Development of the Success and Happiness Attributes Questionnaire (SHAQ) To Validate a Cognitive Model of Happiness, Depression, and Anxiety

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Draft Version
Abstract

This paper documents the development and research results of the SHAQ questionnaire; which was developed primarily from ideas in my book, *You Can Choose To Be Happy: "Rise Above" Anxiety, Anger, and Depression.* It assumes a cognitive systems model of human personality and behavior and emphasizes the importance of cognitions (values, beliefs, knowledge, thoughts, skills, etc.) for influencing both emotions and behavior. Happiness and success (personal, relationship, academic, career, etc.) are a function of cognitive, environmental/conditional, and hereditary/genetic factors. Of is these three classes of factors controlling our happiness and success, we can currently exert control primarily over two—cognitive and environmental. In the book I called these two internal and external routes to happiness. However, even our control over our environment stems ultimately from our cognitions that give us the knowledge, skills, and motivation to affect our environment (including our social environment).

SHAQ consists of 81 scales and subscales to reflect the complexity of key cognitive factors influencing happiness and success. SHAQ's main scales were reliable according to Cronbach alpha tests. More than 3446 users completed much of SHAQ according to their personal choices. All completed additional outcome scales and items. Overall happiness, depression, anxiety, anger, health, relationship outcomes, highest personal income, academic achievement, and other factors were measured by outcome scales.

The SHAQ scales had moderate to high positive correlations with almost all outcome measures. SHAQ's subscales had surprisingly high multiple correlations with the emotional outcomes; with Overall Happiness, R = .865, R Square = .749; with Low Depression, R = .730, R Square = .533; with Low Anxiety R = .675, R Square = .426; with Low Anger-Aggression, R = .701, R Square = .491(N = 1123 for all analyses). For the 224 subjects who completed all 70 subscales including the academic scales, R = .897, R Square = .805 for Overall Happiness. I devised the Happiness Quotient (HQ) to get an overall predictor of happiness. The HQ score is determined by a linear combination of the 56 SHAQ subscale scores. HQ has a mean equal to 100 and a SD equal 10 (similar to IQ).

Results for other outcomes included for the Relationship Outcomes scale, R = .693, R Square = .467; for the Health Outcomes scale, R = .816, R Square = .666; for Highest Income, R = .486, R Square = .236; and for Educational Attainment, R = .458, R Square = .210. Behavioral measures used as outcomes also yielded good results. For example, for a Major Depression Checklist, R = .596, R Square = .356; Amount of Therapy for Depression, R = .452, R Square = .204; and Amount of Medication for Depression, R = .409, R Square = .167.

The results support SHAQ's reliability, validity, and utility. The results also support the main ideas in the book and the proposition that a host of key cognitions are the most important determinants of happiness and other emotions. They also show how these positive happiness and success-producing factors tend to correlate with each other and may support the development of each other. The implication is that when people begin a self-development program, they can use SHAQ to get a profile of the factors they need to improve in order to increase their happiness (and decrease depression, anxiety, and anger) and increase life success. The results also suggest that starting almost anywhere can begin a positive change process that will improve other factors as well.

The main purposes of this paper are to present (1) an accurate model of human happiness and emotions and (2) an overview of the development and research related to the Success and Happiness Questionnaire (SHAQ). The theoretical model and SHAQ are the culmination of effort spanning a 40+ year period. My pursuit of understanding happiness began when I was 16. I experienced a personal conversion experience leading me to believe that happiness (for all humans) was the most important aspect of life.

What is Happiness?

The function of man, then, is exercise of his vital facilities [or soul]. . .in obedience to reason. .. the good of man is exercise of his faculties in accordance with excellence. . . the manifestations of excellence will be pleasant in themselves. . . the life of these men is in itself pleasant. . . Happiness is, then, at once the best and noblest and pleasantest thing in the world, and these are not separated. . .

For all these characteristics are united in the best exercises of our faculties. . .(Aristotle, Ethics).

Some definitions of happiness don't distinguish it from the lower pleasures. Aristotle, on the other hand, understood the intimate connection between the emotion of happiness and mental functioning. I prefer a definition of happiness that gives primary importance to an emotional state that is intimately related to cognitive states and is superordinate to pleasure. Pleasure/pain is related more to specific biological needs or states. Happiness is an emotional reaction to the harmonious functioning of the cognitive system and provides feedback and motivation for the cognitive system related to its performance (Stevens, 1998). When people fall in love, make progress toward goals, engage in a meaningful activity, are mentally "in tune" with nature or music, or achieve new insights, they feel the emotion *happiness*. When people satisfy biological needs for sex, hunger, thirst, touch, taste, or temperature, they feel *pleasure*. You may be unhappy about not getting enough to eat, but there is a difference between hunger and happiness. For the purpose of this research, I developed the Overall Happiness Scale described below, which measures self-reported happiness in a variety of life areas over different periods of time (see below).

Brief Comparison to Other Models of Human Happiness

Philosopher-theologians such as Aristotle, Immanuel Kant, Bertrand Russell, and the Buddha have made happiness the centerpiece and most important value of their philosophies. Jesus' 'Sermon on the Mount' could be viewed as a self-help course on happiness. Maslow (1954, 1962) was a founder of the humanistic tradition of psychology, and his study of self-actualizing people's characteristics formed a basis of his conclusions. I considered his self-actualization values and personality characteristics to be important parts of a larger theory of happiness, and I included some as SHAQ questions. Csikzentmihalyi (1990) wrote of *flow* which emphasized being in an optimal state of functioning like being "in the zone." His flow concept is similar to my concept of harmonious functioning (Stevens, 1998).

Other philosophers and major religions state that people's core beliefs and values are the most important determinant of happiness. Psychologists--including James (1905), Maslow (1962), Rogers (1961), Frankl (1969), Wong and Fry (1998), and Emmons (1999) and many others--have stressed the importance of values such as truth, integrity, and unconditional caring for all people, and caring for people's happiness, health, relationships, and personal development. Values and meaning have been at the core of the humanistic and existential schools of psychotherapy. Even very different approaches such as Kelly's (1955) cognitive therapy, and Staats's (1968), Ellis's (1977, 1989), and Beck's (1987, 1999) varieties of cognitive behavioral therapies have also stressed higher level beliefs and values as powerful determinants of emotions (see below). Kasser *et al* (2004), Solberg *et al* (2004), and others present evidence that materialistic values are associated with lower levels of happiness (SWB) and poorer psychological health.

Diener (1984) has studied "Subjective Well–Being (SWB)" (a concept essentially identical to happiness) extensively from both the individual and cultural perspectives. One of his emphases is upon an adaption level type theory of happiness: people's happiness tends to reset itself to some moderate level even in the worst or best of circumstances. In my theory that phenomenon is probably largely a function of expectations. We tend to be happier when an event meets or exceeds our expectations; however, our expectations tend to adapt to the situation. Myers (1993, 2000) has summarized a great deal of research on the factors that make people happy and has concluded that

> Happiness is similarly available to those of any age, gender, race, location, education, even to those with a tragic disability. We have pondered things that do matter--physical fitness, renewing sleep and periodic solitude, traits such as self-esteem, sense of personal control, optimism, and extroversion; work and other activities that enhance our identity and absorb us into flow; close, supportive friendships and marriages (Myers, 1993).

Another line of research has stemmed from Peter Salovey, John D. Mayer (1990, 2003). Goleman's (1997) concept of *emotional intelligence* which focuses upon cognitive skills. Martin Seligman's (1998, 2000) focus upon learned helplessness and optimism has been very influential. As a researcher and as president of APA, he has led a recent movement for studies in *positive psychology*. Another line of research emphasizing the functionality of cognitive systems concerns the concept of *wisdom*. Sternberg (1990) and Baltes and Staudinger (2000) have elucidated wisdom as a higher order cognitive system related to success and happiness. They believe that wisdom builds upon years of successful self-development of knowledge, skills, beliefs, and values.

A Cognitive Systems Model of Happiness, Anxiety, and Depression

The basic ingredients of happiness have been known for centuries. Great religious founders, philosophers, and psychologists have described them. Millions of people have learned them and teach them to their children. All I have tried to do is group some of the main principles and attributes together, clarify them, and organize them from a psychological the point of view.

This article is based upon two aspects of a cognitive theoretical model imbedded herein. One type of model is a psychological *process* model emphasizing the concept of hierarchically arranged cognitive systems, their development, and their interactions among

themselves and with emotions and behavior. These systems follow learning principles. The top of the hierarchy consists of superordinate, abstract, broadly applicable values, beliefs, and other metacognitions. The middle has general cognitions for different life areas—a sort of university in one's head. At the bottom are daily skills-habits that actually perform moment-to-moment actions.

The other aspect of the model is cognitions' *content*. Certain values-themes-beliefs are hypothesized as being fundamental to harmonious functioning of the cognitive system and of society. These include values like maximizing happiness and love for all; empathy, understanding, forgiveness, and kindness; truth, knowledge, learning, exploration, and creativity; organization, impact, and efficiency; unconditional love of self and others; self-control, self-discipline, self-development, and integrity; optimistic belief in positive forces controlling the universe and people's lives; zero expectations about what we will receive or are owed by life; gratitude for all that we have; healthy activity and play; and beauty.

In well-integrated, self-actualizing people these values influence cognitions from the top to the bottom of the cognitive system. The model predicts that the happiest people will be those whose thoughts, behavior, and other attributes are well-integrated around these values. As you look at the SHAQ scales and items, you should notice how these values permeate questions from the top--most general levels—to the bottom—more concrete, skill-habit levels. For example the self-management, emotional coping, and interpersonal scales describe more specific behaviors, but their items reflect these more general values. This predicted tendency for people to integrate their values across levels and life areas is one reason I expected the items and scales to generally correlate at a moderate to high level. I also expected that the highest functioning people will exhibit not only more functional values but also more value integration/consistency throughout their entire cognitive system.

My thesis is that these values are not just moral platitudes. One of the insights of the great philosophers is that living by these values makes life better for both individuals and for society. Living by them produces greater health, happiness, and productivity. Discovering that fact as a young man was a major turning point for me and is a major thesis of my work. SHAQ was developed partially to provide an empirical test of this thesis.

Cognitive Behavioral Systems Theory

My first attempt at a theoretical model was a 300-plus page theoretical, research review and monograph I wrote as a PhD student for part of my degree requirements (*Positive Behavior Change: A Behavioral Systems Approach,* 1971) . This monograph outlined a cognitive, human learning approach to theory following my PhD dissertation chair, Arthur Staats. The Behavioral Systems Model posited that most meaningful human behavior is controlled by a collection of cognitive systems (similar to Staats' complex s-r behavioral hierarchies). Further, these behavior systems are primarily cognitive systems that are developed by learning processes governed by the principles of classical and instrumental/operant conditioning (Staats, 1963, 1968). Stephen Grosberg (1975, 1980, 1991) has updated learning theory by integrating it with neural network theory.

While learning *principles and processes* of the model are important, I believe that understanding the *content* of people's cognitive-behavioral systems will better explain the individual differences in human happiness and success. I became convinced that people's (1) core values-beliefs and their (2) life knowledge-skills were the most important causes of human behavior and emotions from my work as a therapist. An important goal was to organize and specify these two content areas. The more superordinate core-values-beliefs system is the most central, primary, abstract, comprehensive, and general of the two areas. It is superordinate to all human knowledge-behavior domains. The life knowledge-skills aspect is more domain-specific. It is partially derived by cognitive processes similar to deductive reasoning or "programming" by the higher, core cognitive systems. Conversely, the superordinate cognitions are derived partially by induction from lessons learned at the lower levels. The interacting top-to-bottom and bottom-to-top learning gradually increase integration and harmony within the overall cognitive-psychological system.

The cognitive hierarchy top and bottom are integrated along complex domain-related content areas. Analogies of the relationship of one's core, dominant cognitive system(s) to one's overall cognitive system include the relationship of a conductor to an orchestra or the relationship of a CEO to an organization. Useful analogies for categorizing the domain content areas themselves are the organization of university departments by content or a library classification system. One can think of our life knowledge-skills domain as consisting of inner cognitive, expert systems (c.f. Anderson,1983 and Newell,1990, and Simon,1979, 1990). These systems are highly interrelated and overlapping. Academic areas like religious science and philosophy relate more to our core values and beliefs. The behavioral sciences relate more to our attributes for dealing with emotions and people. The natural languages and math are basic ways of categorizing and communicating about our world. Natural science, engineering, and applied arts provide knowledge for dealing with our physical environment. The life sciences and health fields provide us with knowledge for dealing with our bodies, health, and other organisms. Whether or not people ever attend college, they will develop cognitive expert systems containing personal theories and applied habits in areas such as philosophy, psychology, biology, and physics. All of this amazing wealth of values-beliefs and knowledge-skills-habits can be relevant to people's success and happiness depending upon the circumstances they encounter.

However, if so much content relates to people's happiness, how can we ever specify a model of human happiness and success? Part of

the challenge of developing such a model is to find the key attributes having a greater impact upon human happiness. A good starting point is the accumulated wisdom of experts. This paper will focus less upon the *processes and principles* of the cognitive systems theory of emotions and more upon the *structure and content* of those systems.   I will first focus on the knowledge-skills-habits content aspect and then on the core value-beliefs aspect, because that was the route my psychological career took—from bottom attributes to top attributes.

Developing and Specifying Life Knowledge, Skills, and Habits

During the early part of my career I was engrossed in behavior theory and behavior therapy. This behavior-outcome-results emphasis caused me to focus more upon understanding and specifying the life knowledge-skills areas than the more general core value-belief areas that ironically had been the central aspect of my own personal conversion experience and my earlier study in philosophy, theology, and humanistic psychology. I was also convinced that psychologists shouldn't tamper with clients' values. It is worth noting that a study by Jensen and Bergin (1988) found that an overwhelming majority of therapists do routinely attempt to change clients' value and beliefs to those more like their own (e.g. make clients more open, honest, empathic, accepting, etc.)

As a university psychologist-counselor and faculty member, I increasing observed, studied, and taught what I believed were key cognitive factors in these two domains–especially the life knowledge-skills domain. I developed workshops, university classes, and self-help manuals and videotapes that specified self-management, interpersonal, career planning, emotion management, and learning skills. Graduate students under my supervision also created nine 30-60 minute self-instructional videotapes (mostly assertion skills-related) and tested their effectiveness compared to placebo controls on various outcomes and in every case found that these brief videos had significant, positive behavioral effects (Stevens, 1981).

The Life Skills Questionnaire (LSQ)

In 1984 I designed the Life Skills Questionnaire (LSQ) to further specify and measure several life skills. Many of the LSQ items were developed directly from my workshops and self-help manuals. The LSQ focused on academic, self-management, and interpersonal skills and habits important in later life success and happiness. The LSQ, related outcome questions, and the LSQ results were given to more than 4,000 University 100 freshmen at CSULB to help them identify life skill strengths and areas needing improvement. The specificity of the items and recommendations could help students develop clearer learning objectives. College experience was presented as a means of improving these life skills. A follow-up study was also completed relating LSQ scores to actual college achievement.   In addition several scales had relatively high correlations with happiness (especially the self/time-management, emotional coping, and interpersonal skills scales) (Stevens, 1987). SHAQ incorporates modified versions of several of the best scales from the LSQ including the self-management and emotional coping scales.

The Stevens Relationship Questionnaire (SRQ)

In the mid 1980s my wife, Sherry, and I developed and tested the Stevens Relationship Questionnaire (SRQ). The items were also developed from my workshops and self-help manual on assertiveness training and relationship success. In Sherry's study, she found that two scales, Assertive Conflict Resolution and Intimacy correlated r = .78 and r = .79 respectively with scores on the Locke-Wallace Marital Satisfaction Questionnaire. Items on the SRQ are almost entirely questions about behavioral frequencies and are quite different in content than the satisfaction-related questions on the Locke-Wallace. The five SRQ scales also differentiated couples who were married, separated, or involved--not married. Sex frequency correlated with the SRQ scales of Intimacy, r = .49; Assertive Conflict Resolution, r = .44; and Romance, r = .44. Argument frequency correlated negatively with Assertive Conflict Resolution, r = -.39 and Intimacy, r = -.29 (Sherry Stevens, 1995).   These are but a few of the results. The SRQ article appears on my website. These SRQ scales became the interpersonal skills part of SHAQ.

Revised Cognitive Systems Model Based Upon Core Values and Beliefs

Should intervention focus more on the top or the bottom of the cognitive hierarchy? I came full circle in my own thinking. I began my career by becoming a United Methodist minister because I had believed that people's most important center of causation was their core beliefs and values. I wrote an article then called, *The hierarchical integration of the personality* (1968) in which I followed the theologian Paul Tillich's (1956, 1967)'s ideas about the importance of one's *ultimate concern(s)* (core values) for determining their personality and behavior. I also liked George Kelly's (1955) emphasis on the central power of people's superordinate personal constructs. However, in my psychology graduate training following Art Staats (1968) and others, I focused more upon a cognitive-behavioral-skills approach because these attributes were more specifiable, observable, and presumably more teachable. I developed workshops, classes, and my own counseling approaches based upon this cognitive-behavioral approach teaching self-management,

assertion, and other basic skill areas. I found that people gave very positive feedback about their experiences and we obtained some positive research outcomes. I still believe that teaching these cognitive-behavioral skills are key aspects of change and they are included in my book and SHAQ.
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However, I discovered some problems with relying too exclusively on this approach. For example, I found that some people had very good self-management or assertion skills, but lacked the motivation to use these skills. Of course, insight-oriented therapists might say, "I told you so." However, I found the remedy to be more value and belief-oriented than traditional insight-oriented therapy. Instead of the "deeper" or core issues being psychodynamic ones, I found them to be closer to what theorists like Tillich, Maslow, some existentialist psychologists (Frankl, 1969) or even traditional religions proposed. As I was rediscovering the value of the people's personality core, I discovered that other current psychologists (c.f. Bergin and Richards, 2005 and Pergament, 2001) were also emphasizing people's core values and beliefs as a locus of control. I called my own approach, *Spiritual Cognitive Therapy* (using the word *spiritual* in its broadest psychological meaning, not making any statement about cosmology, and leaving the theological interpretations to the reader).

