ratings would not differ significantly from scores on the CLAS, but would be significantly lower than scores on the SWLS. In Study 2 I found that the three life satisfaction measures were significantly, negatively correlated with levels of NA in daily life. NA, however, is an indirect measure of low arousal positive emotional states such as contentment. To more directly tap the emotion of contentment in this study, the Affect Grid (Russell et al., 1989), which separately assesses daily levels of pleasant mood and daily level of arousal, was used. I predicted that the global life satisfaction measures would be more highly correlated with pleasantness than arousal. Finally, to assess whether the CLAS is sensitive to life's difficulties, I compared the life satisfaction scores of students who reported that they had experienced serious financial difficulties during the previous year with those who had not.

Method

The procedures in Study 3 were similar to those in Study 2 in that there was a pre-test questionnaire (September 2005) and a two-week daily diary (October 2005). The daily diary, however, was completed in two consecutive weeks.

Participants

As in Study 2, researchers recruited students from introductory psychology classes for this September 2005 study of student self-esteem. Students were told that they could complete the initial questionnaire, which was available in class and, if they were interested, they could also participate in a daily diary study of investigating daily events, mood, and life satisfaction. All participants received extra course credit for participation in each stage of the data collection. The characteristics of the sample for the two phases are provided in Table 12.

Table 12
Study 3 Sample Characteristics at Each Stage

Phase	Number of participants	Age range	Age mean (SD)	Number of males	Number of females
1 Initial Questionnaire	250	17 - 55	20.40 (4.92)	67 (27%)	183 (73%)
2 Daily Diary (two weeks)	134	17 - 55	21.23 (6.21)	31 (23%)	103 (77%)

Questionnaire Measures

The initial questionnaire was eight pages in length and took approximately 20 minutes to complete. It included the CLAS, the SWLS, a measure of major life events and other measures that were not relevant to the present study.

Financial hardship. To assess financial hardship, participants were asked to indicate if they had experienced any major financial difficulties within the last year. This item was adapted from the Social Readjustment Rating Scale (SRRS, Holmes & Rahe, 1967). Each event of the SRRS has been assigned a value representing the level of stress associated with the event. The “financial difficulties” event has a rating above 35 that indicates that most people find this event very stressful. The wording of the original item was changed from

'change in financial state' to *'major financial difficulties'* because most students when they return to university experience a change in their financial state.

Daily Diary Measures

At the diary information session in October, participants were given their first week of diary report forms and were instructed to complete the diary every day at bedtime for the next seven days and return their completed diaries to class or to the research lab at which time they received their second week of diary report forms. The daily diary was four pages in length and took about five minutes to complete daily. Participants first rated their daily mood, then their level of satisfaction with their life that day, and then completed a variety of other measures unrelated to the hypotheses of the present study. Compliance rates were reasonable for this diary study: 82 of the 134 participants (61%) submitted complete data of 14 diary entries, 17 of them (13%) missed 1 day, 22 of them (16%) missed 2 or 3 days, 6 of them (4%) missed 4 to 6 days, and 7 (5%) did not complete the second week of diary entries.

Mood. The Affect Grid (Russell et al., 1989) assesses mood along two dimensions: level of arousal and level of pleasant feelings; each is a 9-point scale in which 1= low levels and 9 = high levels. The Grid is presented as a 9 x 9 square containing a total of 81 boxes. Participants were asked “if you summed up your feelings today, how did you feel on average” and were instructed to record their response with an ‘X’ in the appropriate box considering both their level of arousal and degree of pleasant emotions. The vertical axis (arousal) was labeled at the top of the grid as “extremely high arousal” and at the bottom as “extremely low arousal. The horizontal axis (pleasant feelings) was labeled on left side of the grid as “extremely unpleasant feelings” and on the right side as “extremely pleasant feelings”.

Life satisfaction. To assess daily life satisfaction, the single-item global life satisfaction measure described in Study 2 was adapted to a daily measure. Participants' were asked to rate "How satisfied did you feel with your life today". This daily measure employed the same 7-point Likert scale anchored by *very dissatisfied* (1) to *very satisfied* (7) that was used for the single-item global measure.

Results and Discussion

Financial Difficulties

Descriptive statistics for the global life satisfaction measures are presented in Table 13. Independent samples *t*-tests were used to test whether life satisfaction scores were lower for students who had experienced financial difficulties during the year prior to the study relative to those who had not. People who had experienced significant financial difficulties reported significantly lower life satisfaction on both the CLAS ($M = 3.79$) and on the SWLS ($M = 4.13$) relative to people who did not have these difficulties; CLAS ($M = 4.35$), SWLS ($M = 4.68$), $t_s = 3.05$ and 3.10 , respectively, both $ps < .01$. Thus, both global measures of life satisfaction were found to be sensitive to experiences of serious financial problems.

