

THE SELF-CONTROL AND SELF-MANAGEMENT SCALE (SCMS): A GENERAL
MEASURE OF SELF-CONTROL AND SELF-MANAGEMENT SKILLS

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This work is dedicated to my father, Rev. Paul Andras Mezo

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*His love of debate and the free exchange of ideas instilled a lasting appreciation
for knowledge and science.*

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Abstract

Self-control and self-management skills (SCMSk) are a form of cognitive-behavioral intervention that is supported in the research literature (Febbraro & Clum, 1998). However, no current self-report measure of SCMSk in adults was developed to provide an all-purpose, representative, and relevant measure of SCMSk (Mezo & Heiby, 2004a). Thus, the current investigation takes the initial steps in developing and validating a general measure of SCMSk. The content validation of the Self-Control and Self-Management Scale (SCMS) was established by generating items for each of the SCMSk components, namely self-monitoring (SM), self-evaluating (SE), and self-reinforcing (SR). In Study 1, three expert judges revised the initial pool of 150 items. In Study 2, the remaining 145 items were submitted to a sample of 302 undergraduate students. The first goal in item reduction was to ensure item discriminability by removing items that factor analytically loaded on social desirability and neuroticism rather than their respective SCMSk components. Next, additional factor analyses were designed to strengthen the item homogeneity within SCMSk components by deleting items that failed to load with others in their respective components. Finally, a series of exploratory factor analyses were conducted with the remaining SCMSk items, in which items were retained if they loaded strongly on their respective SCMSk components and if they contributed to the content validity of the scale. The 16-item SCMS instrument resulted, with six SM items, five SE items, and five SR items. The SCMS was internally consistent and temporally stable. In terms of construct validity, the SCMS correlated significantly with previous measures of SCMSk and with symptom measures of psychological distress, while it did not correlate significantly with measures of unrelated constructs. Finally, the SCMS

demonstrated incremental validity by accounting for additional variance in weight-management competency beyond that explained by three other measures of SCMSk. In sum, the SCMS appears to be a promising self-report measure of SCMSk. Future research should evaluate the SCMS with clinical samples and as a potential outcome measure for interventions in counseling and clinical settings.

TABLE OF CONTENTS

Acknowledgments	v
Abstract	vi
List of Tables	x
Introduction	1
Definitions of Self-Control and Self-Management Skills	2
Self-Instruction	2
Lifestyle Organization	3
Learned Resourcefulness	4
Self-Control and Self-Management Skills	4
The Assessment of Self-Control and Self-Management Skills	9
Study 1: Item Generation and Content Validation	12
Method	12
Design	12
Participants	14
Materials	15
Procedure	15
Results	15
Discussion	16
Study 2: Instrument Formation, and Reliability and Validity Analyses	17
Method	17
Participants	17
Materials	18
Informed consent form	18
Demographics form	18
Item pool of the Self-Control and Self-Management Scale	19
Specific measures of self-control and self-management skills	19
Broad measures of self-control and self-management skills	22
Symptom measure of psychological distress	26
Measure of divergent validity construct	30
Procedure	34
Results	35
Item reduction and instrument formation: Establishing item discriminability, homogeneity, and factorial validity	36
Item discriminability	36
Item homogeneity	37
Factor-analytic and rational item selection	38
Scale characteristics: Descriptive statistics, Reliability, and Subscale Intercorrelations of the SCMS	39
Validity: Convergent and Divergent Construct Validity of the SCMS ...	40
Specific measure of self-control and self-management skills	41
Broad measures of self-control and self-management skills	41
Symptom measures of psychological distress	41
Measures of divergent validity constructs	42

Demographic variables	42
Validity: Incremental Validity	43
General Discussion	44
Appendix A: Tables	56
Appendix B: Questionnaires	65
References	116

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Factor Structure of the Self-Control and Self-Management Scale (SCMS)	56
2. Descriptive Statistics and Reliability Estimates of the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS)	58
3. Intercorrelations among the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS)	59
4. Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Established Specific Self-Control Skills Instruments	60
5. Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Established Broad Self-Control Skills Instruments	61
6. Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Symptom Measures of Psychological Distress	62
7. Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Measures of Divergent Validity Constructs ..	63
8. Hierarchical regression with Self-Control and Self-Management Skills Instruments as Predictors and the Dieter's Inventory of Eating Temptations as the Dependent Variable	64