When looking for an approach that can make the lives of millions of people happier and more productive in a cost-effective manner I think we should investigate the key attributes promoted by the major world religions. What psychological approach has had a fraction of the effect of Christianity, Judaism, Islam, Hinduism, or Buddhism? Why have these religions developed so many millions of committed followers?   Their testimonies and behaviors provide pragmatic, historical evidence for the effectiveness of their philosophies and life styles for helping people lead happier, more successful lives. A more recent trend is the self-help and 12-step movements. It began with authors like Carnegie (1936), Peale (1952), and includes many recent authors such as psychologist Wayne Dyer (1976).

Process and Content Model Presented in *You Can Choose To Be Happy*

Based upon my personal experience and 30+ years of teaching, research, and clinical experience, I wrote *You Can Choose To Be Happy: "Rise Above" Anxiety, Anger, and Depression* (1998). The book had three primary objectives (1) to present a brief summary of my theoretical cognitive *process* model of human emotions and functioning, (2) to present a description of my *content* model of attributes leading to happiness and success, and (3) to present these models in a manner that would help readers use the book as a self-help guide for increasing their own happiness and success.

Learnability and Controllability of Personal Happiness and Success Attributes

As the title of the book suggests, I am less interested in genetic/inherited or otherwise not learnable or controllable attributes than in attributes people can learn and use. I wanted to present attributes readers could use to get more direct control over their thoughts, behavior, and emotions. If people do choose to be happy, then I want them to be able to readily obtain the means to be happy. I am interested in attributes that people can learn from reading, classes, therapy, role-models, church, normal daily interactions, or though other human-development means.. I am especially interested in low-cost, effective self-development methods deliverable to large numbers of people anywhere in the world. Additionally, to the extent that research shows that learned attributes account for most of effect on happiness and other emotions, then that research provides evidence that hereditary factors have less effect.

Specifying the cognitive systems model of happiness and related emotions. I attempted to integrate the *processes* of the cognitive model (above) with the *content* of the core values-beliefs domain and the life skills domain. Central concepts in my theory include Higher Self cognitive system (Ch 3) and the Theory of Harmonious Functioning (Chs 7-8). These concepts help both (1) explain my *theoretical model of emotions* and (2) specify *key core value-belief and life skills content*. I believe that understanding both process and content can help improve one's ability to manage emotions and life success.

Brief Overview of the Harmonious Functioning (HF) Model of Emotions

The Harmonious Functioning (HF) model of emotions presented in the book helps explain some of emotions' causal processes. The HF model has many practical implications for how people can manage their emotions. Following is a brief list of some of the major HF principles/hypotheses.
1. Emotions such as happiness, depression, anxiety, and anger reflect states of the higher cognitive systems simultaneously providing learning feedback-reinforcement and providing motivation.
2. Optimal learning and cognitive harmony are primary driving forces of the cognitive system and are primary causal sources of emotional reactions. When a cognitive system is overwhelmed-overstimulated, the emotion system tends to produce overarousal emotions like anxiety and anger. When a cognitive system is understimulated, the emotion system tends to produce underarousal emotions like boredom and depression. When there is an optimal match between input and the

cognitive system's ability to process the input (and/or learn it at an optimal rate), then the emotion system produces emotions like happiness, joy, peace, and love (at varying levels of arousal). In that case the cognitive system is near being optimally challenged and is functioning "in the zone" of harmonious functioning.

3. Resultant effects of HF tend to be optimal learning, optimal happiness/peak experience, and optimal performance. Classical conditioning will also increase positive valuing of relevant stimuli.

4. Increasing cognitive control and reducing the amount of discordant stimulation are two general strategies for reducing the overstimulation and thus getting control of fear or anxiety (and often anger). These tend to reduce input stimulation.

5. Depression/boredom is often most directly caused by low stimulation, challenge, and overcontrol for the situation. However, being in the situation that is boring, unchallenging, and overcontrolled may stem from avoidance, withdrawal, or escape from anxiety-producing, overstimulating, overly challenging situations. Consequently, to overcome depression, often the person must both deal with the overstimulated-undercontrolled anxiety causing the withdrawal and with the understimulated, often goalless, often overcontrolled, unchallenging situation of boredom/depression.

6. Values, expectations, and goals are key aspects of the HF model and directly cause the search, stimulation, and reinforcement conditions mentioned above. Adaption levels and novelty also cause varying degrees of search, stimulation, and reinforcement. For example a child used to poverty may feel very happy about receiving a used toy that a wealthy child would feel upset receiving (see Chapter 8).

7. Emotions are responses that may have very brief or prolonged time spans. However, during any single hour or day it is likely that many or even all basic emotions will be felt at least briefly. These emotional variations are caused by variations in cognitive states. However, it is also theoretically possible to measure an emotion occurring at any instant or to mathematically sum the intensity and duration of any particular emotion over a specified time period. That summative or average measure for the hour, day, or even year would be an overall measure. Thus it is possible to have brief moment-to-moment or long-term overall measures of any emotion. For example the Overall Happiness Scale (below) is designed to be a long-term average measure of huge numbers of actual happiness emotional responses over a long time period.

8. Cognitive responses can also become classically conditioned to emotional responses.

9. These HF mechanisms are part of a fundamental learning-motivation process integral to creating the comprehensive neural cognitive system. This cognitive system includes a semantic network constituting the *meaning* of percepts, concepts, objects, people, or any aspect of the world; and it includes specialized *executive* functions controlling thought and action.

10. Chapter 7 explains the HF model and chapter 8 provides a number of strategies for getting control of emotions based upon the HF model.

Key Attribute Domain Areas

In the book I proposed that the following attributes influence happiness, other emotions, and various types of success.

Core beliefs-values and the Higher Self cognitive system. Key topics in the book included the importance of core values-life goals such as happiness for self and others over time, love of self and others, knowledge-truth-honesty, integrity, beauty, health, and autonomy-freedom with responsibility. A postulated cognitive system I call the *Higher Self* (no supernatural references intended) similar to Maslow's "inner self" or Kelly's superordinate personal construct system is executive source of these related core cognitive values-beliefs. I think the Higher Self develops at an early age through empathy and is the cognitive center for love and happiness. It may be in conflict with cognitive systems internalizing more negative values-beliefs possibly learned from parents (a bit Freudian but more Maslow and Rogers).

Unconditional worth of self and others. Following Carl Rogers (1951, 1961) and major religions and philosophers, I posit that unconditional human self-worth and unconditional valuing of all humans as having some significant amount of worth is an important determinant of happiness. Unconditional self-worth is distinguished from (conditional) self-confidence (see below).

Positive world view and optimism. From Peale's classic self-help book, The Power of Positive Thinking (1952) to Seligman (1998) and many others have written about the importance of a positive world view and/or optimism for happiness. Evidence seems very supportive of this hypothesis, and it appears to be one of the strongest factors associated with happiness.

Internal control.. Julian Rotter's (1954) dimension of internal versus external locus of control has proved to be a useful distinction. The assumption here is that giving one's own values, beliefs, goals, decisions, and plans priority over ones actions versus doing what others want one to do will increase the likelihood that those values and goals will be fulfilled. That fulfillment increases the probability of personal success and happiness. Internal control does not mean that one is "selfish" and considers only themselves. A person can have as a goal others' happiness or improving society and work diligently focused on these goals versus letting others derail them. The issue is locus of control. Codependence—caring for others more than for self and caring more than others' care for themselves--is a related instance of external control. Richard Ryan and Edward Deci (2000) use the construct of self-determination to explain important phenomena such as intrinsic motivation and think it is a key to happiness.

Self-confidence, knowledge, and skills. I define this term to be very similar to Albert Bandura's (1982, 1997, 2000) definition of positive self-efficacy. Self-confidence is contingent upon people's self-perception of their ability to achieve goal-related outcomes in specified situations. Self-confidence can range from the specific to more general situations. Self-confidence can be about confidence of making an A in a math course, about one's math abilities in general, or about general academic success. Research shows that self-confidence develops most robustly from years of developing knowledge and success in certain task domains (REFERENCE?). The model posits that confidence, knowledge, and skills influence happiness through a variety of means.

Self-confidence probably influences happiness, anxiety, and depression directly (see HF model) and influences actual success indirectly as a self-fulfilling prophesy. Combined with actual domain-related knowledge and skills, one has increased power/control to create an external environment conducive to one's happiness. One can experience happiness from the benefits of academic, career, interpersonal, health, economic, and recreational success. These benefits include more interesting, productive, and satisfying work; love, respect, and support from others; beautiful, safe surroundings; health; economic power; accomplishment of goals per se; or fun, challenging experiences. I attempted to roughly specify the major areas of one's *inner university* cognitive expert systems and their related self-confidence areas in my model. SHAQ assesses them with brief general questions to save testing time.

Self-management and self-development skills. Decision-making, goal-setting, planning, and time-management are the featured skill sets under this area. This scale is based upon a self-management system called OPATSM I developed and taught in workshops initially in 1974. Many of my ideas for OPATSM came from a book on time management by Lakein (1974) and from behavioral self-management techniques. Self-management skills influence emotional well-being and success in a variety of ways such as increased life balance, efficiency, functional goal-setting, attainment of goals and increased confidence. Self-development helps people develop more functional attributes, and self-control helps people control dysfunctional cognitive systems and habits.

Emotional coping skills. How one reacts to negative emotional states has been seen as an important area since Freud coined the concept of defense mechanisms. In SHAQ subjects are asked to estimate the proportion of time they react to a negative emotional state with a specified response. For example, if you are upset, how often do you eat, withdraw from others, engage in physical activity, try to solve the underlying problem, etc. I used an almost identical scale in my earlier LSQ . In the LSQ it had a correlation r = 38 with overall happiness. The response to a negative emotion can have a dramatic effect on whether that emotion is continued, worsened, or improved. Over time the thousands of daily coping responses have a huge impact upon ones overall happiness. Since one's emotions can also affect their functioning and success, they can affect success in all life areas. There has been a whole line of research demonstrating the value of good coping skills (how people react to stressful events). Pargament (1997) and others have shown how religious faith-based coping can be helpful (or not) depending upon the types of beliefs and thoughts involved. Vaillant (2000), Taylor, et al (2000), and others have summarized a convincing array of evidence of how positive coping can help people overcome very stressful events and improve health outcomes as well.

Learning and academic-related skills. Reading skills, writing skills, various study, critical thinking, analysis/synthesis, methodological, and other cognitive processing skills affect our understanding of ourselves and the entire world around us. They underlie the development of all other beliefs, knowledge, and skills at all levels of the entire cognitive system. That previous research with the LSQ found learning and thinking skills correlated with career success and interpersonal success as well as academic success should be no surprise.

Assertiveness and interpersonal skills. Our scales from the SRQ (summarized above) included Assertive Conflict Resolution, Intimacy Skills, Romance, Independent-Intimacy, and Liberated Roles. My main interest has been in family, friends, and romantic relationships. I have not systematically studied interpersonal skill areas more specifically related to career-business areas such as sales and management. I would welcome additional scales in those areas.

Mutual Causation of Cognitive Systems--Good Begets Good

All of the above categories can be construed as describing partially autonomous cognitive systems. I believe that positive functional cognitive systems tend to spread their effect to interacting systems: *good begets good*. Thinking of the cognitive system as hierarchically arranged, the effect can spread top-to-bottom, sideways, or bottom-to-top. For example people who develop life goals to maximize happiness for self and others (top) will more likely look carefully at how they use their time (time-management), take positive steps to modify negative emotions (coping skills), treat other people more positively (interpersonal skills), and attempt to make positive contributions to the world and have a good income themselves (academic and career skills). The top-to-bottom increase in skills will also increase likelihood of success in these life areas. Conversely, a person might learn to cope with a particular problem such as depression, an addiction, or loneliness and develop better coping skills, self-management skills, or interpersonal skills and begin to generalize from lessons learned in the particular context to higher value, goal, and strategy areas of the cognitive system (bottom-to-top learning).

Another factor that should increase the *good-begets-good* effect is that if people are exposed to highly functional (or highly

dysfunctional) environments the likelihood is that the environment will teach a complex set of functional (or dysfunctional) correlated sets of values, goals, and habits. Therefore, I expected that emotion-affecting attributes would tend to be positively correlated with each other. One of the reasons for developing SHAQ was to test relationships among the many cognitive systems that I believe contribute to people's overall emotional well-being and success.

Cognitive Systems' redundancy and robustness. Another way to view the redundant content of the various cognitive systems is as a human means of establishing redundancy and robustness for dealing with life's many challenges. If one cognitive system doesn't solve a problem, than perhaps another one might. By implementing many variant instances of broader functional themes the cognitive system has more chances of solving life's problems. For example, a lad wants to be happy. He meets a girl he thinks will help accomplish that goal. He uses his planning and interpersonal skills to get the date. After she rejects him, he uses his coping and analysis skills to accept the situation and seek better ways of finding dating success in the future. He uses his unconditional love of self and others to deal with inherent negative feelings toward self and the girl. He uses his optimistic world view to give him motivation to try again.

A person with positive-functional content in all of these cognitive systems from bottom to top has a built in redundancy and robustness for rising above life's difficulties in a multitude of situations. Therefore, I predicted that people's long-term happiness and success would correlate well with many happiness-success attributes--not just a few. Similarly, people who suffer from chronic depression, anxiety, or anger-aggression or people who have continued to struggle unsuccessfully with life's challenges should score low on many of these same attributes. I have seen this phenomenon frequently in clinical situations. That is why helping someone with severe, chronic depression is so difficult. Often, so much change is needed in so many cognitive systems, getting prolonged control over the depression can be very difficult. The good news is that people can start with any cognitive system, and improvement will help and may spread to the whole. However, making fundamental (conversion-like) changes at the top of the cognitive hierarchy via existential-like therapy, religious conversion, or some other such means is probably the most effective strategy.

The Success and Happiness Attributes Questionnaire (SHAQ)

SHAQ was developed for two main purposes. First, it was written to test the utility of the key attributes presented in the *You Can Choose To Be Happy* book. These attributes' utility was to be assessed by new scales to measure outcomes such as happiness, depression, anxiety, anger, relationship success, academic success, and income. Second, SHAQ was developed as a self-help, self-assessment instrument for users to get feedback about these changeable attributes. Learning specific, modifiable cognitions and behaviors may help users improve chances for happiness and success. SHAQ acts as an expert system referring users to free information about targeted attributes from my book and elsewhere. SHAQ and my book are free on the Internet at www.csulb.edu/~tstevens.

One of the differences between SHAQ and my earlier LSQ and SRQ questionnaires is SHAQ's greater emphasis upon core values and beliefs. Although SHAQ retains and increases the LSQ's more skill-oriented scales, SHAQ represents a more comprehensive set of attributes. Researchers interested in the importance of core beliefs, values, meaning, and spirituality might find SHAQ useful.

SHAQ's comprehensiveness

I designed the book and consequently SHAQ to describe a *comprehensive*, though not exhaustive, set of attributes that can increase users' chances of happiness and life success. SHAQ is a large questionnaire with 81 scales and subscales (plus 6 outcome scales and additional biographical items). Due to my interest and experience related to college students' academic success and career choice, I included a large section devoted to academic success and career choice consisting of 25 subscales (of the 81).

SHAQ Scale and Item Development

SHAQ's scales and items were developed from statements in my book (Stevens, 1998) and from the LSQ and SRQ (above). One goal of both the book and the questionnaire is to focus on items that are clear and learnable. The idea of *You Can Choose To Be Happy* is that people can learn values, beliefs, skills, and habits that will increase their chances of being happy (and successful in many life areas).   Because of the emphasis on assessment and intervention for both the book and questionnaire, SHAQ was developed with different assumptions than many questionnaires designed using classical test development approaches. I was not interested in identifying stable, very broad, possibly hereditary traits such as the Big 5 traits,   If a person wanted to change themselves to be happier and more successful, the items on the Big 5 related inventories might not help much.

Also, classical test development focuses on developing scales with items that measure essentially the same trait. My goal was different. I viewed a scale as measuring a key sample from a broader domain of values-beliefs, skills, or habits. That domain might typically consist of a population of so many specific cognitions or behaviors that to measure them all would require a questionnaire

with a huge number of questions. Therefore, my approach was to write items sampling from as many *different* aspects of a domain as possible. Ideally, each item should measure some specific value, belief, skill, or habit. The result is items in the same scale that are quite different from each other versus a traditional scale that might have very similar items. Despite this different approach, the Cronbach alpha's to measure the main scales' internal consistency were generally good (greater than 80)—see below.

For example, the self-management scale samples from a large domain of self-management skills. Sub-domains include self-development skills, time-management skills, and self-motivation skills. Within time-management skills are included such skills as goal-setting, keeping prioritized task-lists from all life areas, and holding regular planning sessions. I wrote several items to assess different aspects of how well or how often users adhere to good time-management practices.   You could ask about my sources for my definition of good self-management. I am using a boot-strap approach. I used my reading of domain experts and clinical experience to develop the items; and then I used the items to see if the empirical results supported the items' utility. In this case, most items were also supported by previous research on the LSQ. Of course a corelational study doesn't show causation, but I can at least expect some moderate correlations between the self-management scale and target outcomes like happiness, low depression, good relationships, and income.