Average Daily Mood

I calculated average daily pleasant mood and arousal by averaging participants' daily ratings of pleasantness across all of their diary entries and averaging their ratings of arousal across all of their diary entries. In terms of emotional arousal, men ($M = 5.27$) did not differ from women ($M = 5.38$), $t(132) < 1.0$, *ns*. In terms of pleasantness of daily mood, males ($M = 5.84$) reported significantly more pleasant moods than females ($M = 5.42$), $t(132) = 2.28$, $p < .05$.

I predicted that global life satisfaction scores would be associated with average levels of pleasantness in daily life, but would be unrelated to levels of arousal. These findings were confirmed. Both the CLAS and the SWLS were significantly correlated with the average daily pleasure: CLAS, $r(134) = .49, p < .001$ and SWLS, $r(134) = .46, p < .001$; but were not significantly correlated with average daily level of arousal; CLAS, $r(134) = .06, ns$ and SWLS, $r(134) = .13, ns$. Thus, people who reported higher levels of life satisfaction in September relative to those low in life satisfaction experienced more pleasant moods in October. The magnitude of the correlations between the global life satisfaction measures and pleasantness were very similar to the magnitude of the correlations between the life satisfaction measures and NA in Study 2.

Scale Distributions and Convergent Validity of Life Satisfaction Measures

Daily life satisfaction was calculated by averaging each participant's daily life satisfaction scores across all of their diary entries. The descriptive statistics for the life satisfaction measures are presented in Table 13. Consistent with the previous studies, there were no gender differences in levels of life satisfaction on any of the life satisfaction measures (all t s < 1.4). For the total diary sample, the average score on the daily life satisfaction measure ($M = 4.35, SD = 0.78$) fell between that of the SWLS ($M = 4.51, SD = 1.32$) and the CLAS ($M = 4.18, SD = 1.36$). For all three measures, including the SWLS, the mean score fell close to the mid-point or neutral point of the scale (i.e., four). The SWLS' mean score of 4.51 was the lowest score obtained for the SWLS in any of the samples. The distribution of scores for the daily life satisfaction measure differed from the global measures in terms of the spread of scores: the daily measure had a smaller standard deviation and positive kurtosis (1.63), which indicates a narrow and more peaked shape to the distribution.

The distribution of scores on the global ratings, particularly on the CLAS, produced a negative kurtosis (CLAS = $-.76$; SWLS = $-.50$), which reflects the flatter distribution of scores. Thus participants' daily ratings of life satisfaction were more homogenous than were their global ratings.

Table 13
Descriptive Statistics for the Life Satisfaction Pretest and Diary Measures

Measures	Mean	N	SD	Range	Kurtosis	Skew
Pretest:						
CLAS	4.18	134	1.36	1.40 – 7.00	$-.76$.01
SWLS	4.51	134	1.32	1.20 – 7.00	$-.50$	$-.43$
Diary						
Life Satisfaction	4.35	134	0.78	1.50 – 6.40	1.63	$-.61$

Consistent with Studies 1 and 2, the CLAS and the SWLS were highly intercorrelated, $r(240) = .80, p < .001$. Furthermore, the global measures were significantly, and similarly, correlated with the average daily measure; CLAS $r(134) = .64, p < .001$; SWLS $r(134) = .60, p < .001$. Paired sample t -tests were used to test for differences among the life satisfaction measures. Replicating the findings in Study 1 and 2, life satisfaction scores on the SWLS ($M = 4.55$) were significantly higher than on the CLAS ($M = 4.22$), $t(248) = 6.53, p < .001$. I hypothesized that the SWLS but not the CLAS would differ significantly from daily life satisfaction ratings. Although, as predicted, the CLAS ($M = 4.18$) did not differ significantly from average daily ratings ($M = 4.35$), $t(133) = -1.84, ns$; the SWLS ($M = 4.51$) also did not differ significantly from average daily ratings, $t(133) = 1.76, ns$. Thus both the CLAS and SWLS appear to be good estimates of levels of life satisfaction that participants reported in their daily lives.

CHAPTER VI

General Discussion

Happiness, it seems to me, consists of two things: first, in being where you belong, and second – and best – in comfortably going through everyday life, that is, having had a good night's sleep and not being hurt by new shoes (Theodor Fontane, 19th century German author).