Introduction

The following dissertation research investigation represents a continuation of efforts to more reliably and validly assess self-control and self-management skills (SCMSk; see Heiby, Mezo, & Kameoka, 2003; Mezo & Heiby, 2004a, for reviews). Past research has provided evidence for the usefulness of SCMSk for alleviating diverse emotional and behavioral problems (Febbraro & Clum, 1998), as well as motivating persistence and achievement (e.g., Kanfer & Schefft, 1988; Bandura, 1991). Hence, precise and economical measurement of these skills could be relevant for future clinical-research endeavors. However, a recent review and empirical investigation have suggested that current self-report measures of SCMSk for adults were content validated on substantially varying theoretical definitions (Heiby et al., 2003), and that the apparent variability in content validity among instruments likely limits any one instrument's generalizability as a broad measure of SCMSk (Mezo & Heiby, 2004a). Indeed, no current self-report measure of SCMSk for adults was developed to provide an all-purpose, representative, and relevant measure of SCMSk as defined by Kanfer (1970; Kanfer & Schefft, 1988; Rehm, 1977; Rokke & Rehm, 2001) and Bandura (1991).

In line with the promise of the continued usefulness of the SCMSk construct, the current investigation takes the initial steps in developing and validating a general measure of SCMSk. First, the content domain of SCMSk will be explored, with reference to related constructs. Next, SCMSk will be clearly defined and delineated from related constructs. The definition of SCMSk will be followed by a discussion of previous self-report instruments, highlighting strengths and limitations. Finally, two studies will be

presented for the purposes of explicating the development of a new, general measure of SCMSk.

Definitions of Self-Control and Self-Management Skills

The diversity of definitions of SCMSk and related constructs pose one of the principal complications for valid assessment. For example, within the cognitive-behavioral tradition alone, there have been various lines of inquiry that have produced somewhat idiosyncratic models of SCMSk. Three of these approaches to defining SCMSk will be briefly reviewed; however, it is helpful to note beforehand that a common thread in all these definitions is the recognition that SCMSk are characterized by behavior that motivates persistence of a chosen behavior despite prevailing environmental contingencies. Put another way, SCMSk promote one's ability to initiate or persist in an objectively low probability target behavior in opposition to competing objectively higher probability behaviors, without the aid of contingent environmental reinforcement or support (Kanfer & Karoly, 1972). The three approaches to SCMSk described here should provide a representative range of variation on this construct other than the version found in Kanfer (1970; Kanfer & Schefft, 1988; Rehm, 1977; Rokke & Rehm, 2001) and Bandura (1991), which will be discussed afterwards.

Self-Instruction

Meichenbaum (1977; 1985) introduced and developed the construct of self-instruction as a program to promote educational gains and develop stress inoculation skills. In these applied settings, a 'hypothesis testing' model was encouraged. Namely, clients were first trained to self-monitor current self-statements during stressful events or while completing challenging tasks. After baseline data were collected, clients were

encouraged to tentatively adopt markedly positive styles of self-instruction (i.e., positive self-talk) contingent on their efforts and persistence on a second set of challenging tasks. Finally, clients were instructed to compare their behavioral outcomes during situations in which they engaged in their typical self-statements, versus situations in which they engaged in the imposed positive self-statements. That is, clients referred to their behavioral outcome data (e.g., number of task problems solved) to test the hypothesis that the provided positive self-statements were more beneficial to performance than their original self-statements. As these comparisons were favorable for the intervention, they helped clients abandon their original patterns of self-talk, and to adopt the positive self-statements in their place, thereby promoting future motivation and progress.

Lifestyle Organization

In contrast to self-instruction, lifestyle organization (Williams, Moore, Pettibone, & Thomas, 1992) is a far broader conceptualization of SCMSk, and includes the planning of more complex goals over the lifespan. As defined by Williams et al. (1992), lifestyle organization involves “defining goals for oneself and then systematically using cognitive and behavioral strategies to reach those goals” (p.217). Hence, this definition is potentially highly inclusive because it does not distinguish between the types of behavioral strategies, nor does it provide a clear structure of how these strategies are related. Indeed, the empirical status of the facets of this construct is not clear, which may be primarily accountable by the fact that it was defined in the context of the self-help literature (Williams & Long, 1991) as opposed to peer-reviewed outlets.

Learned Resourcefulness

A third characterization of SCMSk is the construct of learned resourcefulness, which may be defined as a personality characteristic or repertoire comprised of a relatively stable constellation of cognitive and behavioral responses or coping skills, such as emotion and impulse restraint, problem solving, and expectations of self-efficacy (Rosenbaum, 1990). Learned resourcefulness has been found to mediate several salutary behaviors, including tolerance of pain, and persistence in maintaining a healthy lifestyle (Rosenbaum, 1990). Similar to lifestyle organization, learned resourcefulness is a broad construct comprised of many facets or skills. However, learned resourcefulness is unique because it is a construct that was initially labeled self-control (Rosenbaum, 1980). Later, Rosenbaum (1990) renamed his version of self-control to learned resourcefulness to highlight the globally adaptive personality type that is indicative of one high in learned resourcefulness. Nevertheless, in some quarters, the literature has continued to view the construct of learned resourcefulness as self-control or self-management (e.g., Williams et al., 1992).