Another aspect of item development was transparency and face-validity. I didn't have the resources to validate each item: to see if it measured the real belief, behavior, or whatever was being asked about. Therefore, I developed items with high *face validity*. By face validity, I mean (1) items clear enough so that people answering honestly would choose an answer truly reflecting their real-world state and (2) those states have obvious significance to experts. For example a question like, " I make a prioritized task list which covers to-do's from my school, work, social, recreation, and other areas of my life at least once per week." (1) should be easy for test-taker, researcher, or self-help learner to understand or answer correctly and (2) the question should be one of obvious significance to time-management for time-management experts.

Description of the SHAQ Scales

The SHAQ scales hypothesized to be causally related to happiness and related emotions are listed below, and all SHAQ items may be seen on my website. Some of these concepts/domains have already been partially describe above. They are divided into four major content domains. In addition the Cronbach alpha is listed for each scale and subscale. Each scale is presented with short variable labels.

Life Values and Themes

The 11 Value-Themes scales are the result of a factor and logical analysis of the original four scales—Achievement-Status; Social-Family Related; Internal-Intrinsic; and Non-Dysfunctional Values-Themes. Data from this factor analysis and all other factor analytic studies will *not* be presented in this article because of the added complexity. The data will eventually be posted on my website.

1. **Higher Self** (**HighSlfV**, T1HigherSelf). Values self happiness, integrity, development, learning, discipline, self-sufficiency, independence, balance, and strong philosophy of life. (See www.csulb.edu/~tstevens/h3hiself.htm, Chapter 3, 10 items). Cronbach α = .916.
2. **Non-Family Social Intimacy** (**IntimVal**, T2SocIntimNoFamScale)**.** Values intimacy, romance and being liked, respected, and supported. Dislikes conflict (6 items). Cronbach α = .871.
3. **Family Care** (**FamilyVa**, T3FamCareScale).Values family and parents. Care-giving. (3 items). Cronbach α = .795.
4. **Success-Status** (**SucStatVa**, T4SuccessStatusMater). Values education, success, high income and possessions, respect, status, being a CEO, and completing important goals. (8 items). Cronbach α = .891.
5. **Goodness Idealism Order** (**IdealOrd**, T5OrderPerfectGood). Values goodness, beauty, idealism, orderliness, perfection, organization, justice, simplicity, cleanliness (7 items). Cronbach α = .875.
6. **God Spirituality Religion** (**SpiritGd**, T6GodSpiritRelig). Values spiritual intimacy, God, religion, obedience to God (4 items). Cronbach α = .934.
7. **Impact Giving Challenge Exploration** (**ImpactEx**, T7ImpactChallengeExplor).Values giving, impact on world, mental challenge, exploration, uniqueness, and diversity (6 items). Cronbach α = .858.
8. **Attention Adventure Play** (**AdvntPlay**, T8AttentionFunEasy). Values adventure, play, attention, fun, effortlessness (4 items). Cronbach α = .777.
9. **Value Self-All Unconditionally** (**UncondVa**, T9ValueSelfAllUncond). Unconditional valuing of self and others (2 items). Cronbach α = .601.
10. **Overcome Problems--Accept Self** (**OvercomP**, T10OvercmProbAcceptSelf). Values overcoming problems, self-protection, and personal healing (2 items). Cronbach α = .600.
11. **Duty Punctuality** (**DutyPunc**, T11DutyPunctual). Values duty, obligation, and punctuality (2 items). Cronbach α = .640.

Core Beliefs and Fears

These scales are almost exactly from items originally presented in the book and were supported by factor analytic study.

1. **Positive World View.** Optimism about the future of the world and own life, lack of entitlement thinking, plus daily positive versus negative thoughts (see www.csulb.edu/~tstevens/h4world.htm, Chapter 4, 10 items). Cronbach α = .808. It divides into the following three subscales.
   a. **Grateful abundance beliefs (Grateful,** sswvGrateful). High gratitude for life and whatever one has; high proportion of positive thoughts (5 items). Cronbach α = .806
   b. **Optimism** (**Optimism,** sswvOptimism). Optimism about self and world. Good forces in control (3 items). Cronbach α =.762.
   c. **Not Entitlement Beliefs** (**NoEntitl,** sswvNoEntitl). Not believing that person owed either the basic necessities or a high standard of living (2 items). Cronbach α = .630.

2. **Self-Worth Scale (Unconditional Worth of Self and Others).** Degree to which one accepts/values all parts of one's self and others not contingent on others' individual characteristics or behaviors. It also has items related to unconditional gratitude for life. My definition of self-worth is the unconditional aspect of self-esteem. It differs from self-confidence (see below) which is the aspect conditional upon success or other factors. (See www.csulb.edu/~tstevens/h5self.htm, Chapter 5, 12 items). Cronbach is α = .778. Three subscales.
   a. **Non-contingent or dysfunctional self-worth** (**NoContSW,** ssswNonCont). Self-worth not based upon being liked, strong, the best, living by the rules, or being a winner (6 items). Cronbach α = .802.
   b. **Balanced love-happiness gratitude** (**LoHapGr,** ssswHapAllGrat). Love and happiness for self and all others, gratitude, and make decisions to maximize happiness balancing it across time and people. This scale's meaning is also overlaps with my concept of *Higher Self.* (5 Items). Cronbach α = .787.
   c. **Accept all of self** (**AccSelf,** ssswAcAllSelf). Accept all parts of self (1 item).

3. **Internal Control.** Degree of self-sufficiency and responsibility one takes for his/her own life, health, and happiness without undue influence from others (See www.csulb.edu/~tstevens/h6intern.htm, Chapter 7, 7 items). Cronbach α = .707. Three subscales.
   a. **Autonomy, independence** (**Autonomy,** ssieautony). Belief in taking care of self, controlling own happiness, not dependent upon one person (3 items). Cronbach α = .680.
   b. **Not codependent** (**NotCodep,** ssiencodep). Not care for others above self or care more for another than they do for self (3 items). Cronbach α = .682.
   c. **Not external control** (**NotExtrC,** ssienother). Belief that happiness not controlled by heredity or others (2 Items). Cronbach α =.505.

4. **Absolute-Grounded Integrated Ethics.**.Ethics philosophers and religions agree on many general principles. I attempted to pick a few themes I thought might be important for this scale which bases a person's ethics more on absolute principles and wholes such as humanity, nature, or God than on self, family, or any group. It judges people even more on their inner qualities and assumes some basic inner goodness and inherent value in all people. In addition, I included questions about astrology (very much frowned upon by philosophers, scientists, and religion) and life after death, which is believed by many approaches and people. Some people base their ethics on the reward of heaven. (14 items). Cronbach α = .746. Five subscales.
   a. **Ethics based upon absolutes (AbsoEth,** ssb2.Ethics grounded in abstract absolutes versus relativism. Philosophical beliefs guide daily life. Ethically responsible even if bad genes or environment. Science/reason alone not enough to guide ethics. (4 items). Cronbach α = 598.
   b. **Forgiving, egalitarian ethics** (**ForgivEth,** ssb2Forgiv). Forgiveness based upon inner qualities not based upon good works. Not believe bad only happens to bad (2 items). Cronbach α = .634.
   c. **Identify with humanity** (**HumIDEth,** ssb2IDgrnd) Identify with humanity more than family or any group. (2 items). Cronbach α = .480.
   d. **Meaning from abstract absolutes** (**AbsMeanE,** ssb2GrndMng). Primary ethics meaning from abstract absolutes (e.g. God, Nature); not from self or other people. (2 items). Cronbach α = .316.
   e. **Value inner goodness** (**InrGood,** ssb2InrGood). Inner goodness in all, goodness depends more on attitude (2 items). Cronbach α = .563.
   f. **Not astrology belief** (**NoAstrol,** ssb2noAstr). Not belief in astrology (1 item).
   g. **Life after death belief** (**EverLife,** ssb2lifad). (1 item).

5. **Low Greatest Fears (LoGrFear).** Low degree of common major fears such as illness, poverty, death, failure, rejection, and

confidence in ability to overcome fears or circumstances. Fears are interesting to people per se. However, I think that people's greatest fears reflect their top values and goals in life and are related to their success in philosophical and practical cognitive structuring of those basic life issues we all face. The underlying fear is usually that their greatest values/goals will be unsatisfied (Chapter 4, 12 items). Cronbach α = .864. Four subscales.

   a. **Low social fears (LoSocFr,** sswfsocial). Low fear .of being unwanted, alone, unloved, etc. (4 items). Cronbach α = .818.
   b. **Low self-related fears (LoSelfFr,** sswfself**).** Confidence can overcome worst fears/problems. Low fear of being overwhelmed by personal problems (3 items). Cronbach α = .502.
   c. **Low failure-poverty fear (LoFailFr,** sswfpovfai). Low fear of poverty, failure, lack of career success. (3 items). Cronbach α = .800.
   d. **Low illness-death fear (LoDeIlFr,** sswfillldea). Low fear of illness or death. (2 items). Cronbach α = .726.

Self-Oriented Life Skill Areas

The following scales cover cognitive-behavioral skill areas that I believe are important to happiness and life success. The Self-Confidence scale is largely an overview consisting of items each covering broad skill areas. The subsequent scales cover key areas in more detail. Interpersonal and learning-academic skill areas are covered in later sections.

1. **Self-Confidence.** A list of knowledge and skills areas was developed, and subjects were asked to rate their own confidence/skills for each area. The Self-Confidence scale measures the contingent, efficacy aspect of self-esteem. This scale has emerged as a separate factor from the other main scales in factor analytic studies. I assume that the scale's self-report ratings reflect a combination of actual knowledge and skill and of confidence level. I also assumed that these scales measure something similar to Bandura's (1982, 1997, 2000) concept of self-efficacy. (Chapter 5, 41 items). Cronbach α = .955. Seven subscales.
   a. **Learning Self-Confidence (LearnSC, sssclearn).** Confidence in own intelligence, learning, study skills, analytical thinking, synthesis, research methodology, computer-related, and critical thinking (7 items). Cronbach α = .891.
   b. **Optimistic-assertive task and person engagement SC.** (**AssertSC**, sssccopopt). Achievement motivation, work habits, emotional control, optimism, self-disclosure, and caring conflict resolution (6 items). Cronbach α = .860.
   c. **Self management** (**SlfManSC**, ssscsmsmsd). Self-management of decision-making/planning, time-management, self-development/change, finances, self-discipline, and health (7 items). Cronbach α = .884.
   d. **Career Interpersonal SC (CarIntSC,** ssscinterp). Managing others, persuasion, meeting people, public speaking, and adaptability (7 items). Cronbach α = .864.
   e. **Helping Counseling SC** (**HelpSC**, ssscallhelp). Knowledge of philosophy, religion, and social science and helping, counseling, teaching interpersonal skills. (6 Items). Cronbach α = .843.
   f. **Natural Science SC** (**NatSciSC**, ssscscience). Natural science, biology, and engineering (4 items). Cronbach α = .815.
   g. **Art and Creative SC** (**ArtCreSC**, ssscartcre). Fine and performing arts, and creative thinking (3 items). Cronbach α = .758.

2. S**elf-management Skills.** Skills related to self-care, decision-making, goal-setting, and time-management including leading a balanced life and attending to all main need/value areas. Many items are based upon my OPATSM time-management system, used on hundreds of students who reported high consumer ratings. (See www.csulb.edu/~tstevens/h9patsm.htm) It had good validating evidence from earlier LSQ studies. (Chapter 9, 15 items). Cronbach α = .871. Four subscales.
   a. **Time-management** (**TimeMan** , sssmTimeManGoalSet). Time management/goal-setting/decision-making – Frequent sessions prioritizing goals and writing daily task lists for each life area. Breaking large projects into organized, scheduled tasks (5 items). Cronbach α = .827.
   b. **Accomplishment** (**Accompt**, sssmAccompLoRush). Busy, efficient task completion without feeling too rushed or pressured (2 items). Cronbach α= .507.
   c. **Self-development** (**SlfDevel**, sssmSelfDevel). Self-development habits and skills including taking advice and self-change program(s) (3 Items). Cronbach α = .754.
   d. **Self-health care** (**SlfHelth**, sssmHealthHabs). Self-care health—exercise, diet, sleep. (3 Items). Cronbach α = .574.

3. **Emotional Coping**. Proportion of the time the user makes a particular positive or negative coping response to a negative emotional state. It had very good validating evidence from earlier LSQ studies (See www.csulb.edu/~tstevens/h8hf2.htm, Chapter 8, 20 items). Cronbach α = .850. Six subscales.
    a. **Problem-solving coping responses** (**PrbSlvCR**, sscpProbSolv). Face, explore, and discuss problems (4 items). Cronbach α = .692.
    b. **Positive thoughts CR** (**PosThCR**, sscpPosThoughts). Positive; not critical, punitive, or negative thoughts in response to negative emotions (2 items). Cronbach α = .517.
    c. **Positive actions CR (PosActCR,** sscpPosActs). Fun, involving, or vigorous activities when upset (2 items). Cronbach α = .542.
    d. **Not critical or angry CR** (**NoAngCR**, sscpNoBlameAngerWDraw). Not critical, blaming, or angry toward self or others and not withdraw from others in response to negative emotions (5 items). Cronbach α = .771.
    e. **Not smoke or drugs CR** (**NoSmDrCR**, sscpNotSmokDrugMed). No smoking, drinking, or taking medication in response to being upset (2 items). Cronbach α = .607.
    f. **Not eating CR** (**NotEatCR**, sscpNotEat). Avoid eating as a response to being upset versus eat when upset (1 item).

Interpersonal Values, Beliefs, and Skills (from the Stevens Relationship Questionnaire)

These interpersonal scales were part of the Stevens Relationship Questionnaire (SRQ) and have previous validating evidence from an earlier study discussed above Most items on these scales were originally taken from materials I had developed for assertion training and marital relationship workshops and had been clinically tested on hundreds of consumers. Much of the 10 experimental studies on Self-Instructional Mediated Life Skills Learning Modules also tested some aspect of assertion and intimacy training-related skills. All 10 studies had positive results.

Even though the SRQ scales had been very useful, I decided that they obscured too much information, and decided to use a theoretical analysis combined with a factor analysis of the SRQ scales and create a set of new scales. The new analysis resulted in leaving the Liberated Roles and Romantic scales unchanged.   However, I broke the combined Assertive Conflict, Intimacy and Independent Intimacy scales into new scales. The result is nine scales instead of five--thus adding specificity and predictive power. The new scales are also more easily interpreted. (Start with www.csulb.edu/~tstevens/assertion_training.htm.)

1. **Democratic, assertive communication and conflict resolution (AssertCR,** IntSS1a**).** Seeks win-win solutions to conflicts, with clear, caring, understanding, non-defensive, calm, persistent, honest, friendly, non-threatening behaviors (13 items). Cronbach α = .909.
2. **Open, Honest Communication and Goal Harmony (OpenCm,** IntSS1b**).** Reveal most private and sensitive thoughts and feelings regularly, shared goals, and feelings of relationship commitment (10 items). Cronbach α = .888.
3. **Close, Romantic Interactions (Romantic, IntSS2).** Romantic attraction, playful, romantic surprises, fantasize about partner, go to romantic places, have special celebrations together (7 items). Cronbach α = .879.
4. **Liberated Roles (LiberRol, IntSS3).** Equality in decisions, roles, chores/tasks, career priority, some non-stereotypical role behaviors (7 items). Cronbach α = .844.
5. **Valuing Partner--Love and Respect for Partner. (LoveRes, IntSS4).** Love, respect, cheerfully do favors for, praise more than criticize partner. Feel free when partner home, feel committed not trapped (9 items). Cronbach α = .813.
6. **Relationship Independence-Autonomy (IndepRel,** IntSS5**).** Autonomy within committed relationship. Partners feeling encouraged and free to pursue own interests and friendships. Each enjoy being alone, having partially separate funds, and believing they could be happy with another person if necessary. Value individual happiness over marriage *per se*. (11 items). Cronbach α = .766.
7. **Positive, Supportive Communication (PosSupCm,** IntSS6**).** Supportive of partner even during disagreements, rarely use negative labels, exaggerations, threats, anger. If one partner gets angry, other usually uses deescalating response (7 items). Cronbach α = .777.
8. **Collaborative, Non-Manipulative Relationship (Collabor,** IntSS7**).** Neither partner manipulating or controlling. Partners feel safe revealing weaknesses. Can work together or teach each other effectively (7 items). Cronbach α = .781.
9. **Separateness (Separate, IntSS8).** Spending weekends alone OK. Not consult for small decisions (2 items). Cronbach α = .661.

Academic-Success Related Scales

Several academic scales were created after factor analysis of the original five scales of Learning and Study Skills, Learning Skill Areas, Learning Disabilities, Academic Motivation, and Academic Satisfaction. The following 12 scales and 2 self-report aptitude items are more independent and specific. (See www.csulb.edu/~tstevens/LEARN.htm.)