Similarly to Fontane's (2006) quotation above, I found that life satisfaction as measured by the CLAS was indeed linked to everyday life experiences. In the present research, I tested the contention that North Americans' level of life satisfaction in daily life is closer to neutral than to satisfied and developed a new self-report life satisfaction measure with criteria that would reflect this level of satisfaction. To be satisfied with life on the CLAS, people must feel content with their life, be doing the things that they want to be doing, and be meeting their aspirations. In the following sections, I describe the results of my research, including the associations found with daily life experiences. In three studies, the CLAS' psychometric properties, its relations with other measures of subjective well-being, its sensitivity to life circumstances, and its predictive associations with daily experiences and behaviours including escapist activities and physical health were examined.

Absolute Levels of Life Satisfaction

Levels of depression and chronic stress and numbers of unhealthy days reported by North Americans suggest that there is less life satisfaction in the general population than is represented in existing self-report measures. Whereas life satisfaction assessed with the CLAS was relatively normally distributed around the neutral point of the measurement scale, the SWLS and single-item measures were both negatively skewed. Consequently, people reported significantly lower life satisfaction on the CLAS relative to the SWLS and single-

item measure. When the levels of life satisfaction reported in daily life were examined in Study 3 it was found, as predicted, that average daily life satisfaction fell close to the neutral point of the measurement scale ($M = 4.22$, $SD = .08$) supporting the contention that in daily life people's feelings of satisfaction with their life were, on average, closer to neutral than to satisfied. The mean score on the daily measure fell between the CLAS and the SWLS and did not differ significantly from either. Thus both the CLAS and SWLS approximated levels of life satisfaction that participants experienced in their daily lives. However, this research was conducted with a university sample and university samples typically report lower levels of life satisfaction than general population samples (Cummins, 2003). To generate a more representative estimate, the mean score on the CLAS and the SWLS from the combined sample of Study 1 were averaged based on the assumption that the CLAS and SWLS accurately bracket levels of life satisfaction experienced by people in their daily life as suggested in Study 3. This estimate of levels of life satisfaction in a more representative sample would fall closer to 4.5 on a seven-point scale. This estimate suggests that the average life satisfaction among residents of the province of British Columbia falls between neutral and slightly satisfied.

The CLAS

The CLAS is a brief five-item scale that can be easily incorporated into an assessment battery with minimal cost in time. Its psychometric properties yielded strong evidence of its reliability. Evidence of high internal consistency and factorial integrity together suggest that the scale items tap a single, general factor. Whereas the SWLS items are all positively-keyed, the CLAS includes both negatively- and positively-keyed items. As Pavot and Diener (1993) discuss, relying exclusively on positively-keyed items renders the SWLS vulnerable

to measurement error associated with response acquiescence. On the other hand, they also point out that reverse-worded items can be more confusing and thus contribute a different source of error in measurement. In the item analysis on the CLAS, the negatively-keyed items generated the lowest item-total correlations and had the lowest loading on the general factor. Nevertheless, the internal consistency of the CLAS assessed by coefficient alpha ranged from .85 to .87 and was only marginally lower than the SWLS, which ranged from .89 to .91. More importantly the lower internal consistency of the CLAS did not undermine other indicators of reliability or predictive validity, which were generally higher with the CLAS than with the SWLS. For example, participants' responses on the SWLS were affected by the location of the SWLS in the questionnaire such that significantly lower life satisfaction scores were reported when the SWLS was located after other measures of subjective well-being relative to when it was the first scale in the questionnaire. Thus, the CLAS proved to have higher reliability than the SWLS in terms of stability.

All three global life satisfaction measures were highly intercorrelated and correlated similarly with other indicators of subjective well-being including affect, self-esteem, escapism, symptoms of depression, and physical health. Together, these findings suggest that the three measures are assessing the same underlying construct and differ primarily in estimates of absolute levels of satisfaction.

Discriminant Validity

Given that people reported lower levels of life satisfaction on the CLAS than on the SWLS, it was expected that the CLAS would be less influenced by socially-desirable responding. This, however, did not prove to be the case. All three measures of life satisfaction were significantly correlated with self-deceptive enhancement – the unconscious

tendency to exaggerate one's positive qualities (Paulhus, 1988, 2002). The single-item measure was the most highly correlated, followed by the CLAS, and then the SWLS. Thus, people who need to believe that their life is more positive than it actually is will exaggerate their scores on the CLAS as much as they do on the SWLS. The CLAS produces a lower life satisfaction score because it creates a higher standard for satisfaction than the other measures not because it circumvents the tendency of some people to exaggerate their level of life satisfaction.