Self-Control and Self-Management Skills

The definition of SCMSk developed by Kanfer and Bandura is both more specific than lifestyle organization and learned resourcefulness, and broader than self-instruction. There is a three-component model that defines SCMSk in terms of an iterative closed feedback loop of three interdependent processes: self-monitoring (SM), self-evaluating (SE), and self-reinforcing (SR). In the SM phase, an individual monitors the status of some target behavior (i.e., an action, thought, or emotion). Next, during the SE phase, the target behavior is compared to an internalized standard of that behavior, and

discrepancies are identified. Finally, in light of this comparison, an individual engages in SR, which may include not only self-reward but also self-punishment that can be either overt or covert. The outcomes of the SCMSk processes are themselves actions, thoughts, and emotions that subsequently influence whether the SCMSk processes will be repeated, modified, or abandoned. Hence, an individual is able to exert control upon the probability of a target behavior occurring in the future by repeatedly reinforcing effective monitoring and evaluating of stimuli associated with that behavior.

This brief description of the three-component model allows comparisons to be drawn with other definitions of SCMSk. For example, the three-component model of SCMSk is broader than self-instruction because although self-instruction appears to subsume the facets of SM and SR, instructors provide the SR statements, so there seems to be a disjoint between SM and SR as there is no comparison of present behaviors to an internalized standard, or SE. Thus, SE does not appear to be included in the construct of self-instruction. On the other hand, the three-component model of SCMSk appears to be more specific than either lifestyle organization or learned resourcefulness. For example, lifestyle organization appears to include a variety of behavioral skills that go beyond SM, SE, and SR, although Williams et al. (1992) did not draw direct parallels. Similarly, learned resourcefulness includes problem solving and coping skills, skills that are not included in the three-component model. Indeed, Rosenbaum (1990) has designated SM, SE, and SR as primary cognitive responses, which may subserve the diverse higher-order cognitive and behavioral attributes that comprise the learned resourcefulness personality repertoire.

Thus, the three-component model of SCMSk (hereafter simply referred to as SCMSk) may be situated in the self-instructional, problem solving, and coping skills literature. In addition, the development of the definition of SCMSk has been well documented in the research literature, and has included the convergence of two separate research programs. Initially, Kanfer (1970; Kanfer & Karoly, 1972) introduced the skills of SM, SE, and SR as basic self-regulatory processes that can be applied to achieving self-control. This definition was quickly adopted by other investigators; Rehm (1977) adapted the self-control model to the assessment and treatment of depression, and Heiby (1982) in turn conducted research on the self-reinforcement component. Later work (e.g., Kanfer & Hagerman, 1981; Kanfer & Schefft, 1988), identified further subskills, such as goal setting (i.e., clearly defining a goal to which SCMSk may be applied), and attributional processes (i.e., determining whether goals are under personal control and thus whether they are amenable to the application of SCMSk). At about the same time, Bandura (1986; 1991) was expanding the applications of social cognitive learning theory and, rather remarkably, his definition of self-regulation dovetailed with Kanfer's definition of self-control, without either of them referencing the other. Bandura (1991) defined SCMSk as consisting of SM, SE, and SR, and also included self-efficacy (i.e., confidence of success at a particular task), which closely resembles the notion of attribution of personal control for the achievement of a particular goal (Kanfer & Hagerman, 1981). Hence, SCMSk may be situated in a broader theoretical framework, and the articulation of these skills enjoys a rich theoretical tradition. However, before turning to the assessment of SCMSk, the construct will be defined in more detail, and its usefulness will be described more fully.

It is important to recognize that SCMSk primarily become important during challenges to behavior. SCMSk become adaptive mechanisms when certain prerequisites are met: (a) a former smoothly running behavioral sequence is interrupted, and change of behavior becomes desirable for the individual, (b) the individual successfully replaces the target behavior with a previously relatively low probability behavior, and (c) this change is occasioned without direct environmental control. The following vignette illustrates a behavioral change suggestive of the operation of SCMSk.

A child enjoys speaking about herself in the company of peers, and therefore she primarily engages in this self-centered behavior when with them. However, she begins to note that her peers tend to avoid her, and a peer eventually informs her that she talks too much about herself. This information creates a motivation for change in the child, and so she sets a goal to inquire about others during conversations. To this end, she systematically begins to monitor her verbal behavior during conversations, noting the frequency of her inquiries about others. Next, she judges the degree to which she is asking questions of others. Finally, she rewards herself with covert praise contingent on approximations of her goal to ask questions of others. Over time, both she and her peers notice that the child asks more questions of others, or that she appears more interested in the lives of others and less absorbed in her own.