1. **Time Efficient and Confident Study--versus learning disability** (**ConfEffc,** ssl1aConfidEfficStudyTest**)** Think that tests and grades reflect abilities (versus smarter than test). Not need more time for tests and assignments (8 items). Cronbach α = .859.
2. **Not Study Avoidant** (**NoAvoidS,** ssl1bConfidNotAvoidStudy**).** Not slower or more anxious about beginning assignments, reading, or writing than other students. Feel like college capable (5 items). Cronbach α = .669.
3. **Positive Campus Life Attitudes** (**CampsLif,** ssl2SatisCampusFacFriendsGrdes**).** Look forward to classes, campus activities. Enjoy students and instructors. Happy with campus and grades (8 items). Cronbach α = .902.
4. **Writing Skills-Confidence** (**WriteCon**, ssl3WritingSkills). Good at organizing papers and writing. No vision problems (added due to factor analysis). (4 items). Cronbach α = .818.
5. **Build Mental Structures** (**MentStru**, ssl4BldMentalStruct). Study alone, struggle with difficult material, attempt to build own theories and associations. Make boring material interesting (7 items). Cronbach α = .834.
6. **Basic Study Skills** (**StudySkl**, ssl5BasicStudySkills). Preview, outline, review assignments; take good notes; good concentration; create visual map; review material at least 3 times for exam (6 items). Cronbach α = .811.
7. **Degree Motivated** (**DegrMotv**, ssl6SelfmanAcadGoals). Motivated and confident will degree and won't drop out. Not confused about goals and confident of finances (5 items). Cronbach α = .818.
8. **Math-Science Seek Principles** (**SeekPrin**, ssl7MathSciPrinc). Enjoy and good in math, and seek to understand basic principles in math and science (2 items). Cronbach α = .628.
9. **Study Environment** (**StudEnvr**, ssl8StudyEnvir). Homework encouraged by family, friends; not chores conflict; good place to study; and time available to study (3 items). Cronbach α = .516.
10. **Attendance and Persistence** (**Attend**, ssl9AttendHW). Attend classes, never drop classes, and manage study time well (3 items). Cronbach α = .702.
11. **Efficient, Confident Learning** (**EfficLrn**, ssl10MemNotAnx). Efficient learning time use, good memory, relaxed during exams (3 items). Cronbach α = .732.
12. **Internal Motivation--to be in college** (**IntMotiv**, ssl11NotNonAcadMot). Internal motives versus pleasing parents, making money, or being confused why in school. Financially self-supporting (4 items). Cronbach α = .473.

The following two aptitude items were user estimate items, and not scales.
13. **Verbal Aptitude test score estimate (ssl12).** (1 item).
14. **Math Aptitude test score estimate.(ssl13).** (1 item).

SHAQ College Major Interest Scales

Many college students are confused about what academic major they wish to pursue. To help them narrow the field for investigation, I designed these college major interest scales. The college major interest scales divided common academic major areas into sets—using typical groupings in universities (CSULB specifically) and groupings by the Strong Interest Inventory as a basis. The result was the following 11 major interest scales: s.Business major interests, s.Engineering major interests, s.Fine art major interests, s.Helping profession major interests, s.Languagemajor interests, s.Medical major interests, s.Military major interests, s.Natural science major interests, s.Social science major interests, s.Womens or ethnics studies, s.Writing major interests. I will not examine them in this article. More research needs to be done on them.

The Outcome Scales and Items for Validating SHAQ

Several scales and numerous items were written to validate SHAQ's main scales and items. These scales include the Overall Happiness Scale, the Low Depression Scale, the Low Anxiety Scale, the Low Anger and Aggression Scale, the Interpersonal Relations Outcomes Scale, and the Health Outcomes Scale. In addition, a number of items were seen as important outcome measures. These items include highest annual salary, educational attainment, grade averages, and occupational status. The first three and fifth scales will be described in more detail, since they are more central to the current paper.

1. The Overall Happiness (OvHap) Scale. A 7-point scale measured happiness in various life areas including home, career, family, romance, recreation, health, and direct questions about overall happiness for recent past, current, and expected future time periods (15items). Cronbach α = .919.

2. The Low Depression (LoDep) Scale. Items were developed from the DSM-IV depression diagnosis criteria and written as self-assessment items. The scale also asks the amount of psychotherapy and medication taken for depression. It was scored in reverse so that high scores would mean low depression (6 items). Cronbach α =.828.

3. The Low Anxiety (LoAnx) Scale. Items were developed from the DSM-IV anxiety disorder diagnosis criteria and written as

self-assessment items. The scale also asks the amount of psychotherapy and medication taken for anxiety-related disorders. Included were phobias and some obsession and compulsion-related items. Reverse scored. (9 items). Cronbach α = .790.

4. The Low Anger-Aggression (LoAng) Scale. Items include frequency of losing temper, name-calling/yelling, aggressive acts, and thoughts about getting even. Reverse scored. (5 items). Cronbach α = .850.

5. The Interpersonal Relations Outcomes (IntRelOut) Scale. Number and quality of friends, happiness in marital-like relationship, and work relationships (7 items). Cronbach α =.698. This is not a well-unified scale, but consists of a collection of related relationship items that are each important.

6. Physical Health (PhyHlth) Scale. Frequency of illness, alcohol and drug use, weight, and conditioning estimates. (6 items). Cronbach α =.544. This is not a unified scale, but it is a collection of important health behaviors and outcomes.

Biographical Items

Basic personal and educational information was collected to help identify the characteristics of the sample and to discover important relationships between biographical variables and other variables. Highest career income and educational achievements were used as outcome measures for subjects with ages greater than 25 or 30 years.

Refinement of Scales and Development of the SHAQ Subscales—Number of Scales and Subscales

Originally SHAQ itself (no biographical items or outcome scales) consisted of 4 value-theme scales, 8 main self belief-skill scales, 5 interpersonal scales (from SRQ), and 5 learning-academic scales; for a total of 22 scales. In addition, a college major-career interest questionnaire of 11 scales had been included for those who wanted to add it.

The original 22 scales have proved to be useful; however, only the 8 main self belief-skill scales are unchanged. Factor analyses validated the factorial utility of the original 8 main scales and validated separating the value-theme, interpersonal, and learning-academic scales into separate sets. Further factor and logical analyses led to a restructuring of the original 4 value-theme, 5 interpersonal, and 5 learning-academic sets of scales. The 4 value-theme scales grew to a new set of 11 scales, the original 5 interpersonal scales grew to 9, and the original 5 learning-academic scales grew to 14. Additionally, I used factorial-theoretical analyses to create 36 subscales from the original 8 main self belief-skill scales to give more specified-concrete scales. The entire process involved a number of factor analytic studies, and goes beyond the scope of this article.

SHAQ has a grand total of 70 independent scales/subscales. The SHAQ experience also includes biographical items, 6 outcome scales, and potentially 11 major-career choice scales. Subjects' goals and choices determine scales administered. In addition two redundant scales overlap other scales, but are of special interest. One scale is the *Higher Self scale* that consists of items fitting the description of Higher Self in Chapter 3, and one is the *Forgiveness scale.* The original value-theme, SRQ interpersonal, and academic scales are not described in this body, but are described in the Appendices.

The Happiness Quotient (HQ) Composite Scale

Dyer (1976) coined the term, "Happiness IQ." I wanted to summarize this complex maze of SHAQ scales for both users and researchers. Therefore, I created the *Happiness Quotient (HQ).* The HQ is a simple formula for estimating one's overall ability to achieve happiness. The HQ is the linear combination of the 56 non-academic SHAQ scales. The weights are the correlations of the individual scales with happiness.[1] One use of the HQ is to give users feedback about their progress developing success and happiness-related attributes. Users may examine the components of their HQ score to see strengths and areas needing improvement. They may even look at individual questions and follow Internet links to help them develop those areas. Since the questions were designed to be face-valid, clear, learnable items, question/score examination can be very useful.

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[1] Even though I performed a linear regression using the same scales and found beta weights that were better predictors than the correlations, I used the correlations because the correlations do not remove common variance. I think it is more useful for a user to get the result of the overall correlation since it is unknown whether the removed variance is really due to association/causation from that factor or not. In some beta weight cases it is even possible that a variable moderately correlating with happiness has a negative correlation after removing common variance when in fact it might be/probably is truly a positive factor. Such nuances would be very confusing/misleading to most users.

SHAQ Scales and Scoring

Almost all items and all scale scores range in value from 0 to 1. Items typically were scored on 7 to 13 point scales. The individual item scores were each divided by the number of scale points. Similarly, the raw scale scores were divided by the number of scale items. This *relative score* for both items and scales allowed a more interesting comparison across items and scales. For example a score of 3 on a 7 point scale is not the same as a score of 3 on an 11 point scale. In the first case the relative score would be 3/7 and in the second it would be 3/11--revealing that difference. Similar *types* of items or items on the same scale usually used the same rating scale.

PROCEDURE

SHAQ—A Self-Help Expert System That Adapts To Individual Users Needs

SHAQ is part of a larger website environment devoted to self-development. The title of the website is, *Success and Happiness Website--Dedicated to Human Growth and Development at California State University, Long Beach.* The website URL is www.csulb.edu/~tstevens/success and it contains not only SHAQ, but text and references to many self-help topics. It is also closely linked to my other website www.csulb.edu/~tstevens--*You Can Choose To Be Happy*--which features my book and other self-help materials. Everything on both sites is full text, downloadable, and free. SHAQ has three parts, the biographical questions, the outcome questions, and the SHAQ scales. I wrote almost all items myself and didn't use other authors' scales to avoid copyright problems for the free distribution of all SHAQ items. Not using established outcome scales presents scale validation problems. However, I have some previous data from the LSQ and SRQ scale research; and making all scales freely available seemed worth validation problem disadvantages.

I wrote SHAQ as a java applet that is downloaded and run on users' Internet browsers. The data is sent back to the CSULB server. I wrote SHAQ as a simple *expert system*. The user's checked user type and goals determine the scales to be administered. Users can also select to take only specific scales. The process of answering questions is rapid, and users may backtrack within any scale. Users seem to like and value the experience. The last question is, "How interesting and beneficial overall would you rate your experience taking SHAQ?" On a 7- point scale, the mean was 6.082 (SD = 1.037, N = 3247). Therefore, users seemed very satisfied with the experience.

After completing SHAQ, the applet provides a list of internet links to self-help web pages. The listed items depends upon user scale scores. Users receive a complete copy of all scales, questions, results, self-help tips, and links to self-help web pages in text format. They can then edit, save, or print their results; which can be quite lengthy. Completing SHAQ usually requires about 1-2 hours.

Subjects

All of the 3446 subjects in this study completed the online version of SHAQ. I have extensive data available about the characteristics of the subjects. Following are some relevant subject data:
1. **Sex:** 63.1% female, 36.9% male.
2. **Age:** mean, 34.525. Percentiles and age: 10th, 20.0 yrs; 25th, 25.0 yrs; 50th, 33.0 yrs; 75th, 43.0 yrs; 90th,50.0 yrs.
3. **Location:** USA,72%, Other nations, 27% (mostly English-speaking); zip codes spread throughout USA.
4. **Highest education completed**: not complete HS, 3.1%; high school, 26.3%; technical degree, 4.8 %; 2-year degree, 11.3%; bachelor's degree, 32.8%; master's degree, 15.6%; doctorate, 4.6%.
5. **Occupation:** student, 29.0%; people professional, 20.8%; technical professional, 18.6%; educator, 11.4%; manager, 10.9%; consultant, 6.0%; sales, 7.1%; other technical, 4.3%; clerical, 7.5%; service, 8.0%; own business, 1.1%; others, 11.3%.
6. **Hours work/week**: Mean, 30.8; Median, 40.0; Less than 10 hrs, 20.2%; 10-40 hrs, 28.2%; 40 hrs, 31.2%; 40-50 hrs, 14.5%; over 50 hrs, 5.5%.
7. **Primary ethnic heritage:** North America, 49.3%; Northern Europe, 26.2%; Asia, 11.5%,; Southern Europe, 7.3%; Africa, 3.2%; South America, 1.0%; Pacific, 0.7%; other, 4.6%.
8. **Fluent in following languages:** English, 95.0%; Spanish, 6.9%; French, 5.8%; German, 2.7%; Chinese, 2.0%; Vietnamese, 0.4%; Korean, 0.4%; Other Asian, 6.0%; Other European, 4.1%; Other, 37.1%.
9. **Religious affiliation:** No Affiliation, 21.2%; Catholic, 18.1%; Conservative Protestant, 13.9%; Liberal Protestant, 12.4%; Agnostic, 11.5%; Jewish, 2.6%; Buddhist, 2.4%; Islam, 1.4%;
10. **Motivation for completing part or all of SHAQ** could also be important. SHAQ was designed to let users have some choice over what scales they took because SHAQ is so long and because many people may have more specific self-development interests. Two questions were designed for this purpose. Each is in the form of a checklist. The questions and results follow:
    a. **Type of User:** *Check ALL that apply to you*: I want to know more about self, 71.7%; I want help with a

problem, 63.0%; I want a thorough assessment, 58.8%; I want a specific questionnaire, 5.0%.
b. **Want help with:** *Check ALL that apply to you*: explore values, 74.9%; relationships, 66.1%; success-happiness, 59.9%; procrastination, 59.8%; self-esteem, 58.0%; loneliness, 56.5%; time management, 54.0%; emotional coping, 53.9%; anxiety, 53.0%; depression, 51.6%;; meeting people, 44.8%; anger/aggression, 43.8%; academic success, 16.8%; career planning, 19.3%; career help only, 1.6%; not taking for self, 23.6%.

Selection issues and conclusions

So who are our subjects? They are a good mixture of ages, ethnicity, religion, occupations, and geographic location. Certainly, it is a much broader sample than the introductory psychology students or college students used by many studies.
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Outcome variable data sources. Since I was particularly interested in happiness and success (personal, academic, relationship, and career), it was important that we have a large subset of subjects who were old enough and represented a broad enough cross-section of the population to have meaningful outcomes such as time to graduate from college or have marital or career success or failure. Our sample met those goals.

Potential sample selection biases. How does the sample compare to the larger U.S. or world population? A better question is what larger population does it more accurately represent? First, the sample is female heavy (63% to 37%) and a little better educated than the general population. An important selection bias concerns the type of people who find SHAQ online and complete it. How are they alike and different from the general population. Most obviously, they are English-speaking people who use the Internet. What are their motives? The SHAQ type and goal questions provide relevant information. Most people seem to seek and complete SHAQ for self-development reasons. Our sample probably includes people with greater than average self-improvement motivation. This may be the greatest relevant source of sample bias compared to the whole population. About 63% report that are taking SHAQ for specific self-help reasons and about 58% for more general self-development reasons. Since about 29% are students (3.5% in high school), it is natural that about 16% want academic help. Well over half want help improving self-esteem and emotions and 66% want help with relationships and 56% loneliness. From my experiences as a therapist, these data for help-seekers are similar to frequencies of people seeking therapy or other forms of self-development help. What may be more surprising is that 74% wanted help exploring values and 54% wanted time-management help. However, the website did use these as keywords, along with keywords related to many other self-development issues.

Some of the analyses are based upon all 3446 subjects taking SHAQ and some on smaller subsamples.. Almost all frequency and corelational data is based upon nearly the full sample. However, whenever the analysis required many or all scales simultaneously (as in some factor analytic and regression analyses), then the sample sizes were reduced to those who completed most or all of SHAQ. That might be a more biased sample and would probably be those more interested in more general forms of self-development and less those interested in more specific problem help. Another factor that reduced the sample size for those completing all scales was the fact that at least one scale was added after about one-fourth of the subjects had already completed SHAQ. However, the corelational results for about 3300 subjects were quite consistent with the regression results for about 1100 (see below). So this may not have been a very important bias.

Another issue to consider is that if the sample has a "self-development" bias (or any other kind) that restricts the range of the subjects' scores (standard deviations) taking SHAQ, that bias might actually *underestimate* the size of the correlations for the larger population. (due to the restriction of the range phenomenon). However, since most of the important correlations are already substantial, the reduction of sample size for regression analysis does not appear to be an important issue.

RESULTS

Reliability of SHAQ Scales

Individual Cronbach alphas are reported in the scale descriptions above. For the *SHAQ main scales* the results were α > .9 for 4 scales; α= .8-.9 for 13 scales; and α = .7-.8 for 8 scales. Four scales with only two items had α = .6-.7. For the *SHAQ learning scales*, α > .8 for 6 scales and α = .7-.8 for 1 scale. Four scales with 2-3 items had α < .7. For *SHAQ subscales* with > 3 items α > .8 for 10 scales; α = .7-.8 for 3 scales; and α < .7 for 1 scale. For subscales of 2-3 items (11 had only 2 items), α > .7, for 6 scales; α = .5-.7 for 11 scales; and α < .5 for 2 scales.

The *outcome scales* that were true scales were Overall Happiness, α = .919; Low Depression, α = .828; Low Anxiety, α = .790; and Low Anger-Aggression, α = .850. The other two "scales" were actually summaries of relationship success measures, α = .698; and health and healthy behavior outcomes, α = .544.

The main SHAQ and outcome scales generally exceeded, met, or nearly met the standard Cronbach α = .80 criteria--indicating good reliability. The small subscales are generally 2 to 5 items long; thereby making the α > .80 criteria difficult to meet. The small subscales were largely designed by using logical groupings and by studying factor analytic results using varimax rotation. Substituting them for the main scales in the regression equations has also increased predictive power. Alphas were probably lower than ideal partially because all scales were kept to minimum length so that SHAQ could meet the two conflicting goals. These conflicting goals were (1) to be as comprehensive as possible and (2) to minimize the time required to complete SHAQ.

User Ratings of SHAQ Experience

One goal of SHAQ was for users to be able to benefit from the experience of completing SHAQ. I hoped that users would gain insight into personal factors that relate to their own happiness and success. I believe that comparison to a standard can serve as an inherent role-model and encourage users to change attributes they believe helpful to becoming happier and more successful. Therefore, I wrote the last question to assess user's rating of their interest and benefit received from completing SHAQ. The mean rating of 6.08 on a 1-7 rating scale indicates a very positive rating from the 3247 users rating SHAQ.