Within individualistic cultures it is difficult to imagine people who are dissatisfied with themselves (i.e., low self-esteem), but who report that they are very satisfied with their lives (Cummins & Nistico, 2002). Although researchers believe that numerous aspects of life such as one's living circumstances, health, work, and relationships affect global life satisfaction judgments, Lucas et al. (1996) raised the possibility that, for people in individualistic cultures, judgments of life satisfaction might simply represent happiness with one's self. After a careful analysis of discriminant validity, Lucas et al. concluded that self-esteem was distinct from life satisfaction despite the substantial correlation between the two measures. When constructing the CLAS, an item was included that was expected to have considerable overlap with self-esteem (*When I examine my life as a whole, I feel I am not meeting my aspirations*), but hopefully not so much as to render the CLAS not discriminable from self-esteem. As shown in Study 2, the three life satisfaction measures correlated highly with self-esteem, but among the three measures the CLAS had the lowest correlation. Thus, in terms of the magnitude of the correlations with enhancement and self-esteem, the CLAS demonstrates as acceptable a level of discriminant validity as the SWLS and the single-item measure.

Affect

Past research has demonstrated that evaluations of life satisfaction are not simply based on people's evaluations of the amount of time they experience positive or negative emotions (Diener, 1994; Kahneman et al., 2004; Lucas et al., 1996). For example, Kahneman et al. (2004) demonstrated recently that "net daily affect" (the difference between positive and negative affect) was only moderately correlated with life satisfaction ratings ($r = 0.38$). When life satisfaction is assessed at the same time as positive and negative affect, it is generally found to correlate either at a similar magnitude with both or somewhat higher with PA (e.g., Lucas et al.). Conceptually, however, life satisfaction should be particularly linked to moderate or low arousal positive affects such as feelings of contentment and satisfaction. Consistent with this formulation, Davern and Cummins (2004) found that among a number of different emotions contentment was the best predictor of life satisfaction.

To avoid any confounding influence of state affect, life satisfaction and affect were assessed at separate points in time with life satisfaction being assessed in the initial questionnaire and affect being assessed using the daily diary. In Study 2, consistent with my prediction that life satisfaction measures would predict lower levels of NA more than higher levels of PA, I found that life satisfaction scores on the CLAS and SWLS were more highly correlated with NA than with PA. I also found confirmation for my prediction for Study 3 that life satisfaction measures would predict pleasure more than arousal with the findings that the CLAS and SWLS scores were highly correlated with daily pleasure ratings, but not with daily arousal levels. Thus students who reported more life satisfaction at the beginning of their academic term relative to those with less life satisfaction experienced significantly lower negative affect and significantly more pleasure, but did not experience significantly

more PA states such as excitement or inspiration, or higher levels of arousal. Generally, the pattern of correlations between the three global life satisfaction measures and affect were consistent with the formulation that levels of life satisfaction should predict feelings of satisfaction and contentment in daily life. The magnitude of the correlations further demonstrates that life satisfaction is not synonymous with emotional experiences.

Sensitivity and Stability

The life satisfaction construct is hypothesized to be sensitive to changes in important life circumstances, but stable across minor changes or across changes in circumstances that are not important to the person. For example, the death of a spouse or the loss of a valued job would typically be expected to decrease levels of life satisfaction for a period of time. At the same time however life satisfaction is expected to stay stable across changes in life such as temporary increases in workload. The test-retest correlation across two months for the CLAS was .72, which was similar to that of the SWLS and single-item measure. Extensive research on the SWLS has demonstrated that the SWLS shows similar levels of temporal stability in different samples for similar timeframes (see Pavot & Diener, 1993 for a summary). Thus, the CLAS has similar stability as the SWLS for a two-month timeframe.

Consistent with previous research, married people were found to report higher life satisfaction than single people on both the CLAS and the SWLS and modest but significant correlations were found between income and the CLAS and SWLS, such that higher income was associated with higher life satisfaction. In a further exploration of the impact of financial hardship on life satisfaction, students who reported that they had experienced serious financial difficulties during the previous year relative to those who did not experience such difficulties reported significantly lower levels of life satisfaction on both the CLAS and

SWLS. Thus, life satisfaction as assessed by the CLAS demonstrates sensitivity to life conditions with the finding that it is influenced to some degree by one's standard of living and one's relationship status.