This vignette illustrates the change of an initial high probability behavior into a low probability behavior using SCMSk as a heuristic. This child was capable of replacing her

tendency to speak about herself with the behavior sequence of questioning others, and she was able to do so largely because of her own efforts.

The preceding vignette also highlights the constituent facets of SCMSk; namely, SM, SE, and SR. Thus, the child engaged in SM when she observed and noted her verbal behavior during conversations. Then, as an indication of SE, she compared her observed verbal behavior with her expectations, for example, “am I asking enough questions of others?” Finally, she engaged in SR during her self-rewarding of relevant behavior.

This relatively benign example of behavior change presages the relevance of SCMSk interventions not only for subclinical concerns, but also for clinically severe ones. Accordingly, deficient SCMSk have been associated with depression among adults (e.g., Rehm, 1977) and the elderly (e.g., Wong, Heiby, Kameoka, & Dubanoski, 1999), hostility (Heiby & Mearig, 2002) and noncompliance to health regimens (Brandon, Oescher, & Loftin, 1990; Heiby, Gafarian, & McCann, 1989; Heiby & Frank, 2003; Frank, Heiby, & Lee, in press).

Hence, interventions aimed at enhancing SCMSk have shown some success in alleviating agoraphobia, habit disturbances (obesity, smoking, and problem drinking), insomnia, and unipolar depression in inpatient, outpatient, and college populations (Febbraro & Clum, 1998). As a case in point, self-control therapy for depression (Fuchs & Rehm, 1977) was recognized as a ‘probably efficacious treatment’ by the American Psychological Association’s Division 12 Task Force on Psychological Interventions (Chambless et al., 1998). Furthermore, in addition to the clear clinical merits of SCMSk therapy, there is also evidence that enhanced SCMSk can help individuals persist in targeted thoughts, emotions, and actions. For example, successful application of SCMSk

should result in positive affect with closer approximations of the target behavior, and these experiences of accomplishment should produce increased self-efficacy (Bandura, 1982), thereby motivating continued progress toward goal attainment (Bandura, 1991).

The Assessment of Self-Control and Self-Management Skills

Nevertheless, although SCMSk have been defined clearly and shown to be useful, as mentioned at the outset, and to be detailed more fully now, no general self-report measures of this construct have been developed. Albeit, several self-report instruments have been developed over the last few decades that have made reference to Kanfer's (1970) original conceptualization of self-control skills, composed of the three interrelated, repetitive processes of SM, SE, and SR. On the basis of a comprehensive literature review, six instruments were identified as originally designed to measure SCMSk: (a) Self-Control Schedule (SCS; Rosenbaum, 1980a), (b) Self-Control Questionnaire (SCQ; Rehm, Kornblith, O'Hara, Lamparski, Romano, & Volkin, 1981), (c) Frequency of Self-Reinforcement Questionnaire (FSRQ; Heiby, 1982), (d) Cognitive Self-Management Test (CSM; Rude, 1986), (e) Self-Control Questionnaire (SCQ-Brandon; Brandon et al., 1990), and (f) Lifestyle Approaches Inventory (LSA; Williams et al., 1992). The limitations of each instrument will be briefly reviewed.

In general, the limitations of current measures of SCMSk may be organized along three dimensions: (a) targets of measurement, (b) goals of measurement, and (c) breadth of measurement. The SCS was developed as a measure of the construct later named learned resourcefulness (Rosenbaum, 1990). As such, the SCS is a broader measure that subsumes SCMSk, but also includes additional targets of measurement (e.g., problem solving or pain tolerance). In contrast, the SCQ was developed to explicitly measure

SCMSk (Rehm et al., 1981). Even so, the SCQ was designed for the specialized goal of measuring SCMSk deficits associated with depression, and functioned as an outcome measure for self-control therapy for depression (e.g., Fuchs & Rehm, 1977). The FSRQ was developed to measure a specific SCMSk (i.e., SR; Heiby, 1982), and thus likely is not of sufficient scope to measure the breadth of SCMSk. For example, there is factor analytic evidence that the FSRQ does not measure SE (Wagner, Holden, & Jannarone, 1988). Similarly, the CSM was not developed to representatively measure each SCMSk, instead emphasizing the measurement of SR (i.e., positive self-talk) and goal setting (Rude, 1986), and thus it is likely overly constricted in breadth. However, the over-specificity of the FSRQ and CSM has seemingly not limited their ability to correlate strongly with related constructs (Mezo & Heiby, 2004a). Indeed, Mezo & Heiby (2004a) suggest that the interrelatedness of the SCMSk may compensate for any failures to assess all three skills; albeit, the content validity of these instruments would remain suspect (see Smith, Fisher, & Fister, 2003, for a discussion of the importance of incremental content validity in test construction). The SCQ-Brandon was designed to measure behavioral outcomes likely associated with SCMSk, and as such differs in the fundamental targets of measurement. Finally, the LSA, like the SCS, is both a broader measure of SCMSk, as well as a measure of additional target facets. In fact, like the SCQ-Brandon, the LSA contains items designed to measure behavioral outcomes suggestive of SCMSk (Williams et al., 1992).