Validation of the SHAQ Scales

The only method I have had available for validating SHAQ has been my website. I have used only questions I wrote myself to avoid copyright issues or high costs since taking SHAQ is free and I am not on a grant. In an effort to offset this disadvantage, I attempted to write outcome questions that were very straightforward, face valid, and contained information that was of research interest *per se*. As stated above, the anxiety and depression scales restated DSM-IV criteria. I encourage other researchers interested in validating SHAQ to compare it with other instruments, give SHAQ to specialized population groups (e.g. depressed patients, criminals, high achieving professionals, etc.), or use SHAQ in experimental research. I will be happy to assist—even by including additional scales online if necessary (and they don't violate copyright). Following are my regression and corelational data relating SHAQ scales to the outcome scales and items.

Relation of SHAQ to Emotional, Health, Relationship, and Other Outcomes

My book title, *You Can Choose To Be Happy: "Rise Above" Anxiety, Anger, and Depression* (1998) describes major hypotheses of my research. People can learn cognitive and behavioral methods for maximizing their chances for being happy and minimizing their chances for being unhappy (i.e. feeling depression, anxiety, or anger). The SHAQ items and scales are my attempt to specify the means for accomplishing this goal of maximizing happiness. If these attributes really accomplish increase happiness, then the SHAQ items and scales should correlate with higher scores on happiness measures and lower scores on negative emotions measures. To be meaningful, those correlations should be good predictors of those outcome measures. I was also interested in SHAQ's relationship to health, relationship, academic, and career-related outcomes. The first major results section provides evidence for SHAQ's overall ability to predict these important outcomes. A linear regression analysis was performed using the 56 SHAQ scales and subscales listed above as variables to predict outcome measures for all subjects who completed the relevant SHAQ scales.

SHAQ's predictive power for emotions. Individual regression analyses were performed for the 56 SHAQ subscales predicting each major outcome variable described above. 1123 subjects completed all SHAQ scales. The dependent variable Overall Happiness yielded a multiple correlation coefficient of R = .865 with the 56 subscales. The amount of variance (effect size) accounted for was R Square = .749. For Low Depression R = .730, R Square = .533. For Low Anxiety R = .675, R Square = .426. For LowAnger-Aggression R = .701, R Square = .491. For the 224 subjects who completed all 70 scales including the academic scales R = .897, R Square = .805 for Overall Happiness. See Tables 1 and 2.

For treatment and symptoms of depression and anxiety. Regression correlations between the 56 SHAQ subscales and the following behavioral disorder outcome measures follow. Correlation with the amount of therapy for depression R = .452, R Square = .204; with length of time medication taken for depression R = .409, R Square = .167. With major depression symptoms checklist R = .596, R Square = .356. With PTSD[2] symptoms R = .498, R Square = .248; lasting OCD[3] problems R = .460, R Square = .211. number of phobias R = .572, R Square = .328. With number of panic attacks R = .429, R Square = .184. With length of time on medication for anxiety R = .389, R Square = .151. With amount of therapy for anxiety R = .399, R Square = .159. (N = 1123 for all analyses.)

Meaning of *effect size*. Many non-researchers aren't familiar with the meaning of the term *effect size*. I would like to explain. Think of effect size as predictability. Maximum predictability is 100%--meaning you can predict an outcome with 100% accuracy. An R Square of .749 for predicting the happiness score means that you can predict happiness with about 75% accuracy using the combined 56 SHAQ subscales—a very high degree of predictability. Depression effect size/predictability was 53%; anxiety, 43%; and anger, 49%. R Square *means* measured effect size.

SHAQ's predictive power for health outcomes. Regression results for the 56 scales predicting the Health Outcomes Scale score was R = .816, R Square = .666. Correlations with individual health items produced the following results. Low Frequency Illness past 3 yrs R = .477, R Square = .227; Low Num Alcoholic Drinks R = .572, R Square = .328; Low Smoking Freq R = .827, R Square = .683; Low Illegal Drugs R = .521, R Square = .271; Physical Conditioning Level R = .600, R Square = 489; Low Body Weight R = .539, R Square = .291.

SHAQ's predictive power for relationship outcomes. For the Relationship Outcomes Scale, the SHAQ subscales correlated R = .693, R Square = .467; N = 1123.

SHAQ's predictive power for academic and career success outcomes. Most users completing SHAQ didn't complete the academic portion of SHAQ. For the 56 scales not including the learning-academic Scales the regression produced the following results. For highest personal income R = .486, R Square = .236.(For age > 40 R = .538; R Square = .289.) Highest education completed R = .458, R Square = .210 and College GPA R = .393, R Square = .154. For the users completing all of SHAQ including the learning-academic scales, the results were highest personal income R = .620, R Square = .384 (N = 160, age > 25); highest education completed R = .580, R Square = .336 .(N = 296, age > 25);and college grade point average (GPA) R = .583, R Square = .339 (N = 240).

Table 1: Outcome Regression Results for 56 SHAQ Scales/Subscales

Scale Sets	Outcome	R	R Square	N
56 Scales/Subscales	Happiness	.865	.749	1123
Scale Outcomes	LoDepression	.730	.533	1123
	LoAnxiety	.675	.426	1123
	LoAng-Aggr	.701	.491	1123
	Health Outc	.816	.666	1123
	Relationships	.693	.467	1123
56 Scales/Subscales	Income	.486	.236	1123
Behavioral Outcomes	Highest Education	.458	.210	1123
	College GPA	.393	.154	
	Depression Therapy	.452	.204	1123
	Depression Medication	.409	.167	1123
	Major Depress Chklist	.596	.356	1123
	PSTD Symptoms	.498	.248	1123
	OCD Problems	.460	.211	1123
	Number Phobias	.572	.328	1123
	Num Panic Attacks	.429	.184	1123
	Anxiety Therapy	.399	.159	1123
	Anxiety Medication	.389	.151	1123

P < .0001 for all Rs

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[2] Post-Traumatic Stress Syndrome
[3] Obsessive-Compulsive Disorder

**Table 2: Outcome Regression Results for 70 SHAQ Scales
and Subscales Including Learning-Academic Scales**

Scale Sets	Outcome	R	R Square	N
All 70 Scales/Subscales	Happiness	.897	..805	296
(Including Academic-	LoDepression	.764	.583	103
Learning)	LoAnxiety	.721	.521	296
	LoAng-Aggr	.793	.629	296
	Health Outc	.844	.712	296
	Relationships	.713	.508	296
	Income*	.620	.384	160
	Highest Education	.580	.336	296
	College GPA**	.583	.339	227
	Happy Work Relations	.710	.504	296

P < .0001 for all Rs; * For subjects Age > 25; ** For subjects Age > 30

Regression Outcome Results by Scale Sets

Regression analyses were also performed upon sets of SHAQ scales to get an idea about how each related to the various outcomes. The scales were divided into six sets—life values-themes (11 scales), general beliefs-values (19 Subscales), knowledge-skills (17 Subscales), interpersonal skills (9 scales), and learning-academic scales (14 scales). It is clear from the results that each scale set had good predictive power with the general beliefs-values and knowledge-skill sets leading the way with Rs of .802 and .797 for happiness. Interestingly, they were also the best predictors of health and relationships. See Table 3.

Emotional Outcomes. All six sets performed well on all outcomes except Highest Personal Income. On Overall Happiness, General Beliefs-Values (R = .802) and Knowledge-Skills (R = .797) led the way. Most surprising was learning-academic (R = .668); however, most of the subjects completing those scales were college students and their academic skills and academic life is a very important part of their current happiness. Other emotional outcomes followed a similar pattern.

Other Outcomes. Knowledge-skills led on Health Outcomes (R = .791). Knowledge-Skills (R = .585) and General Beliefs-Values (R = .561) led on Interpersonal Outcomes. Surprisingly, the Interpersonal Scales set wasn't quite as strong a predictor at .486. This is not entirely consistent with other studies and the correlations which found individual interpersonal scales with higher correlations than those. However, it isn't surprising that the non-interpersonal skills areas related strongly to interpersonal scales, since it is known that people's values and beliefs are important factors in interpersonal relationships. (The previous LSQ results found that self-management and emotional coping scales correlated well with interpersonal items.)   Also, some of the general belief and value scales' items were related to relationships.   Highest income was best predicted with R's .300 to .400 in all areas except Life Values-Themes. Learning-Academic (R = .365) and General Beliefs-Values (R = .363) led.

Table 3: Outcome Results for SHAQ Major Scale Sets

Scale Sets	Outcome	R	R Square	N
Life Values-Themes	Happiness	.546	.298	2289
11 scales	LoDepression	.318	.101	2308
	LoAnxiety	.264	.070	2308
	LoAng-Aggr	.416	.173	2308
	Health Outc	.400	.160	2222
	Relationships	.475	.226	1720
	Income	.145	.021	2308
General Beliefs-Values:	Happiness	.802	.643	1934
19 subscales	LoDepression	.654	.428	1934
from World View,	LoAnxiety	.576	.332	1934
Self-Worth, I-E,	LoAng-Aggr	.559	.312	1934
Ethical Beliefs,	Health Outc	.535	.286	1934
Worst Fears	Relationships	.561	.315	1934
	Income	.363	.132	1934
Knowledge-Skills:	Happiness	.797	.636	1775
17 subscales from	LoDepression	.666	.444	1430
Self-Confid/Skills,	LoAnxiety	.610	.372	1799
Self-Management,	LoAng-Aggr	.561	.315	1799
Emotional Coping	Health Outc	.791	.610	1772
	Relationships	.585	.342	1799
	Income	.344	.118	1799
Interpersonal Skills	Happiness	.591	.349	2336
9 scales	LoDepression	.385	.148	2038
	LoAnxiety	.376	.141	2370
	LoAng-Aggr	.590	.348	2370
	Health Outc	.404	.163	2264
	Relationships	.486	.236	2324
	Income	.208	.043	2370
Learning-academic	Happiness	.668	.431	582
14 scales	LoDepression	.492	.242	513
	LoAnxiety	.457	.209	582
	LoAng-Aggr	.417	.174	582
	Health Outc	.427	.182	564
	Relationships	.462	.213	408
	Income[1]**	.365	.133	313
	Highest Education*	.361	.130	313
	College GPA**	.446	.199	292
	Happy Work Relations	.604	.348	582

P < .0001 for all Rs; * For subjects age > 25; ** For subjects age > 30.

Happiness Quotient (HQ) Predictive Power

The current HQ scale uses the 56 scales and subscales with their individual correlations as beta weights to predict happiness. The result of using HQ to predict happiness is slightly less than a regression analysis; however it uses all positive weights and doesn't give extra weight to scales arbitrarily processed first. For the HQ model R = .801, R Square = .642; N = 992. Predicting Low Depression R = .551, R Square = .303; N = 916. Predicting Low Anxiety R = .533, R Square = .284; N= 916. Predicting Low Anger-Aggression R = .594, R Square = .353; N = 912. Health outcomes R = .594, R Square = .353; N = 923. Relationship outcomes R = .632, R Square = .399; N = 909.

Correlations Between Outcomes and Individual Scales

Now that we have established SHAQ's overall ability to predict happiness, negative emotions, health outcomes, and relationship outcomes, let's look more closely at how individual scales or sets of scales correlate with these outcomes.[8]

Individual SHAQ scales' correlations with emotional outcomes.   Since SHAQ was designed to identify attributes that improve people's happiness and other emotions, it was expected that the highest correlations would be with the emotional outcomes. Indeed that was the result. Table 4 lists the Pearson, r, correlations between each original main scale and the outcome scales. Tables 5 -11 list the correlations between each SHAQ scale or subscale. The SHAQ scales are grouped by the scale attribute types listed above—Life Value-Themes through Learning-Academic sets.

Table 4: Emotional Outcomes By Original Main Scales

Original SHAQ Scales (excluding Value-Theme Scales)	Happi-ness	Low Depres-sion	Low Anx-iety	Low Anger-Aggres-sion	Relation-ships	Health	Highest Personal income	Educa-tion Level	College GPA
Self-Worth Beliefs	.585	.446	.420	.484	.388	.361	.105	.089	.097
Int-Ext Control Beliefs	.492	.420	.462	.421	.288	.375	.236	.144	.127
Positive World View	.720	.549	.468	.420	.464	.388	.179	.085	.096
Low Greatest Fears	.549	.476	.449	.380	.306	.324	.179	.096	.099
Self-Confidence Areas	.691	.462	.427	.381	.499	.388	.170	.145	.189
Self-Management Skills	.655	.396	.315	.379	.498	.469	.098	.141	.198
Emotional Coping Skills	.662	.601	.510	.491	.418	.494	127	.140	.142
Ethical Beliefs	459	306	..336	.463	.362	.442	.109	.000*	.086

All correlations except * significant at p < .0001.   N's ranged from 1448 to 3298

Table 5: Relationship, Income, and Academic Success Outcomes By Original Main Scales

TO BE ADDED Xxxx put new table here Also include relationships, income, and etc. by other scales in tables. Also put range of Ns as did in book.

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[8] **Why use correlations instead of partial correlations?** There are two accepted methods for looking at correlations—Pearson product-moment and partial correlations. The Pearson method takes one variable at a time and pretends it is the only variable being used to predict the outcome (e. g. happiness). The person method can mislead the unaware reader to thinking that the total effect explained by a set of variables is greater than it really is. . Looking at the Pearson correlations can be misleading, because as a set there can be many high correlations, when in fact there may be effect factors in common to all that 'inflate' the set of correlations. The partial corelational method solves that problem. It compares all variables in a set at once to the outcome (e. g. happiness) and reduces the shared effect. The problem with the partial correlation method is that it takes the strongest or first variable in the set and gives it a disproportinal amount of the shared predictive power, thus making it appear as though the other variables have less predictive power than they actually do when taken alone. The choice of which variables get to use the 'shared' predictive power is somewhat arbitrary and may not reflect reality. I report the Pearson method correlations, because it is a fairer method for comparing the predictive power of the individual scales. Using the Beta weights of regression equations as data points to compare the strength of variables has the same problem. Variation is removed from all variables and assigned to the variables that have the greatest effect size. However, in real life it may be that a variable with less effect size is the real cause. Using partial correlations or beta weights can even cause variables with moderate positive correlations to an outcome variable to end up with negative correlations when in reality it might be positively correlated! I think it is better to stick with the Pearson correlation.

Table 6: Correlations of Outcomes and Life Value-Theme Scales

Life Value-Theme Scales	Happiness	LoDepression	LoAnxiety	LoAnger-Aggr	Health	Relationships
sT1.HigherSelf-Integrity	.380	.166	.137	.327	.355	.351
sT2.SocialIntimacyNotFamily	.256	.056	.058	.251	.279	.357
sT3.Family-EmotionalSupport	.406	.154	.110	.217	.294	.426
sT4.SuccessStatusIncomeMaterial	.295	.136	.096	.138	.303	.298
sT5.OrderPerfectionGoodness,	.310	.102	.031	.214	.278	.338
sT6.GodSpiritualReligion	.302	.126	.040	.103	.224	.269
sT7.ImpactContributionMentalCha	.347	.136	.133	.296	.277	.326
sT8.AttentionFunEasy	.311	.106	.101	.192	.247	.335
sT9.ValueSelf-AllUnconditionally	.461	.276	.209	.311	.232	.336
sT10.OvercomeProbAcceptAllSelf	.185	.073	.030	.135	.168	.209
sT11.DutyPunctuality	.265	.097	.037	.155	.260	.264

Note: All correlations are significant at p < .0001, except *, p < .05; **, p < .01; ns = not significant.
Number of Subjects (N) ranged from2300 to 3300.

Table 7: Correlations of Outcomes with Top Belief-Value and Fear Scales

Worldview, Self-Worth, Fear, and Internal-External Subscales	Happiness	LoDepression	LoAnxiety	LoAnger-aggr	Health	Relationships
sswv.Grateful, abundance beliefs	.722	.574	.445	.356	.332	.459
sswv.Optimism about self and world	.543	.354	.284	.265	.297	.366
sswv.NotEntitlement beliefs	.157	.164	.185	.266	.216	.076
sssw.Not contg or dysfunct SelfWorth	.364	.337	.383	.428	.293	.210
sssw.HigherSelf--MaxLoveHapBal-Grat	.567	.328	.247	.360	.307	.429
sssw.Accept all of self 1	.160	.282	.193	-.015	-.039	.036
sswf.Not not social or alone	.492	.444	.366	.275	.261	.320
sswf.Not self-related fears	.574	.477	.429	.375	.284	.332
sswf.Not poverty-failure fears	.380	.311	.304	.270	.225	.164
sswf.Not illness-death fears	.221	.218	.314	.300	.254	.086
ssie.Autonomy, independence	.553	.438	.434	.367	.329	.333
ssie.Not codependent	.213	.230	.283	.243	.250	.087
ssie.Not care-provider for other(s)	.246	.213	.274	.310	.228	.176

Number of subjects (N)

Note: All correlations are significant at p < .0001, except *, p < .05; **, p < .01; ns = not significant.

Table 8: Correlations of Outcomes with Ethics-Related Beliefs

Ethics-Related Beliefs Subscales	Happiness	LoDepression	LoAnxiety	LoAnger-aggr	Health	Relationships
s.Ethics-Related Beliefs	.459	.306	.336	.463	.459	.442
ssb2.Ethics grounded absolutes	.346	.266	.294	.373	.367	.266
ssb2.Forgiving-egalitarian	.282	.216	.294	.378	.294	.210
ssb2.Identify with abstract whole	.258	.078	.066	.214	.171	.237
ssb2.Meaning from abstract absolutes	.256	.225	.264	.277	.262	.147
ssb2.Inner goodness in all	.327	.121	.102	.226	.203	.317
ssb2.Not belief in astrology 1	.087	.167	.201	.212	.334	.020*
ssb2.Belief in LifeAfterDeath 1	.263	.138	.080	.133	.142	.257
ssb3.Forgiving-not punitive	.342	.271	.345	.490	.338	.234
Number of subjects (N)						

Note: All correlations are significant at p < .0001, except *, p < .05; **, p < .01; ns = not significant.