In the community samples, which had a good distribution of ages, the CLAS was found to be positively correlated with age in all three samples (average $r = .18$), but the SWLS was positively associated with age in only one sample. These findings suggest that the CLAS is sensitive to a developmental trend in life satisfaction. Two different theories have been advanced to explain the positive association often found between age and life satisfaction. One is that people become more satisfied because they gain wisdom and perspective and are thus better able to find satisfaction with what they have. Alternatively, Cummins et al. (2005) have argued that the positive association between life satisfaction and age is a product of happier people living longer and thus comprising a larger percentage of the older population. Given that an association was found between life satisfaction and levels of stress-related physical symptoms after controlling for general health levels in a university sample, it is possible that chronic dissatisfaction over the life span will produce significant health problems that could decrease longevity.

Consequences of Life Satisfaction

It was hypothesized that people who are content and satisfied with their lives would be less inclined to engage in escapist coping behaviours in daily life, such as television viewing, that indirectly indicate that their life is not entirely the life they want. Furthermore, it was predicted that life satisfaction would act as a psychological resource that would buffer people against daily stressful events. To assess escapism and stress-buffering some relatively objective aspects of daily life were included, in addition to the more subjective ratings of

level of perceived stress and coping. Thus, in Study 2 I assessed participants' ratings of their hours of television viewing and their daily physical health symptoms (e.g., headache, sore throat). Among the three global life satisfaction measures, the CLAS predicted all forms of escapist coping including television viewing, eating, drinking alcohol, and smoking such that people higher in life satisfaction engaged in less escapism than people low in life satisfaction. The SWLS and single-item measures were also negatively correlated with all forms of escapism, however they did not reliably predict TV watching and eating as modes of coping with daily life.

In terms of health outcomes it was found, as predicted, that life satisfaction assessed on all the measures was associated with lower levels of daily stress, fewer physical health problems and fewer symptoms of depression. In addition to establishing the predictive validity of the CLAS, these findings suggest links between life satisfaction and both physical and psychological health. Given that obesity and inactivity are undermining the health of North Americans, if eating, drinking alcohol and watching television are ways in which people deal with their dissatisfaction, improving life satisfaction might reduce these behaviours that can undermine health. That is, if people are feeling more satisfied, they might not need to watch as much television or over-eat to divert their attention from their dissatisfaction.

Limitations and Future Research

There are three main limitations in the present research. The first limitation has to do with establishing whether life satisfaction assessed on the CLAS is responsive to changes in life conditions such as the loss of an important job or the end of a valued relationship. Although the CLAS was correlated with a number of life conditions such as relationship

status, income, and financial hardship, the correlational design of the present research limits causal conclusions. Ideally, I would like to demonstrate with a pre- post-intervention study that life satisfaction on the CLAS changes in response to changes in a person's life conditions such as pre and post treatment for depression.

The second limitation, involving the research on the levels of life satisfaction experienced in daily life, is that the use of university student samples is not generalizable. The average daily life satisfaction based on one university sample taken at one point in time cannot be said to represent the average levels of life satisfaction in North America. University samples typically report lower levels of life satisfaction than general population samples (Cummins, 2003). Level of life satisfaction in a more representative sample was estimated to be about 4.5 on a 7-point scale by averaging the mean score on the CLAS and the SWLS from the combined sample of Study 1. Ideally, however, daily diary studies should be conducted on representative samples to verify these estimates.

The third limitation, also involving the research on the levels of life satisfaction experienced in daily life, is that the single-item measure of life satisfaction was not included in the pretest of Study 3, and thus could not be compared to average daily life satisfaction. Although it was found that both the CLAS and SWLS approximated levels of life satisfaction experienced in daily life, with the mean score on the daily measure falling close to the neutral point of the measurement scale and falling between the CLAS (low end) and the SWLS (high end), it is not known where the single-item measure would fall. Given that, in Study 2, people reported significantly higher levels of life satisfaction on the single-item measure than on the SWLS, and this is consistently found in other research (see Cummins, 2003); it is

probable that life satisfaction scores estimated on the single-item measure would be significantly higher than daily self-report life satisfaction.

There are two main avenues for future research. First, the long-term stability of the CLAS needs to be tested. In the present research, the CLAS was shown to have similar stability as the SWLS and single-item measure with a test-retest correlation of .72 for a two-month time period. However, over larger timeframes, the test-retest correlation for the CLAS is unknown. The test-retest correlation for the SWLS has been shown to decline, as would be expected. Pavot and Diener (1993) reported a test-retest correlation for the SWLS of .54 over a four-year period, indicating that the measure is sensitive to either developmental changes or changes in life circumstances. It would be expected that the CLAS would show similar correlations. The University of Northern British Columbia (Psychology department and ISRE) will be collecting longitudinal data on the CLAS and will be able to report its test-retest correlation across two years in both university and community samples.