The evidence reviewed thus far suggests the coherence and usefulness of the SCMSk construct, as well as the inadequacy of current self-report instruments for assessing it in adults. Further, it may be noted that the evidence reviewed here is not

merely an argument made by this author, but also by experts in cognitive-behavioral assessment and intervention. For example, Dobson and Dozois (2001) have contended that the success of self-control and self-management therapy for depression (Fuchs & Rehm, 1977) suggests the feasibility of developing a comprehensive SCMSk intervention that would cut across diagnostic categories. Hence, by implication, they suggest the feasibility of developing a similarly comprehensive measure of SCMSk.

Thus, the goal of this dissertation investigation was to conduct the preliminary steps in developing a reliable and valid measure of SCMSk. This goal was pursued by completing a series of empirical procedures structured within two studies. Study 1 included procedures for generating and revising potential instrument items by using theoretical rationale for item generation and expert feedback for item revision. Hence, Study 1 was designed to ensure the content validity of the instrument by addressing the relevance and representativeness of item content (Haynes, Richard, & Kubany, 1995). Study 2 proceeded with two primary objectives, (a) reduction of the item pool to form a tentative instrument, and (b) preliminary evaluation of the proposed instrument in terms of reliability and validity. These outcomes were obtained based on responses from a large undergraduate sample ($n = 302$). Item reduction and instrument formation involved the application of factor analytic procedures (Clark & Watson, 1995; Floyd & Widaman, 1995; Reise, Waller, & Comrey, 2000), and was aimed at promoting item discriminability from nuisance constructs (Clark & Watson, 1995; Spector, 1992), and homogeneity and content validity within and between SCMSk components (Clark & Watson, 1995; Smith & McCarthy, 1995; Smith et al., 2003). Following item-level data reduction, the tentative instrument was evaluated for its reliability in terms of internal consistency and temporal

stability. Similarly, Study 2 began the process of demonstrating the construct validity of the instrument by building evidence that it related with measures of other constructs in a theoretically comprehensible manner. To that end, the relationship of the proposed instrument with criterion, convergent, and divergent constructs was evaluated and contrasted with extant measures of SCMSk.

Study 1: Item Generation and Content Validation

Method

Design

As suggested by Clark and Watson (1995), initial item generation was guided by an exhaustive literature review, and the writing of both theoretically central as well as tangential item content. Based on the literature review of self-control and self-management skills (SCMSk), items were written to primarily assess one of the three components of self-monitoring (SM), self-evaluating (SE), or self-reinforcing (SR). These three components constitute the facets of the SCMSk construct (e.g., Kanfer & Schefft, 1988; Bandura, 1991), and following the recommendations of Smith and colleagues (2003), items were written at the facet level rather than the broad construct level, so as to maximize the incremental content validity of each facet. In other words, writing items at the facet level allows distinctions to be drawn at both the facet and higher-order construct level, distinctions which would be masked if items assessed across facets (Smith et al., 2003).

In addition to identifying the three facets or components of SCMSk, the literature review identified several dimensions or characteristics of each facet. Many of these dimensions were outlined in the years following the initial definition of self-control

(Kanfer, 1970; Kanfer & Karoly, 1972). In an effort to create an instrument based on the most recent theoretical formulations of SCMSk, these dimensions were identified, and items were written to assess them within their given facets. All three SCMSk components have been hypothesized to vary in terms of attributional/locus of control processes and SM and SE in terms of self-efficacy (Kanfer & Hagerman, 1981; Kanfer & Schefft, 1988; Bandura, 1991; Rokke & Rehm, 2001). In addition, SM has been characterized in terms of frequent and accurate tracking and awareness or mindfulness of task-related actions, thoughts, and emotions (Kanfer & Karoly, 1972; Kanfer & Schefft, 1988; Bandura, 1991; Rokke & Rehm, 2001; Baer, 2003), and the maintaining of undivided attention (Kanfer & Schefft, 1988; Bandura, 1991; Baer, 2003). The SE component has been characterized by the difficulty and flexibility of standards of achievement when setting goals and when evaluating outcomes (Kanfer & Karoly, 1972; Kanfer & Hagerman, 1981; Kanfer & Schefft, 1988; Bandura, 1991; Rokke & Rehm, 2001), and also by the valuation of achievements (Kanfer & Schefft, 1988; Bandura, 1991). Finally, SR has additionally been characterized since its earliest formulation as the delivery of covert or overt self-reinforcement (e.g., Kanfer & Karoly, 1972; Bandura, 1991).