Table 9: Correlations of Outcomes with Self-Confidence/Skill Scales

Self-Confidence Subscales	Happiness	LoDepression	LoAnxiety	LoAnger-aggr	Health	Relationships
sssc.Learning	.408	.323	.359	.329	.309	.239
sssc.PosAchCopeRelate	.740	.502	.384	.354	.298	.540
sssc.Self control, discip,dev	.668	.474	.368	.323	.422	.410
sssc.Career interpers skills	.577	.377	.400	.228	.252	.446
sssc.Helping skills	.480	.265	.281	.342	.267	.410
sssc.Natural science	.318	.229	.218	.221	.294	.196
SsscArt, creative	.349	.200	.176	.222	.182	.310
Number of subjects = N	3165	2654	3133	3096	3065	2531

Note: All correlations significant, p < .0001.

Table 10: Correlation of Outcomes with Self-Management and Emotional Coping Scales

Life Skills Subscales	Happiness	LoDepression	LoAnxiety	LoAnger-	Health	Relationship
sssm.Time management	.411	.198	.105	.133	.258	.351
sssm.Busy,accomp,efficient	.553	.391	.299	.279	.292	.341
sssm.Self health care	.460	.266	.221	.283	.589	.325
sssm.Self-development	.558	.301	.225	.350	.347	.417
sscp.Prob solve,talk,selfexpl	.491	.282	.222	.292	.264	.418
sscp.Pos thoughts,phil,peptalk	.577	.496	.359	.309	.276	.364
sscp.Pos acts,fun,exercise	.362	.242	.137	.207	.290	.250
sscp.Not anger,blame,withdraw	.492	.525	.476	.447	.257	.272
sscp.Not smoke,drugs	.192	.291	.325	.260	.635	.074
sscp.Not eat 1	.200	.265	.219	.207	.235	.068
Number of subjects (N)						

For all correlations, p < .0001.

Table 11: Correlations of Outcomes with Interpersonal Skill Scales

Interpersonal Skills	Happiness	LoDepression	LoAnxiety	LoAnger-	Health	Relationship
IntSS1a.AssertCR	.463	.236	.202	.355	.306	.365
IntSS1b.Open Honest	.503	.289	.230	.302	.293	.435
IntSS2.Romantic	.394	.173	.117	.238	.181	.267
IntSS3.LiberatedRoles	.166	.113	.182	.292	.134	.137
IntSS4.Love Respect	.476	.287	.268	.432	.295	.425
IntSS5.Rel Independ	.379	.288	.308	.389	.296	.215
IntSS6.Pos-Supportive	.421	.275	.267	.538	.307	.272
IntSS7.Collaborative	.406	.268	.235	.328	.271	.317
IntSS8.Separate	-.023ns	.061	.127	.102	-.018ns	-.061
Number of Subjects						

Note: All correlations are significant at p < .0001, except *, p < .05; **, p < .01; ns = not significant.

Table 12: Outcome Scales and Learning-Academic Scales

Academic Success Factor	Happiness	LoDepres-ion	LoAnxiety	LoAnger-Aggr	Health	Relationship	Highest Educ Complete	College GPA
ssl1a.StudyTimeEffic-Confid	.184	.129	.119	.160	.184	.076**	.110	.255
ssl1b.Confid NotAvoid study	.175	.159	.124	.217	.237	.167	.166	.192
ssl2.Campus,fac,friend,grdSatis	.619	.250	.431	.389	.224	.166	.132	.249
ssl3.Writing skills	.294	.172	.156	.178	.248	.205	.171	.247
ssl4.Build Mental Structure	.302	.132	.203	.132	.118	.186	.172	.250
ssl5.StudySkl-UndRevMapNotes	.356	.157	.265	.219	.206	.250	.265	.266
ssl6.Selfman-acad goal intention	.507	.271	.253	.393	.318	.267	.153	.226
ssl7.MathSci-Principles,interest	.215	.178	.081	.162	.124	.100	.099	.181
ssl8.Study home environment	.292	.238	.113	.182	.163	.224	.063	.145
ssl9.Attend class-doHW	.379	.320	.203	.329	.303	.247	.225	.370
ssl1.Memory-not anxious	.362	.189	.210	.229	.270	.157	.134	.233
ss11.Not job,parent,money motiv	.146	.113	.092	.199	.222	.188	.283	.147
ssl12Study time available	-.074	-.047	-.122	-.016	-.015	-.049	-.052	.110
ssl13.Verbal aptitude test score	.131	.185	.017	.160	.253	.204	.130	.214
ssl14.Math aptitude test score	.189	.255	.023	.177	.196	.134	.109	.220

Note: All correlations are significant at p < .0001, except *, p < .05; **, p < .01; ns = not significant.   Ns ranged from 401 to 1086, since some items added later. Most were over 8.

Evidence for Higher Self Values and for Making Happiness a Top Goal

One hypothesis of the book was that making happiness for self and others a top goal in life, and living by that goal will increase the probability one will be happier and more productive. My research supports the idea that making happiness as a top goal is associated with being happier; having less depression, anxiety, and anger; having better relationships; being healthier; and being more successful in some ways. Making happiness a top goal correlated R= .446 with Overall Happiness, R= .217 with Low Depression, R= .185 with Low Anxiety, R= .316 with Low Anger-Aggression, R= .298 with Health Outcomes, and R= .396 with good Relationship Outcomes. (All R's were significant at .0001 level and N's ranged from 2589 to 3195.)

The Higher Self Values scale discussed above included making happiness important, but also included values like integrity, self-sufficiency, impacting the world, and learning and self-development. The Higher Self scale correlated r = .503 with Overall Happiness, r = .252 with Low Depression, r = .197 with Low Anxiety, r = .372 with Low Anger-Aggression, r = .365 with Health

Outcomes, and r = .436 with Relationship Outcomes, r = .37. (All r's were significant at .0001 level and N's ranged from 2567 to 3129).

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Importance of Overcoming Worst Fears
start here xxxx

Because I suspected that peoples underlying worst fears were important causes of their emotions, I created the SHAQ Low Greatest Fears scale and subscales. The **Greatest Fears (LowGF) scale** had a strong relationship to the Overall Happiness scale. The correlation was r = .55.　　The LowGF scale correlated .48 with Low Depression, .45 with Low Anxiety, and .38 with the Low Anger/Aggression scale. The LowGF scale also correlated with good Relationship Outcomes, .31; Health Outcomes, .32; Highest Personal Income, .18; Highest Education Completed, .10; and College GPA, .19.

Greatest Fears Subscales. The four subscales of the GF scale and their correlates to outcomes are:
1. Low Fears of Illness and Death: Happiness,.22; Low Depression, .22; Low Anxiety, .31; Low Anger, .30; Good Relationships, .09; Health, .25; Income, .08; Education level, .07; college GPA, .05.
2. Low Fears of Failure and Poverty: Happiness, .38; Low Depression, .31; Low Anxiety, .30; Low Anger, .27; Relationships, .16; Health, .23; Income, .19; Education, .07; College GPA, .07.
3. Low Rejection/Social-Related Fears: Happiness, .49; Low Depression, .44; Low Anxiety, .37; Low Anger, .28; Relationships, .32; ; Health, .26; Income, .14; Education, .08; College GPA, .06.
4. Low Self-Related Fears: Happiness, .57; Low Depression, .48; Low Anxiety, .43; Low Anger, .38; Relationships, .33; ; Health, .28; Income, .12; Education, .08; College GPA, .11.

It should be clear that these underlying fears are substantially related to happiness and success and that working to overcome them should be a high priority for anyone who chooses to be happy, healthy, and successful in relationships and other areas of life. (For all correlations, p < .0001 and N's ranged from 2048 to 3199.)
Relation of Biographical Characteristics to Outcomes

Generally we found only weak relationships between biographical characteristics and outcomes. Sex significantly correlated with happiness (.086--higher for females) and relationships (.148). Males had higher incomes (-.175). Among the emotional outcomes, age was mildly related to both anxiety (.112) and anger (.130). However, age was one of the best predictors of income (.454); probably because students and younger people have not had time to develop higher incomes. Similarly, age related to education completed (.252). Age was not related to relationships but was negatively related to health (-.070).

For religion, being Jewish (.060) or being Methodist (.052) correlated the highest with happiness; being agnostic was negatively related (-.092). Of the various ethnic groups, being "other Asian" (.082) and Mexican (.081) had the highest positive correlations, while having a northern European background had the most negative (-.053) with southern Europeans right behind (-.048). People who spoke "other European" languages were particularly unhappy (-.111). German (-.086) and 'other European' (-.127) speaking people had slightly higher anger/aggression scores. Depression was slightly less (.072) among Chinese language and 'other Asian' (.069), but was mostly unrelated to language, ethnicity, or religion. Though 'other Fundamentalist's were slightly less depressed (.083) and anxious (.068) than other people.

Among occupations, students (.081), people professionals (.080), educators (.074), and managers (.061) were the happiest; only 'other' occupation had a negative correlation (-.057). 'Others' were also the most depressed (.057) and least healthy (-.076). While students were the happiest, they were also the most anxious (-.068) and the healthiest (.082) of the occupations.

Health wise, 'other Asian's (.124) and Chinese language (.086) had better health among the ethnic/language groups. The 'other European' (-.124) and German language people (-.079) faired the poorest. The Mormons led the way among religions (.077); Buddhists (.051) were second.

I included the User Feedback Rating of the SHAQ experience as an indirect measure of a response tendency to rate everything positively. It had a mild positive correlations with some outcomes; but wouldn't account for much of the overall effect on outcomes. The correlations ranged from -.017 with depression and .017 with college GPA to .091 with relationships. The effect sizes ranged from .0003 to .0083 (.03% to .83%)—pretty small.

Table 13: Correlations between Outcomes and Sex, Age, and User Rating

	Happi-ness	LoDepression	LoAnxiety	LoAnger-aggression	Health	Relation-ships	Highest education	College GPA	Highest income
Sex 1=M 2=F	.086	-.033*	-.058	.036*	-.070	.148	-.017ns	.104	-.175
Age	-.005ns	.049*	.112	.130	.026ns	.013ns	.252	.055	.454
UserRating of SHAQ	.084	-.017ns	-.030*	.012ns	-.038ns	.091	.048**	.017ns	.062

Note: All correlations significant at p < .0001 except *, p < .05; **, p < .01; and ns = not significant.

Correlations Between Outcome Scales-The Rich Get Richer

The Harmonious Functioning model of emotions presented in my book predicts that happiness, depression, anxiety, and anger should be interrelated and moderately to highly correlated. The model also gives high priority to cognitive values, beliefs, knowledge, and skills (including learning skills) as causal factors in affecting both moment-to-moment and overall emotional states. It is my personal and clinical experience that changing these cognitive factors can have dramatic and immediate effects upon people's emotional states. This model makes different predictions than models which downplay the effects of cognitive factors. Successes in cognitive therapy and other approaches changing cognitions help validate these hypotheses. Happiness correlates .596 with low depression, .402 with low anxiety, and .325 with low anger/aggression. Depression correlates .639 with anxiety and .364 with anger-aggression.

Since we also believe that many of the same cognitions are responsible for better relationship and health management, it is interesting to note that correlations of happiness with relationship success is .620 and with health .402. Similarly, health correlates with low depression .382, with low anxiety .342, and with low anger-aggression .390. Relationship success correlate with low depression .286, low anxiety .180, and low anger-aggression .167.   See Appendix A, Table 13, for a complete set of all outcome intracorrelations.

DISCUSSION

SHAQ Reliability Issues

This study included finding the Cronbach alphas as a measure of reliability for each scale and subscale. The results are summarized above and point to a reasonably good reliability (alpha > .80) for almost all of the main scales. The reliabilities of even the very small scales (2 to 5 items) were almost always acceptable as well. I have not performed a study of test-retest reliability since I have had no control over test-takers though it might be possible even over the Internet. I would encourage an enterprising researcher to find a sample of subjects and do so.

SHAQ and Validity Issues

Some of the most obvious and/or significant facts about this study are: (1) the size and scope of the study testing 3446 subjects on about up to 81scales covering a broad variety of human attributes; (2) using the Internet as a means of collecting that data which yielded a wide variety of subjects on many dimensions; (3) using only items written by one author and therefore not having collaborating independent evidence; (4) the overwhelming number, strength, and proportion of positive regression/correlation coefficients (and lack of insignificant or negative ones). Let's look at these facts in more detail. These facts relate to conclusions about the validity of SHAQ and of the study results.

Conclusions about the sample and use of the Internet. As discussed above, using the Internet to recruit subjects had its advantages and disadvantages. On the positive side, I was able on very limited resources, to administer a huge questionnaire to a large, diverse sample of subjects. On the negative side, they were self-selecting first by being only people having access to the Internet and second by choosing to find this unusual website and take this long questionnaire. SHAQ test-takers were probably not a representative sample of everyone. From our data it was clear that they were generally more female (63%) and seeking self-improvement. So are our results generalizeable to the broader population or just to people seeking self-improvement? I don't know, but I doubt that they would be much different. It is even possible that due to restricted variance the correlations could be higher for the larger population. A recent review by Birnbaum (2004) concluded that "Experience with studies done via the Web and in the lab indicates that if Web studies are properly designed, one can replicate lab results in many fields of psychology." A later review by Skitka and Sargis (2006) concluded that use of the Internet was a valid and useful means of collecting data, and it encouraged more researchers to do so.

Construct validity of SHAQ

Construct validity is normally found by comparing one instrument to other, well-validated instruments. Ideally it should correlate highly with those it is supposed to be similar to and minimally with those instruments it is supposed to be different from. Unfortunately, in this study I couldn't put validated instruments on the Internet because of copyright and/or cost limitations. Therefore, traditional construct validity research has not yet been performed upon SHAQ or the outcome scales. That is a serious problem that I do not want to minimize, and I hope that other researchers will correct this deficiency.

Nevertheless, I believe that the bootstraps approach I have used does provide some evidence for SHAQ's construct validity. First, if we can start with the premise that many individual items reflect face valid, clear, and interesting data in themselves, then I think we can construct an argument that SHAQ does indeed have evidence for construct validity. Second, another important aspect of this study is the diversity of the questions and question types. Some questions measure subjective self-reports of emotions, some measure values and beliefs, some measure self-reports of behaviors and facts (such as grades, educational attainment, relationships, health, and income).

The bootstrap idea is that if everything works and goes as predicted for the huge, complex data set, then the results provide evidence for both the whole and the parts. In this case the overwhelmingly positive evidence and almost total lack of negative evidence support the conclusion that both the whole and the parts are valid.

Differences in explanatory power between SHAQ's attribute scales and other scales and items. My model predicted that variables such as sex, age, occupation, religious background, ethnic group, language, income, or other similar variables would be much poorer explaining/predicting emotional or other outcomes than the cognitive attribute scales included in SHAQ. While there were a number of significant correlations between these biographical variables and the outcomes, they were much weaker than the associations between the SHAQ variables and the outcomes. One interesting result similar to what some other studies have found is the low correlation between income and happiness ($r = .051$). Many people would be surprised that people's income and possessions are not very important to happiness. Instead inner qualities, relationships, and health seem to be much more important factors in determining our happiness. Kasser et al.(2004), Solberg et al. (2004), Myer's (1992), and others' reviews have found similar results. These results provide positive evidence for the differential predictive validity of SHAQ.

SHAQ's strong correlations met or exceeded expectations. I expected moderate correlations between the SHAQ scales and the outcomes, but I was surprised by both the strength and the consistency of the SHAQ scale correlations with the outcomes. On the surface these strong results provide supportive evidence both (1) for the validity of SHAQ for predicting what it was designed to predict and (2) for the cognitive model upon which SHAQ was built. It may be surprising that all of SHAQ's major cognitive attribute areas—values-themes, world view, self-worth, I-E control, ethical beliefs, fears, self-confidence areas, self-management, emotional coping, interpersonal, and learning-academic skills correlated so strongly with each other and with the outcome variables. However, that correlation pattern was predicted by the model.

One of the underlying causal agents for the fairly strong relationships between all these sets of variables might be reinforcement of two kinds: (1) reinforcement by expectation validation and (2) reinforcement by increased happiness/decreased negative emotions. According to my model, reinforcement causes positive-functional values/strategies to gradually permeate the cognitive system, becoming more dominant than poorer performing ones. In time reinforcement of functional cognitions leads toward integrity of the personality and the high functioning people Maslow describes. Unfortunately, reinforcement in dysfunctional environments can strengthen dysfunctional cognitions. Therefore, environment functionality may also be a powerful factor behind these correlations.

Alternative explanations of the results. Before getting too excited about the results, we need to look for alternative explanations. Can these results be explained by variables or artifacts that don't fit the model? One possible reader reaction to these data is that they are almost too good to be true. Honestly, that was my first reaction. As psychologists we are trained to be suspicious of results that are too good. We are taught to think that something besides the variables we think we are examining may be explaining the results. We look for these alternative explanations as we should. In this case the most obvious explanation is that subjects may have had a positive response bias. What if a large percentage of subjects are simply prone to answer questions affirmatively or negatively? If such is the case, then that response bias could explain at least some of the results, since all my scales seemed to positively correlate with each other and with almost all the outcomes. I would like to have included a social desirability measure to test for one type of response bias; but didn't because of the extra length it would have added (and the copyright issue). I strongly encourage researchers to see how SHAQ and the outcome scales correlate with a social desirability scale and other scales of response bias.