Second, the cross-cultural generalizability of the CLAS needs to be evaluated. The CLAS was designed to capture existing feelings of dissatisfaction in North Americans. Thus the CLAS might be more culturally bound than the SWLS or single-item measure. Cross-cultural studies need to be undertaken that will comparatively test the validity of these life satisfaction measures.

Conclusions

The CLAS creates a higher standard for satisfaction than do existing measures of life satisfaction. It differs in content from the SWLS in that it is less focused on material conditions of life and more focused on meeting aspirations, and on feeling content and fulfilled. Despite these differences, both the CLAS and SWLS approximated levels of life

satisfaction that the student participants experienced in their day-to-day life. The CLAS exceeded both the SWLS and the single-item measure in terms of predictive validity, especially on the more objective indicators. Furthermore, the CLAS was found to be more reliable than the SWLS in terms of stability across placement within questionnaires. Before it can be claimed that the CLAS surpasses the standard set by the SWLS and single-item measure, however, more research is required.

Why is the product of this research important to society? Accurate estimates of absolute levels of life satisfaction in North American samples are needed to ensure that societal conditions, such as growing demands at work (National Institute for Occupational Safety and Health, 2005), which might decrease quality of life (e.g., Kahneman et al, 2004) and explain existing chronic stress levels, are not ignored due to the appearance of general feelings of satisfaction. The concern is that the positivity biases that are clearly documented in the psychology of North Americans of European decent (Heine, Lehman, Markus, & Kitayama, 1999; Oishi, 2002; Taylor, 1989) give the impression that the North American lifestyle is intrinsically satisfying and represents an ideal. In the United Kingdom, the British government has recently announced that they will include measures of subjective well-being among the set of national indicators for the evaluation of the success of national policies (Secretary of State for Environment, Food and Rural Affairs, 1995). The use of life satisfaction measures for policy evaluation requires that subjective well-being researchers ensure that the measures produce accurate estimates of absolute levels of life satisfaction.

Footnotes

¹ A substantial number of participants ($N = 44$) did not complete the single-item measure. I believe this was due to the formatting of the questionnaire. Although the multiple-item scales were presented in boxes with instruction above the box, the single-item measure was not boxed. Because this item was located at the top of the page, I think participants might have overlooked it thinking it was simply a set of repeated instructions.

References

- Andrews, F. M. (1984). Construct validity and error components of survey measures: a structural modeling approach. *Public Opinion Quarterly*, 48, 409-442.
- Andrews, F. M., & Withey, S.B. (1974). Measures of perceived life quality: Results from several national surveys. *Social Indicators Research*, 1(1), 1-26.
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: Americans' perceptions of life quality*. New York, New York: Plenum Press.
- Andrews, F. M., & McKennell, A.C. (1980). Measures of self-reported well-being: Their affective, cognitive and other components. *Social Indicators Research*, 8(2), 127-155.
- Andrews, F. M., & Robinson, J. P. (1991). Measures of subjective well-being. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Argyle, M. (1999). Causes and correlates of happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 353-373). New York: Russell Sage Foundation.
- Arrindell, W. A., Meeuwesen, L., & Huyse, F. J. (1991). The Satisfaction with Life Scale (SWLS): Psychometric properties in a non-psychiatric medical outpatients sample. *Personality and Individual Differences*, 12, 117-123.
- Beck, A.T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row.
- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty- five years of evaluation. *Clinical Psychology Review*, 8(1), 77-100.
- Campbell, A. P., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life*. New York: Russell Sage Foundation.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Centers for Disease Control and Prevention (2004). Measuring healthy days. Retrieved Dec. 28, 2005 from <http://apps.nccd.cdc.gov/HRQOL/Index.asp?State=1&Category=1&Measure=1>

- Cohen, S., & Williamson, G. M. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Social Psychology of Health* (pp. 31-67). Newbury Park, CA: Sage Publications.
- Conway, J. (2003). The Grim Challenge of Mental Health (Part II). *The Winnipeg Free Press*, 2003, September 14.
- Crawford Solberg, E., Diener, E., Wirtz, D., Lucas, R., & Oishi, S. (2002). Wanting, having, and satisfaction: Examining the role of desire discrepancies in satisfaction with income. *Journal of Personality and Social Psychology*, 83(3), 725-735.
- Csikszentmihalyi, M. (1991). *Flow: The psychology of optimal experience*. New York: HarperPerennial.
- Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist*, 54, 10, 821-827.
- Cummins, R. A. (1995). On the trail of the gold standard for subjective well-being. *Social Indicators Research*, 35, 179-200.
- Cummins, R. A. (2003). Normative life satisfaction: Measurement issues and a homeostatic model. *Social Indicators Research*, 64, 225-256.
- Cummins, R. A., Okerstrom, E., Woerner, J., & Tomin, A. (2005). *Australian Unity Wellbeing Index: Report # 13 The wellbeing of Australians – caregiving at home* (Australian Centre on Quality of Life, Deakin University) (http://acqol.deakin.edu.au/index_wellbeing/index.htm).
- Cummins, R. A., & Nistico, H. (2002). Maintaining life satisfaction: The role of positive cognitive bias. *Journal of Happiness Studies*, 3, 37-69.
- Davern, M., & Cummins, R. A. (2005). *Subjective wellbeing as an affective construct*. Manuscript submitted for publication.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-575.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, 31, 103-157.
- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. *Social Indicators Research*, 57, 119-169.
- Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology*, 69(5), 851-864.

- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life scale. *Journal of Personality Assessment*, 49, 1, 71-75.
- Diener, E., Gohm, C. L., Suh, E. M., & Oishi, S. (2000). Similarity of the relations between marital status and subjective well-being across cultures. *Journal of Cross Cultural Psychology*, 31(4), 419-436.
- Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research*, 28, 195-223.
- Diener, E., & Seligman, M. E. P. (2002). Very happy people. *Psychological Science*, 13, 81-84.
- Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *The Economic Journal*, 111, 465-484.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50, 992-1003.
- Fontane, T. (2006). Timelines of History web site. retrieved April 20, 2006 from http://timelines.ws/1811_1820.HTML
- Hagerty, M. R. (2000). Social comparisons of income in one's community: Evidence from national surveys of income and happiness. *Journal of Personality and Social Psychology*, 78, 764-771.
- Heine, S., Lehman, D., Markus, H. R., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, 106(4), 766-794.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213-218.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3-25). New York: Russell Sage.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, 306 (5702), 1776-1780.
- Keery, H., van den Berg, P., & Thompson, J. K. (2004). An evaluation of the tripartite influence model of body dissatisfaction and eating disturbance with adolescent girls. *Body Image: A Journal of International Research*, 1, 237-251.

- Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2005). Integrating the diverse definitions of happiness: A time-sequential framework of subjective well-being. *Journal of Happiness Studies*, 6, 261-300.
- Kubey, R., & Csikszentmihalyi, M. (1990). *Television and the quality of life: How viewing shapes everyday experiences*. Hillsdale, NJ: Lawrence Erlbaum.
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, 71(3), 616-628.
- Maich, S. (2004, December 6). Hip deep in hoc. *Macleans*. Retrieved Dec 16, 2005, http://www.macleans.ca/topstories/finance/article.jsp?content=20041206_94315_94315
- Michalos, A. C. (1980). Satisfaction and happiness. *Social Indicators Research*, 8, 385-422.
- Michalos, A. C. (1985). Multiple discrepancies theory (MDT). *Social Indicators Research*, 16, 347-413.
- Michalos, A. C. (1991a). *Global Report on Student Well-Being, Vol. 1: Life Satisfaction and Happiness*. Springer-Verlag: New York.
- Michalos, A. C. (1991b). *Global Report on Student Well-Being: Volume 2, Family, Friends, Living Partner and Self-Esteem*. Springer-Verlag, New York.
- Michalos, A. C. (1993a). *Global Report on Student Well-Being: Volume 3, Employment, Finances, Housing and Transportation*. Springer-Verlag, New York.
- Michalos, A. C. (1993b). *Global Report on Student Well-Being: Volume 4, Religion, Education, Recreation and Health*. Springer-Verlag, New York.
- Michalos, A. C. (2004). Social indicators research and health-related quality of life research. *Social Indicators Research*, 65(1), 27-72.
- Michalos, A. C. (Ed.). (2005). *Citation classics from social indicators research: The most cited articles*. Springer, Dordrecht.
- Michalos, A. C. (2006). [British Columbia panel survey on quality of life]. Unpublished raw data.
- Michalos, A. C., Hubley, A. M., Zumbo, B. D., & Hemingway, D. (2001). Health and other aspects of the quality of life of older people. *Social Indicators Research*, 54, 239-274.
- Mok, T. A. (1998). Getting the message: Media images and stereotypes and their effect on Asian Americans. *Cultural Diversity and Mental Health*, 4, 185-202.