The writing of items for the item pool included outright adoption of appropriate items from existing instruments, as well as revision of items from existing instruments, in addition to the creation of wholly novel items. Initial item generation was conducted by the author, who consulted materials relevant to the writing of high quality questionnaire items (e.g., Holden & Fekken, 1990; Clark & Watson, 1995). Moreover, to increase the future generalizability of the proposed instrument to less literate populations, all items were written at a Flesch-Kincaid reading level of sixth grade or lower (Flesch, 1994).

Other than newly created items, items were drawn or adapted from the following instruments: the Self-Control Questionnaire (Rehm et al., 1981), the Frequency of Self-Reinforcement Questionnaire (Heiby, 1982), the Cognitive Self-Management Test (Rude, 1986), and the Lifestyles Questionnaire (Williams et al., 1992). Select items were also drawn or adapted from the Mindful Attention Awareness Scale (Brown & Ryan, 2003), specifically to contribute to the item pool of SM.

The item pool generated by the author consisted of 150 items, in which 50 items were designed to primarily assess SM, 60 items were designed to primarily assess SE, and 40 items were designed to primarily assess SR. Items were generated so as to conform to a Likert scale format in which degree of endorsement would be indicated. Following the generation of the initial item pool, the set of items was submitted for revision to experts in the area of SCMSk. A detailed description of the item revision methodology follows.

Participants

Five individuals with expertise in the area of SCMSk were contacted and were requested to participate in this study as content validity judges. Expertise in SCMSk was construed by considering the productivity (i.e., number of references as determined by PSYCINFO) and impact (i.e., number of citations as determined by PSYCINFO) of the published works of individuals in the area of SCMSk broadly defined. Moreover, published works pertaining to the theoretical boundaries of SCMSk were afforded greater weight when evaluating expertise. Three of the five experts replied and agreed to serve as content validity judges.

Materials

Participants were provided with the item pool, including the division of items into components skills (i.e., SM, SE, and SR). Participants were also provided with item revision instructions (refer to Appendix B for a copy of the materials). The item revision instructions consisted of four parts: (a) A preamble that outlined the purpose of the investigation, (b) Basic definitions of SM, SE, and SR, based on Kanfer and Karoly (1972), (c) Expanded definitions of SM, SE, and SR, that establish their place in a broader theoretical context, and draw on more recent research to explicate specific components, and (d) Specific instructions on how to complete the ratings of the proposed items. The fourth part of the instructions indicated that unwanted items may be marked, and that any suggestions or comments pertaining to any one item or set of items may be provided.

Procedure

Study materials were sent to prospective participants via e-mails containing a Microsoft Word document attachment of the pool of items and the item revision instructions. The e-mails contained a brief introduction, an invitation to participate in the study, and requested a decision as to whether the expert would agree to participate. They also requested that item pools be returned via e-mail attachment by a given date.

Results

The feedback from the three content validity judges was used to revise the item pool. One of the judges did not recommend any changes to the item pool, while the other two judges provided 25 recommendations in total. All recommendations for item revision were incorporated. The majority of recommendations ($n = 18$) involved the rewording of

items to reduce ambiguity of meaning or to ensure unidimensional measurement of self-control and self-management skills (SCMSk) at the facet/component level. However, the recommendations also included the deletion of six items and the addition of one new item. The six deleted items all originated from the SE component item pool, while the one new item was added to the SR component item pool. These changes did not eliminate the measurement of any of the dimensions identified in the literature review as characterizing SCMSk components. Thus, of the 145 items approved by the content validity judges, 50 items were designed to measure SM (33 of the items were negatively keyed), 54 items were designed to measure SE (34 of the items were negatively keyed), and 41 items were designed to measure SR (19 of the items were negatively keyed).

Discussion

The results of Study 1 suggest a viable initial pool of questionnaire items for the content valid assessment of self-control and self-management skills (SCMSk). The design of the study consisted of two phases: (a) the generation of a large item pool, and (b) the rational evaluation and revision of the item pool. The writing of items during the first phase was based on a comprehensive literature review in which the theoretical structure of the SCMSk construct was explicated. Based on this review, SCMSk was found to be a higher-order construct consisting of three facets or components, self-monitoring, self-evaluating, and self-reinforcing. Moreover, these components themselves are defined along dimensions, and these dimensions were outlined for the purposes of writing content valid items.