There is one small built-in test of social desirability/positive response bias--the user rating question. If a person has a positive response bias or is answering to please the researcher, then surely they would check a higher rating on that question. If many subjects had a positive response bias, then the there should be a high correlation between the user rating and both the outcome scales and the SHAQ scales. However, the correlations of the user rating question were $r = .084$ with happiness, $r = -.017$ with low depression, $r = -$

.030 with low anxiety, r = .012 with low anger, r = -.038 with health, r =.091 with relationships, .048 with education attained, r = .017 with college grades, and r = .062 with income. The effect sizes ranged from .0003 to .0083 (.03% to .83%). These small correlations would not support the positive response bias explanation of the results.

There are other good reasons to restrict doubt about this studies' many high correlations as being valid indicators of what is happening in the real world. I used well-accepted practices of writing these questions and scaling them. The types and content of items are similar to those of many other questionnaires. Let's look at some of the different types of questions I used.

Subjective, inner-state questions. Many SHAQ questions and outcome questions are self-reports about inner states such as beliefs, values, or emotions. Much evidence exists in the literature that these types of questions generally do indeed measure what they purport to. For example questionnaires that have studied subjective well-being have used subjective questions similar to these and after study researchers have accepted them as valid indicators of inner states. Lucas, Diener, and Larsen (2003) reviewed and compared research on a variety of behavioral, physiological, neuroimaging, and other measures of emotions. They concluded that "psychologists can confidently assess positive emotions using a variety of well-validated measurement techniques. The simplest and most flexible are self-reports of emotions; and self-reports probably provide the best insight into the experience of emotion within individuals over time."

Behavioral and factual questions. Even more accepted is the use of simple questions reporting behaviors or facts. Many of my questions are of this type. Yet in all types of questions across many content domains, results supported hypotheses. While a response bias can explain part of the variance/effect, response biases have never been found to have the kind of effects that would explain the number and strength of these regressions/correlations.

Test-taking motivation and testing conditions. It is important to note that SHAQ was administered under conditions which generally are very supportive of honest responding. Subjects were self-directed, were not taking SHAQ to get a job or any other outcome where looking good would be an extraneous factor, and were under very impersonal/objective conditions (a computer on the Internet). Most were also taking the questionnaire for self-improvement for the purpose of getting honest feedback about themselves. Most subjects were probably aware that answering dishonestly inherently undermined the very purpose for which they were taking SHAQ. There is evidence that subjects completing questionnaires on the Internet may be more honest than in other contexts. Skitka et al. (2006) in their review of Internet research concluded that "Recent research indicates that collecting data on the Web avoids some of the data quality problems one sometimes sees when using other collection methods. As also reviewed in Skitka & Sargis (2005), Web-based surveys are lower in measurement error, survey satisficing, and social desirability bias than are surveys conducted over the phone or via intercom (Chang & Krosnick 2002a,b)."

Results consistent with previous research. Another point to ponder is that none of these results is reallyvery surprising to anyone who has studied issues related to this research. My questions and scales have not discovered any radically new or surprising human attribute, key for happiness, or other positive outcome. My study is different primarily by its scope and complexity. Additionally, SHAQ's scales may offer more specificity of values, beliefs, and skills than most. The increased specificity may have helped increase the strength of the associations. Piers Steel, Joseph Schmidt, and Jonas Shultz (2008) point out that previous meta-analyses of the relationship between personality factors and happiness or subjective well-being have given greatly *underestimated* the true relationship because of methodological flaws.

The Characteristics of Happy People

I included the "Choose To Be Happy Checklist" in my book (at http://www.csulb.edu/~tstevens/hhapchkl.htm) which is written as a set of life guidelines. SHAQ was designed partially from that checklist. To summarize from the scale descriptions above, the happiest people (also not depressed, not anxious, not angry-aggressive, with good relationships and tending to be generally successful) have the following characteristics.

1. **Highest Values**
   a. Love and health/happiness for self and all others tends to be their top goal.
   b. Spirituality, God, and intimate relationship with God and/or Nature.
   c. Integrity, honesty, truth, knowledge, learning, and self-development
   d. Unconditional love for all people (including self) and valuing relationships—friends, family, romantic, peer, etc.
   e. Beauty, goodness, order, organization, perfection, justice, simplicity, and cleanliness,
   f. Contributions to society, positive impact on others' lives, spreading health and happiness.
   g. Achieving goals, self-discipline, self-responsibility, excellence, and accomplishment.
   h. Exploration, play, adventure, challenge, and spontaneity.

2. **Positive World View**
   a. Positive forces in control of nature/world/people's lives. We can control own lives and happiness.
   b. Progress and optimism--future will be better for world, others, and self (in general at least). People/self can learn and improve.
   c. Gratitude for gift of life and all of positives in life (start with 'zero expectations'), no entitlement thinking.

3. **High Self-worth**
   a. Value self (and others) unconditionally.
   b. Seek truth about self and accept all parts of self—including previous actions and effects of actions (no repression).
   c. Lack of dysfunctional beliefs basing self-worth upon opinions of other, success, or other contingencies.

4. **Internal Control-Autonomy**
   a. Focus on own values/goals (above), and self-discipline/integrity-- keeping thoughts and behavior consist with them. May include treating people empathetically and kindly despite their treatment of the person.
   b. Take responsibility for own health and happiness. No excuses. Not allow others to interfere with top goals.
   c. Not allow self to take *primary* responsibility for others' happiness, be manipulated, or be codependent.

5. **Enlightened Philosophy-Ethics**
   a. Values humankind more than any subgroup (e.g. nation, family, etc.)
   b. Find greatest meaning from own abstract philosophy, values, and spirituality versus concrete realities--other people, work, play, home, or any life role.
   c. Strong adherence to ethical standards based upon values above.
   d. Forgiving based upon beliefs in inner goodness/value of all people.

6. **Low Fears** of death, illness, failure, poverty, being alone, or other people's opinions or actions—philosophically based.

7. **Self-Confidence based upon high knowledge and skills** in general and in important life areas described above as the university in one's head—such as philosophy, science, language, math, psychology, art, business, engineering, athletics. (Especially important are the areas listed below.)

8. **Self-Management Skills**
   a. Time management, goal-setting, decision-making, life planning.
   b. Self-development, self-improvement, and habit change integrated into life.
   c. Self-health care; adequate exercise, diet, safety, medical care, healthy habits.

9. **Emotional Coping Skills** (habitual responses to negative emotions or their prevention)
   a. Problem-solving, self-exploration, and help-seeking.
   b. Positive thoughts generated from positive philosophy, beliefs, and values (not negative).
   c. Positive actions, involving, fun, vigorous mental and physical constructive activities (not harmful ones).
   d. Not critical, blaming, or aggressive responses toward self or others.
   e. Not eat, smoke, drink alcohol, take drugs, or other self-destructive habit.

10. **Interpersonal Beliefs and Skills**
    a. Democratic and assertive. Seeks win-win solutions with mutual discussion and empathy-respect. Collaborative--avoid blaming, threatening, manipulative actions. Remain calm and caring during even heated discussion.
    b. Open, honest, empathetic, caring, respectful of others and supportive of their autonomy.
    c. Romantic, playful, friendly.
    d. Good helping and teaching skills. Empathetic, positive, supportive, and clear.
    e. Good (honest, caring) persuasive skills (sales, marketing, and speaking).
    f. Good management/leadership skills, inspiring, organizing, group decision-making, planning, follow-up,

11. **Learning, Critical Thinking, and Academic Skills**
    a. Internal motivation to obtain knowledge and/or degree with adequate time and concentration to learn.
    b. Curious/exploratory, seek deep theoretical/abstract principles and theories of all phenomena.
    c. Face and use analysis and problem-solving for difficult or confusing material. Make the uninteresting, interesting.
    d. Good learning and study skills—outlining, note-taking, summary, and review methods.
    e. Good, motivating study/work environments—enjoyable, supportive, and distraction free.

These characteristics are SHAQ's prescription for happiness, health, and success. We have presented some fairly strong evidence that people with these characteristics tend to have a better emotional life. They are happier, less depressed, less anxious, and less angry. They also have better interpersonal relationships, are better educated, and seem to be healthier. It is important for psychologists to note that these are *learnable, teachable* characteristics not physiological ones such as serotonin levels. My guess is that these learned attributes will have more significant *effect*s upon serotonin levels than be the *result*s of them. Recently, psychologists and the public have become enamored with the wonderful developments in neurophysiology; however, psychology is not physiology—it is a higher level of analysis. No matter what the underlying mechanisms and physiology may be, these learned, psychological attributes are the most important determinants of our emotional life; and we need focus upon developing them through learning and other psychological means. Psychology—not physiology--is the primary mission or our profession. It is unlikely we will ever find a pill that teaches us math or any of the attributes above. We still have to learn them the old-fashioned way. Unfortunately, that learning requires a lot more time and effort than popping a pill.

Primary Value of SHAQ and this Research

I believe that the greatest contributions of this research are: (1) demonstrating that the wisdom of the ages and conclusions of years of cognitive and positive psychology theory can be partially condensed into an instrument measuring a complex array of values, beliefs, and skills intimately related to primary emotion and life success indicators; (2) supporting cognitive systems theory and the Harmonious Functioning model; (3) supporting the utility SHAQ as both a research instrument and a diagnostic assessment tool related to improving happiness, depression, anxiety, anger, academic success, interpersonal relationships, and possibly career success. Furthermore, SHAQ is accessible (free) to any English-speaking person in the world via the Internet.

Further Conclusions and My Hopes for the Future

My hope for future SHAQ research is that other researchers will test SHAQ and its reliability and validity in many new ways on many different subgroups of people. I would like to improve SHAQ as more becomes known about it. My hope for future SHAQ use is that it will become more widely known, accepted, and freely used.

Using SHAQ as a diagnostic research, clinical, and self-help instrument. SHAQ has three main advantages over most other instruments as an assessment device—its comprehensiveness, its transparent items, and its free availability. By transparent items, I mean items that are specific enough, clear enough, and behavioral enough to make them fairly easy for therapists or clients to understand. Clients and therapists can read any item and know what belief, thought, or action is needed to improve the score on that item. Many psychologists (Nathan and Langbucher, 1999; Beutler and Malik, 2002; and others) have summarized evidence for the diagnostic limitations of the psychiatric-based DSM and evidence for the lack of intervention utility of the DSM and most psychological assessment devices. By using SHAQ in research on depression, anxiety, anger, and interpersonal clinical problems, the researchers and clinicians will gain knowledge of teachable attributes they can measure and impart to those seeking help. SHAQ's items and scales have more focus on positive cognitions, but allow for a wide range of responses that go beyond moving from high depression to no depression, they also range to high states of happiness. These scales fulfill the request of those in the positive psychology movement who want instruments and research that studies not just clinical problems, but a wider range of human functioning. SHAQ could be very useful for both research and clinical diagnosis and treatment. SHAQ could also be useful for studying deeper factors underlying differences between exceptionally high functioning people, average/normal functioning people, and people diagnosed with clinical disorders.

The comprehensiveness of SHAQ allows a researcher or clinician to see the true complexity of depression. For example one client may be low on positive world view/optimism, internal control, self-worth, emotional coping; and high on materialistic-status values, and interpersonal values and skills.. A therapist should treat that client very differently from one who was low in higher-self values, self-worth, emotional coping, and interpersonal skills but high in internal control, achievement values, self-management, self-confidence, and academic skills. A more severely depressed person may score low on almost all of these scales. An examination of the subscales and individual items could provide the therapist and client with more specific and useful intervention objectives.

Using SHAQ for large-scale college student assessment and college planning. SHAQ was partially developed for use with college students—my specialty. It makes a very useful tool for University 100: Introduction to the University type classes. SHAQ can help students understand personal attributes that will make a difference in their college and future life happiness and success. SHAQ can give them concrete goals for personal development. Students can pursue these goals by choosing college courses and activities that will enhance those attributes. Therefore, SHAQ can help colleges with their core mission—to help students become happier, healthier, more productive contributors to society after graduation.

Importance of Psychology's Unique Contribution to Support of Societally Functional Values, Beliefs, And Behaviors

If I sound enthusiastic about SHAQ and these results, it is because I am. However, my enthusiasm comes not only from these results; but from a lifetime of seeing SHAQ-type attributes make such a huge difference in my own, my clients, and so many other peoples' lives. My enthusiasm comes from seeing hundreds of people who have changed their lives by improving themselves on these attributes. I can think of no greater contribution our profession can make than to help the people on this planet lead happier, healthier, and more productive lives. I want to do whatever I can to contribute to that goal. In our society, we are constantly exposed to many messages in the media highlighting or promoting values such as conflict, rebelliousness, violence, dysfunction, selfishness, greed, dependence, codependence, overprotection, apathy, lack of self-discipline and integrity, and dishonesty. Even many intellectuals and academics believe that pursuing SHAQ attributes are naïve. Bertrand Russell (1930) penned the following,

> *It is common in our day, as it has been in many other periods of the world's history, to suppose that those among us who are wise have seen through all the enthusiasms of earlier times and have become aware that there is nothing left to live for. The men who hold this view are genuinely unhappy, but they are proud of their unhappiness, which they attribute to the nature of the universe and consider to be the only rational attitude for an enlightened man.*

SHAQ was designed with items that ask people what they value and believe and how they act. Values and related beliefs, knowledge, and skills that support pursuing happiness; unconditional love/acceptance; integrity; honesty; self-reliance and self-discipline; beauty; productivity and efficiency; contribution to society; truth, knowledge, and self-development are diametrically opposed to many of the attributes being directly or indirectly taught in the media. SHAQ provides some comprehensive and convincing evidence that if we want to be happy, healthy, have good relationships, and have academic-career success, then we must be as those staid, un-newsworthy sages of the ages have told us we must be and ignore those negative media messages.

For more than 30 years as a cognitive therapist almost every new counselee would enter my office upset and leave feeling better. It wasn't that we solved their problems that really existed outside my office. It was that they found a new cognitive structure for coping with those problems, and they often found hope where there had been despair or desperation. As my Harmonious Functioning model explains, one of the most interesting things about happiness is that almost anyone can find happiness even in the most awful circumstances because of our human ability to cognitively adapt to situations. That is the good news. The bad news is that even in the best of circumstances, it is possible for us humans to feel very anxious, depressed, or angry because of how we think about the situation.

It is sad to see how society and many in our own profession overlook the lessons psychologists have worked so long and hard to learn. A half-century ago George Kelly (1955), in his personal construct theory, explained depression, anxiety, and anger in cognitive terms as did Staats (1963, 1968), Miller, Galanter, and Pribram (1960), and many others since (c.f. Lopez and Snyder, 2003). We have the results of studies showing that cognitive therapy is at least as effective in the short run and more effective in the long run as medication (Cuijpers et al. , 2009; Chan, 2006 ; Gould et al., 1997). There is also evidence that cognitive treatments are also more cost-effective than pharmacological treatments (Hunsley, 2003). Yet many people would rather pop a pill than learn methods for *permanently* improving their cognitive values, beliefs, and skills in ways that will increase their chances at happiness the rest of their lives. Some therapists would rather refer clients for medication, possibly because they don't know how to help these clients. In seeing hundreds of clients for anxiety and depression, I only referred a few for medication because cognitive therapy worked well without it.

Maslow (1954, 1962) led a movement to help teach positive approaches to living and overcoming negative emotions and problems. Martin Seligman (2000) edited the classic *American Psychologist* Special Issue on happiness and positive functioning to begin the new millennium on a positive note. APA later published a landmark handbook on assessing positive psychological characteristics by Lopez and Snyder (2003). Seligman was a breath of fresh air as APA president (like Maslow so many years before) advocating more focus upon positive emotions, positive contributions, and positive means of human development. These means to these positive outcomes are *learnable* and *teachable.* Religions teach millions of people some of these means. This data is not groundbreaking; however, it paints a somewhat comprehensive picture of the multitude of cognitions involved in a robust approach to overcoming negative emotions and achieving happiness. This data supports the conclusion that these cognitions are not only important in achieving a good emotional life, they also appear to be important in achieving health, good relationships, and academic and career

success. Finally, because of their specificity, most of these cognitions appear to be *learnable* and *teachable* beliefs and skills, and not general heritable traits.