- Morgan, M. (1984). Heavy television viewing and perceived quality of life. *Journalism Quarterly*, 61, 499-504.
- Moskalenko, S., & Heine, S. J. (2003). Watching your troubles away: Television viewing as a stimulus for subjective self-awareness. *Personality and Social Psychological Bulletin*, 29, 76-85.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55(1), 56-67.
- National Institute for Occupational Safety and Health (2005). Publication No. 99-101. retrieved Dec. 28, 2005 from <http://www.cdc.gov/niosh/stresswk.html>.
- Oishi, S. (2002). The experiencing and remembering of well-being: A cross-cultural analysis. *Personality and Social Psychology Bulletin*, 28(10), 1398-1406.
- Paulus, D. L. (1988). Assessing self-deception and impression management in self-reports: The Balanced Inventory of Desirable Responding. *Unpublished manual*. Vancouver, British Columbia, Canada: University of British Columbia.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Paulhus, D. L. (1998a). Intrapsychic and interpersonal adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74, 812-820.
- Paulhus, D. L. (1998b). *Manual for the Balanced Inventory of Desirable Responding (BIDR-7)*. Toronto/Buffalo: Multi-Health Systems.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. Braun, D. Jackson, & D. Wiley (Eds.), *The role of constructs in psychological and educational measurement* (pp. 49-69). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Paulhus, D. L., Harms, P. D., Bruce, M. N., & Lysy, D. C. (2003). The over-claiming technique: Measuring self-enhancement independent of ability. *Journal of Personality and Social Psychology*, 84(4), 890-904.
- Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, 5(2), 164-172.

- Pavot, W., Deiner, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence of the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 57, 149-161.
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine*, 25, 551-603.
- Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (1991). Criteria for scale selection and evaluation. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes, Vol 1* (pp. 1-16). San Diego, CA: Academic Press Inc.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Russell, J. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110 (1), 145-172.
- Russell, J., Weiss, A., & Mendelshohn, G. A. (1989). Affect grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology*, 57, 493-502.
- Schwarz, N., & Strack, F. (1999). Reports of subjective well-being: Judgemental processes and their methodological implications. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 61-84). New York: Russell Sage.
- Secretary of State for Environment, Food and Rural Affairs (March 1995). Securing the future – UK government sustainable development strategy. Retrieved March 27, 2006, from http://www.sustainable-development.gov.uk/publications/pdf/strategy/SecFut_complete.pdf
- Skaer, T.L., Sclar, D.A., Robison, L.M., & Galin, R.S. (2000). Trend in the use of antidepressant pharmacotherapy and diagnosis of depression in the US: An assessment of office-based visits 1990 to 1998. *CNS Drugs*, 14, 473-481.
- Smolak, L., Murnen, S. K., & Thompson, J. K. (2005). Sociocultural influences and muscle building in adolescent boys. *Psychology of Men and Masculinity*, 6, 227-239.
- Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work scale, Organizational Constraints scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology*, 3, 356-367.
- Statistics Canada (2001). *2001 Census of Canada Community Profile for the City of Prince George*. Retrieved February 19, 2006, from <http://www12.statcan.ca/english/profil01/CP01/Details/Page.cfm?Lang=E&Geo1=CS>

D&Code1=5953023&Geo2=PR&Code2=59&Data=Count&SearchText=Prince%20George&SearchType=Begins&SearchPR=59&B1=All&Custom=

- Statistics Canada (2003). Canadian community health survey: Mental health and well-being. *The Daily*, 2003, September 3. Retrieved September 5, 2003, from <http://www.statcan.ca/Daily/English/030903/d030903a.htm>
- Taylor, S. E. (1989). *Positive illusions: Creative self-deception and the healthy mind*. New York: Basic Books.
- Twenge, J. M. (2000). The age of anxiety? Birth cohort change in anxiety and neuroticism. *Journal of Personality and Social Psychology*, 79(6), 1007-1021.
- Veenhoven, R. (1991). Is happiness relative? *Social Indicators Research*, 24, 1-34.
- Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-item Short-Form Health Survey (SF-36): I. Conceptual framework and item selection. *Medical Care*, 30, 473-483.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 6, 1063-1070.
- Wiggins, J. S. (1973). *Personality and prediction: Principles of personality assessment*. Reading, MA: Addison-Wesley.
- Wirtz, D., Kruger, J., Scollon, C. N., Diener, E. (2003). What to do on spring break? Predicting future choice from online versus recalled affect. *Psychological Science*, 14, 520-524.
- Yip, M. S. M., Russell, J. A., & Feldman Barrett, L. (1999). Structure of self-reported current affect: Integration and beyond. *Journal of Personality and Social Psychology*, 77, 600-619.
- Zanna, M. P., & Rempel, J. K. (1988). Attitudes: A new look at an old concept. In D. Bar-Tal & A. W. Kruglanski (Eds.), *The social psychology of knowledge* (pp. 315-334). Cambridge: Cambridge University Press.