The second phase of Study 1 involved the submission of the item pool to rational-empirical evaluation. Accordingly, three highly qualified expert participants were

recruited as content validity judges. Their feedback provided advice for the clarification and refinement of certain items. Moreover, their feedback appeared to support the overall content validity of the item pool, as evidenced by the relatively few revisions and item deletions by two of the judges, and the third judge's approval of the item pool as it was initially generated. Therefore, the comprehensive theoretical-rational development of the SCMSk item pool should support the content validity of a resulting instrument. Indeed, this study represented the first occasion in which the development of a SCMSk instrument paired the efforts of the primary developer with the knowledge of experts in the field of SCMSk for the writing and revision of the item pool (Mezo & Heiby, 2004a).

Study 2: Instrument Formation, and Reliability and Validity Analyses

Method

Participants

The initial pool of respondents was composed of a sample of 302 students enrolled in undergraduate psychology courses at the University of Hawaii at Manoa. Participating students volunteered for inclusion in this study, and received course credit for completing the questionnaire packets. Their mean year of attendance in college was 3.5 with a standard deviation of 1.32, and a modal year of 4. The college majors of participants included Psychology ($n = 201$, 66%), Education ($n = 20$, 7%), Business ($n = 12$, 4%), Natural Sciences ($n = 5$, 2%), Humanities ($n = 2$, 1%), other Social Sciences ($n = 11$, 4%), and other college majors ($n = 51$, 17%). The sample contained 66 males (22%), and ranged in age from 18 to 59, with a mean age of 22 and a standard deviation of 5.09. Eighty-two (27%) participants endorsed more than one primary ethnic affiliation. The ethnic groups endorsed by monoethnic and multiethnic participants included

Japanese ($n = 123$), Caucasian ($n = 88$), Chinese ($n = 44$), Filipino ($n = 39$), Hawaiian ($n = 21$), Portuguese ($n = 11$), Hispanic ($n = 10$), Korean ($n = 10$), African American ($n = 5$), Vietnamese ($n = 4$), Samoan ($n = 3$), other Pacific Islanders ($n = 8$), and other ethnic group affiliations ($n = 18$). The marital status of the sample was predominantly single ($n = 238$, 79%), but also included cohabiting ($n = 36$, 12%), married ($n = 23$, 8%), and divorced ($n = 5$, 2%) participants. A measure of long-standing integration in the local culture of the state of Hawaii was obtained by asking participants whether they had attended high school in Hawaii, to which 203 participants (67%) answered in the affirmative.

Materials

All Study 2 materials are reproduced in Appendix B in the order they are discussed.

Informed consent form. An informed consent form was designed for this investigation. The form conformed to University of Hawaii Institutional Review Board standards, and included information regarding a participant's rights, the duties associated with participating, and the risks and benefits of participation.

Demographics form. A Demographics Form was designed for this investigation. The form included items designed to measure years of college attendance, college major, sex, age, marital status, and ethnicity. These demographic variables were not hypothesized to have significant relationships with SCMSk, and will therefore be used for both sample descriptive purposes, as well as for indicating divergent construct validity.

Item pool of the Self-Control and Self-Management Scale. The revised, 145-item item pool of the Self-Control and Self-Management Scale (SCMS) was scored on a five-point Likert scale, with higher scores indicating more adaptive self-control and self-management skills (SCMSk). The scale anchors ranged from one to six, from *Very undescriptive of me* to *Very descriptive of me*.

Specific measures of self-control and self-management skills. Three instruments that were designed to measure specific SCMSk or specialized applications of SCMSk measurement were used. These instruments served as convergent construct validity measures, and the proposed instrument was hypothesized to correlate highly with each of them.

The Self-Control Questionnaire (SCQ; Rehm et al., 1981) consists of 40 items scored on a five-point Likert scale, with higher scores indicating more adaptive SCMSk. The SCQ was designed as an outcome measure for a manualized self-control treatment protocol for depression (Fuchs & Rehm, 1977). The items of the SCQ were rationally-derived to assess “attitudes and beliefs about self-management behaviors and cognitions related to depression” (Rokke & Rehm, 2001, p. 198). More specifically, the items of the SCQ were designed to assess depressed affect in terms of dysfunctional attitudes and beliefs concerning self-monitoring (SM), self-evaluating (SE), and self-reinforcing (SR).

SCQ internal consistency estimates include coefficient alphas of .82, (O’Hara, Rehm, & Campbell, 1982), and .69 (Rude, 1989). The stability of the SCQ was estimated by a test-retest correlation of .82 over a five-week interval (O’Hara et al., 1982).

The most abundant evidence for the validity of the SCQ as a measure of SCMSk is provided by numerous treatment outcome studies that demonstrate expected increases

in SCQ scores from pre-treatment to subsequent tests during and after self-control/management therapy for depression (e.g., Rehm, 1984; Rehm, Kaslow, & Rabin, 1987; Rokke, Tomhave, & Jovic, 2000).