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APPENDICES

APPENDIX A: MOST INTRA OUTCOME SCALE AND ITEM CORRELATIONS

Table 14: Inter Outcome Correlations

Outcome Scale or Item	Overall happiness	LoDepression outcomes	LoAnxiety symp+treat outcomes	LoAnger-aggression outcomes	Health outcomes	Relationship outcomes	Highest income	Highest education completed
Overall happiness	1.000	.596	.402	.325	.402	.620	**.051**	**.051**
Health outcomes	.402	.382	.342	.390	1.000	.213	**.086**	.123
Relationship outcomes	**.620**	**.286**	.180	.167	.213	1.000	**.055**	**.067**
LoDepression outcomes	**.596**	1.000	.639	.364	.382	.286	.109	**.079**
LoAnxiety symp+treat outcome	**.402**	**.639**	1.000	.452	.342	.180	.209	.189
LoAnger-aggression outcomes	**.325**	**.364**	**.452**	1.000	.390	.167	.105	.111
Highest education completed	.051**	.079	.189	.111	.123	.067	**.378**	1.000
High school GPA	.106	.099	.115	.078	.152	.028ns	.012	.223
College GPA	.130	.090	.097	.092	.118	.057**	.071	.284
Highest personal income	.051**	.109	.209	.105	.086	.055**	1.000	.378
LoFreq of illness past 3 years	**.245**	**.289**	**.292**	**.268**	.540	.094	.187	.074
LoFreq of alcohol drinks	**.180**	**.130**	.067	**.198**	.483	.090	-.096	-.078
LoFreq of cigarettes	**.187**	**.205**	**.198**	**.157**	.651	.095	.044	.159
LoFreq of illegal drugs	**.119**	**.162**	**.152**	**.169**	.509	.060**	.110	.135
Physical conditioning level	**.432**	**.295**	**.250**	**.275**	.590	.265	.082	.061
LoWeight	.222	.192	.093	.168	.505	.129	-.049	-.001ns
Friends happy-successful	**.334**	.162	.128	.186	.289	.483	.026	.036*
Have or had happy marital rel	**.307**	.154	.093	.096	.083	.620	.137	.086
Close netwk of friends-car rel	**.592**	**.279**	**.200**	.178	.181	.744	-.035	.053**
Friends share innermost	**.451**	**.202**	.126	.152	.093	.664	-.066	.028ns
Num friends socialize 1/month	**.368**	.117	.052**	.030*	.122	.486	-.114	-.033*
Number extremely close frnds	**.399**	.119	.015ns	.045*	.113	.570	-.044	.017ns
Commit to romantic relatnshp	**.186**	.142	.084	.000ns	.050**	.534	.194	.051**
Number of subjects (N)	3185	2637	3119	3083	3069	2525	3140	3140

Note: the health items are part of the Health outcomes scale and the relationship items part of the Relationship outcomes scale, so correlations are artificially high between items and the same scale. Note: N for each correlation is the smaller of the two Ns. All correlations were significant at $p < .0001$ level except *, $p < .05$; **, $p < .01$; ns = not significant.

APPENDIX B: HIGHER SELF SCALE

Higher Self Scale (**HighSelf**, HigherSelfScale). Unconditional love of self and others. Happiness as top goal for self and others including principle guiding decisions to maximizing happiness balanced between self and others, across life areas, and over time. Honesty, integrity, goodness, health and longevity, impact upon the world, giving to others, development of personal philosophy and self, play, independence, self-discipline, self-sufficiency, beauty, competence, learning, and meeting goals are very highly valued (24 items). Cronbach α = .935. This scale takes items from several other scales and therefore is a redundant scale not used in some analyses. However, it is an attempt to provide one means of measuring my concept of *Higher Self*.

HigherSelfScale =(thmimpac + thm33goa + thm6lear + thm9shap + thm10oth + thm14ind + thm22bod + thm23bal + thm34exp + thmcompc +thminteg + thmphil + thmbeaut + thmgoodn + thmplayf + thmsesuf + thmsedis + thmuncon + tbvbalan + tbvhapca + tbvgrati + thvselfa + thvuncon + thvselfw) / 24.

Outcome	Higher Self Beliefs
s.Overall happiness	0.503
s.LoDepression outcomes	0.252
s.LoAnxiety symp+treat outcomes	0.197
s.LoAnger-aggression outcomes	0.372
s.Relationship outcomes	0.436
s.Health outcomes	0.365
b.Highest personal income	0.016
b.Highest education completed	0.009
b.College GPA	0.059
ssde.LoDepressionSymptoms	0.283
ssde.LoDepressionTreatments	0.092
ssax.LoPerformanceAndGeneralAnxiety	0.281
ssax.LoFearsAndOCDsymptoms	0.120
ssax.LoAnxietyTreatments	0.036
sshe.LoNegAddictHabits	0.216
ssde.NO DepressionTreatment	0.005
ssax.NO AnxietyTreatment	-0.029
h.Happy w/ my career now	0.274
ssh.Career happiness	0.348
ssre.CloseFriends	0.372
ssre.RomanticRelationshipSuccess	0.204
re.Friends happy-successful	0.346
re.Have or had happy marital rel	0.204
ssh.Romantic relation happiness	0.233
ssh.Family happiness	0.294
ssh.Friends happiness	0.394
ssh.Recreation happiness	0.342
ssh.Happy self-development/meaning	0.472
ssh.Happy in past years	0.337
ssh.Happy recently	0.372
ssh.Expected future happiness	0.449

he.LoFreq of illness past 3 years	0.229
he.LoFreq of alcohol drinks	0.309
he.LoFreq of cigarrettes	0.101
he.LoFreq of illegal drugs	0.083
he.Physical conditioning level	0.398
he.LoWeight	0.178

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

APPENDIX C: ORIGINAL LIFE VALUES-THEMES SCALES

1. Achievement-related.   (9 items). Cronbach α = .893.
2. Social-family related.   (10 items). Cronbach α = .893.
3. Duty-obligation related. (8 items). Cronbach α = .78.
4. Internal-oriented values. (30 items). Cronbach α = .958.

APPENDIX D: ORIGINAL ACADEMIC SUCCESS SCALES

1. Academic Aptitudes Scale. Self-reported estimates of verbal and math aptitude scores. (2 items). (11 items). Cronbach α = .79.

2. Academic Motivation and Satisfaction Scale. Desire and satisfaction related to attend various college activities and underlying motives for attending college. (12 items). Cronbach α = .851.

3. Academic Motivation Scale. Intention, confidence, and determination to attend classes and complete college requirements. (11 items). Cronbach α = .806.

4. Learning and Study Skills Scale. Basic study and learning skills questions taken from a self-help guide I wrote for college students to help them improve their grades. See www.csulb.edu/~tstevens/learn.htm. (12 items). Cronbach α = .878.

5. Basic Academic Learning Factors Scale. A scale developed with the assistance of Frank Christ, who developed the CSULB Learning Assistance Center and was a mentor to many others beginning college-level learning assistance centers throughout the USA. He used these items as primary screening items for students needing learning assistance. These were validated by their research. (12 items). Cronbach α = .811.

6. Potential Learning Disabilities Scale. A scale developed with the assistance of Dr. Robert Swan, who developed the CSULB Learning Disabilities Center, which was one of the first in California. He used these items as screening items for students who might need help with learning disabilities. These were validated by their research. (13 items). Cronbach α = .879.

APPENDIX E: ORIGINAL SRQ INTERPERSONAL SKILLS/HABITS SCALES

1. Assertive Conflict Resolution. Positive communication and problem-solving, especially when people initially disagree using assertive (versus aggressive/domineering or non-assertive/passive). Use of empathy, compliments, non-labeling, non-blaming, neutral to positive language that focuses upon facts, feelings, and positive win-win goals are major themes of this scale. Most items are specific behaviors related to these themes. Correlated ??? with the Locke-Wallace. (24 items). Cronbach α = .922.

2. Intimacy communication. The aspect of communication stressing positive, open, complete, and accurate self-disclosure and encouragement of self-disclosure by others. Empathetic responses are an important aspect as well. Correlated ??? with the Locke-Wallace. (15 items). Cronbach α = .917.

3. Independent Intimacy. Independence and self-sufficiency within the context of a close relationship. Acceptance and encouragement of partner's independence, growth, and happiness as well. (18 items). Cronbach α = .806.

4. Romance. Romantic behaviors and thoughts about one's partner. (7 items). Cronbach α = .879.

5. Liberated Role Beliefs. Liberated role beliefs (versus traditional male-dominant ones). Stresses equality in decision-making and responsibility in important relationship areas. (7 items). Cronbach α = .842.

APPENDIX F: SCALE MEANS, STANDARD DEVIATIONS, Ns

Almost all of the following means and SDs are of relative scores ranging between 0 and 1.0 (explained above). Therefore the reader can make valid comparisons between means as a measure of raw differences in scores. For example for life values-themes our sample valued sT1: Higher Self integrity, etc. mean = .749 the highest of the value groups and sT6: God, Religion, mean = .555 the lowest of the group. Comparing those two numbers should reflect a meaningful overall difference in the sample as a group. My guess is that sT6 would be more controversial, and differences in the standard deviations of sT6 = .240 versus sT1 = .140 supports that idea.

Table 15: Outcome Scale Means and Standard Deviations

Outcome Scale or Item	Mean	SD	N
s.Overall happiness	.600	.184	3185
s.LoDepression outcomes	.599	.225	2819
s.LoAnxiety symp+treat outcomes	.719	.183	3298
s.LoAnger-aggression outcomes	.772	.163	3262
s.Health outcomes	.702	.133	3081
s.Relationship outcomes	.521	.153	2673
Outcome Subscales			
Some Individual Outcome Items			
b.Highest education completed	5.112	1.665	3394
b.High school GPA	.759	.160	3192
b.College GPA	.761	.154	2895
b.Highest personal income	4.345	2.340	3393
he.LoFreq of illness past 3 years	.658	.245	3173
he.LoFreq of alcohol drinks	.644	.218	3081
he.LoFreq of cigarettes	.761	.351	3081
he.LoFreq of illegal drugs	.921	.177	3081
he.Physical conditioning level	.553	.178	3173
he.LoWeight	.683	.272	3173
re.Friends happy-successful	.623	.232	2673
re.Have or had happy marital rel	.630	.311	2673
re.Close network of friends & career-rel	.580	.275	2673
re.Have/had friends share innermost	.640	.295	2673
re.Number friends socialize 1/month	.306	.204	2673
re.Number extremely close friends	.215	.136	2673
re.Degree of commit to 3 mo romantic	.653	.354	2673

Table 16: Life Belief-Values Scales Means and Standard Deviations

Value or Belief Scale or Subscale INSERT SCALES W SUBSCALES???	Mean	SD	N
Life Top Values-Themes			
Higher Self Beliefs (redundant scale)	.678	.125	3217
sT1.HigherSelf-Integrity, happy, balance,devel,discpn,phil,	.749	.140	3334
sT2.SocialIntimacyNotFamily, love/rom, respect,support,agreeable	.735	.145	3279
sT3.Family-EmotionalSupport and care giving,parental love-respect	.701	.172	2424
sT4.SuccessStatusIncomeMaterialism	.615	.148	3269
sT5.OrderPerfectionGoodness,cleanliness,juatice,simplicity,punctual	.649	.142	3334
sT6.GodSpiritualReligion	.555	.240	2473
sT7.ImpactContributionMentalChallenge-exploration	.672	.150	3312
sT8.AttentionFunEasy, playful, adventure	.627	.146	3273
sT9.ValueSelf-AllUnconditionally	.560	.208	3246
sT1.OvercomeProblems-AcceptAllofSelf	.585	.106	2385
sT11.DutyPunctuality	.582	.177	2510
World View and Self Worth			
s.Positive world view	.624	.153	3162
sswv.Grateful, abundance beliefs	.668	.198	3200
sswv.Optimism about self and world	.641	.196	3200
sswv.NotEntitlement beliefs	.496	.208	3162
s.Self-worth beliefs	.595	.126	3246
sssw.Not contingent or dysfunct SelfWorth	.655	.165	3246
sssw.HigherSelf--MaxLoveHapBal-Grat	.573	.172	3246
sssw.Accept all of self 1	.343	.216	3246
Internal-External Control Beliefs			
s.Int-Ext control beliefs	.616	.162	2690
ssie Autonomy, independence	.702	.211	2690
ssie.Not codependent	.538	.238	2690
ssie.Not care-provider for other(s)	.565	.214	2690
Ethics-Misc General Beliefs			
s.GroundedEthics????			
ssb2.Ethics grounded in abstract absolutes	.672	.150	2366
ssb2.Forgiving-egalitarian	.751	.192	2366
ssb2.Identify with abstract whole	.412	.165	2366
ssb2.Meaning from abstract absolutes	.624	.204	2366
ssb2.Inner goodness in all	.546	.182	2366
ssb2.Not belief in astrology 1	.718	.242	2366
ssb2.Belief in LifeAfterDeath 1	.606	.270	2366
ssb3.Forgiving-not punitive	.758	.157	2356
Low Greatest Life Fears			
s.Low greatest fears	.601	.174	3162
sswf.Not not social or alone	.550	.229	3162
sswf.Not self-related fears	.625	.193	3162
sswf.Not poverty-failure fears	.576	.227	3162
sswf.Not illness-death fears	.702	.236	3162

Table 17: Knowledge-Skills Scales Means and Standard Deviations

Knowledge-Skill Scale or Subscale	Mean	SD	N
Self-Confidence/Assessment of Knowledge Skills			
s.Self-confidence areas	.682	.143	3225
sssc.SelfConf-Learning	.801	.159	3225
sssc.SelfConf-PosAchCopeRelate	.623	.201	3225
sssc.SelfConf-self control, discipline, develop	.657	.191	3225
sssc.SelfConf-Career interpersonal skills	.657	.188	3225
sssc.SelfConf-Helping skills	.740	.168	3225
sssc.SelfConf-Natural science	.583	.201	3225
sssc.SelfConf-Art, creative	.659	.204	3225
Self-Management Skills			
s.Self-management skills	.537	.160	1936
sssm.Time management-OPATSM	.505	.220	2127
sssm.Busy,accomplishment,efficient	.494	.222	2127
sssm.Self health care--exercise, diet, sleep	.558	.176	2127
sssm.Self-develop, take advice, habit chng	.647	.214	1936
Emotional Coping Responses To Negative Emotions			
s.Emotional coping skills	.585	.135	3273
sscp.Prob solve,talk,selfexpl, expect	.599	.182	3273
sscp.Pos thoughts, phil, pep talk	.477	.204	3273
sscp.Pos acts,fun,exercise	.457	.202	3273
sscp.Not anger,blame,withdraw	.580	.202	3273
sscp.Not smoke,drugs	.791	.262	3273
sscp.Not eat 1	.665	.284	3273
Assertive-Interpersonal Knowledge-Skills			
IntSS1a.AssertCR	.563	.186	2664
IntSS1b.Open Honest	.643	.192	2491
IntSS2.Romantic-same romantic	.615	.219	2938
IntSS3.LiberatedRoles-same slibrole	.703	.188	3056
IntSS4.Love Respect	.751	.154	2491
IntSS5.Rel Independ	.676	.144	2862
IntSS6.Positive Supportive Com	.598	.175	2603
IntSS7.Collaborative	.562	.177	2542
IntSS8.Separate	.604	.218	2862

APPENDIX G: OUTCOMES BY LEARNING-ACADEMIC SCALES

Table 18: Correlations of Outcomes with Learning-Academic Scales

Learning-Academic Scale	Overall happiness	Low Depres sion	Low Anxiety	Low Anger- aggr	Health	Relation ship	Highest income	Highest educa- tion	College GPA
ssl1a.TimeEffic Confident read-study-test	.184	.160	.184	.076ns	.129	.119	.122	.157	.267
ssl1b.Confid +not avoid study	.175	.217	.237	.167	.159	.124	.194	.191	.192
ssl2.Satisf w/campus,faculty,friends,gpa	.619	.389	.224	.166	.250	.431	.023ns	.172	.270
ssl3.Writing skills	.294	.178	.248	.205	.172	.156	.109	.238	.296
ssl4.Build Mental Structure	.302	.132	.118	.186	.132	.203	.051ns	.108	.249
ssl5.BasicStudySkills-Undrstnd,review,map,outline,notes	.356	.219	.206	.250	.157	.265	.050ns	.170	.232
ssl6.Selfman-acad goal intention	.507	.393	.318	.267	.271	.253	.059ns	.252	.273
ssl7.MathSci-principles,interest,skills	.215	.162	.124	.100	.178	.081	.107**	.173	.182
ssl8.Study home envirn	.292	.182	.163	.224	.238	.113	.000ns	.163	.160**
ssl9.Attend-doHW	.379	.329	.303	.247	.320	.203	.138	.210	.302
ssl1.Memory-not anxious	.362	.229	.270	.157	.189	.210	.103*	.187	.238
ss11.Not job, parent,money motiv	.146	.199	.222	.188	.113	.092	.287	.142	.162
ssl12Study time available-acmtime	.074*	-.016ns	-.015ns	-.049ns	.047	-.122	.032ns	.047ns	.133*
ssl13.Verbal aptitude test	.131	.160	.253	.204	.185	.017	.020ns	.154	.266
ssl14.Math aptitude test	.189	.177	.196	.134	.255	.023	.050ns	.222	.276
Number of Subjects (N)	>608	>514	>597	>586	>565	>409	>317	>317	>293

Note: For last 3 columns, Age > 25. All correlations p < .0001, except *, p < .05; **, p < .001; ns = not significant

APPENDIX H: RELATIONSHIP BETWEEN SHAQ SUBSCALES AND DEPRESSION, ANXIETY, AND OCD SYMPTOMS

Subscale	R	RSquare	N
LowDepressionSymptoms	.779	.607	1067
LowPerfAndGeneralAnxiety	.714	.510	1067
LowFearsAndOCDSymptoms	.594	.353	1067

APPENDIX I: BELIEF AND FEAR SUBSCALE SETS' RELATIONSHIP TO OUTCOMES

Table 19: Regression Correlations Between Belief or Fear Sets and Outcome Variables

Scale Set	Overall happiness	Low Depression	Low Anxiety	Low Anger-aggr	Health	Relationship	Highest income	Highest education	College GPA
WorldView, Self-Worth, External-Internal, Ethical Beliefs Sets **R**	.785	.654	.559	.545	.531	.539	.347	.257	.205
WorldView, Self-Worth, External-Internal, Ethical Beliefs Sets **RSquare**	.615	.428	.312	.297	.281	.290	.120	.066	.042
N	1954	1954	1954	1954	1954	1954	1954	1954	1954
Worst Fears **R**	.602	.512	.470	.417	.336	.369	.202	.097	.118
Worst Fears **RSquare**	.363	.262	.221	.174	.113	.136	.041	.009	.014
N	3107	2615	3094	3057	3019	2506	3115	3115	2656

Note: All correlations p < .0001, except *, p < .05; **, p < .001; ns = not significant