The original version of the Frequency of Self-Reinforcement Questionnaire (FSRQ; Heiby, 1982) consists of 30 items scored as 'true' or 'false', although the version used in the current study was scored on a four-point Likert scale (Corcoran & Fisher, 2000; Mezo, Heiby, Kloezeman, Galario, Visoria, & Vuu, 2004). Higher scores on the FSRQ indicate more adaptive SCMSk. The FSRQ was designed to measure SCMSk in terms of differences in rates of self-reinforcement. With this approach, the SR component of SCMSk becomes the primary focus of measurement, and SM and SE are considered more as precursors to SR (Heiby, 1982). The FSRQ was developed by submitting 100 potential questionnaire items to 10 judges who were instructed to endorse items that conformed to Rehm's (1977) definition of SCMSk, which had adapted Kanfer's (1970) model to explain depressive symptomatology; items were retained if they achieved at least 80% inter-judge agreement.

The internal consistency of the FSRQ was indicated by alpha values of .73 (Wagner, Holden, & Jannarone, 1988), and .83 (Heiby, Campos, Remick, & Keller, 1987). The stability of the FSRQ was estimated by a test-retest correlation of .92 over an eight-week interval (Heiby, 1983a).

Evidence for the validity of the FSRQ as a measure of SCMSk is primarily provided by research supporting numerous predicted relationships between the FSRQ and a diverse set of hypothetically related criteria and constructs. For example, the FSRQ demonstrated significant positive correlations with reported self-praise on analogy and

anagram tasks (Heiby, 1983a), frequency of daily self-monitored self-reinforcement (Heiby, 1982), and experimenter ratings of participants' tendencies to self-reinforce (Heiby, 1982). In addition, the FSRQ demonstrated significant negative relationships with trait anxiety (Heiby, Onorato, & Sato, 1987), alcoholism (Cernovsky, 1989), self-punishment (Holden & Wagner 1990), depressive symptomatology (e.g., Heiby, 1983b; Heiby, Campos, et al., 1987; Rokke et al., 2000), as well as anger, hostility, and aggression (Heiby & Mearig, 2002).

The Cognitive Self-Management test (CSM; Rude, 1986) consists of 26 items rated on a five-point Likert scale, with higher scores indicating more adaptive SCMSk. Although items are summed to obtain a total score, no uniform scoring guidelines have been established for the CSM (S. S. Rude, personal communication, February 21, 2000). However, Mezo and Heiby (2004a) have proposed individual item scoring anchors ranging from one to five, with the total scale score ranging from 26 to 130. The CSM was developed by Rude (1986) to supplement the SCQ, and a measure of learned resourcefulness, the SCS (Rosenbaum, 1980), by providing a more comprehensive assessment of the cognitive aspects of SCMSk. Specifically, the CSM was designed to “tap feelings of efficacy in approaching new tasks, and style of self-talk (supportive vs. disparaging)” (Rude, 1986, p. 391). Hence, with regard to the SCMSk model, the CSM appears to measure SR (i.e., style of self-talk). However, no claims are made concerning whether the CSM is additionally capable of assessing SM or SE.

The internal consistency of the CSM was indicated by alpha values of .51 (Rude, 1989), and .88 (Mezo & Heiby, 2004a). The temporal stability of the CSM was supported

by a test-retest correlation coefficient of .88 over a one-week interval (Mezo & Heiby, 2004a; Mezo & Heiby, 2004b).

The validity of the CSM has been suggested by correlations with other measures of SCMSk, and with related measures of psychological distress, including depression, anxiety, and weight-management competencies (Mezo & Heiby, 2004a; Mezo & Heiby, 2004b). In addition, the factor structure of the CSM has been investigated and deemed to be comprehensible (see Rude, 1989).

Broad measures of self-control and self-management skills. Three instruments designed to measure constructs related to adaptive behavior that likely subsumes the use of SCMSk were used. These instruments served primarily as convergent construct validity measures because they are thought to include measurement of the SCMSk facets. However, because they are additionally thought to measure other, related facets, they were hypothesized to correlate only moderately with the proposed instrument.

As a measure of learned resourcefulness, the Self-Control Schedule (SCS; Rosenbaum, 1980) was developed to measure the diverse cognitions and behaviors subsumed by this construct (Rosenbaum, 1990). The development of the SCS began with a pool of 50 items that were designed to present situation-specific scenarios to which resourceful behaviors could be applied (Rosenbaum, 1980; Rosenbaum, 1990). Thirty of these items were developed to measure the ability to regulate undesirable emotional and physiological states, and the remaining 20 items were designed to measure resourcefulness in response to situations necessitating restraint, such as occasions that draw upon problem-solving skills or the ability to delay gratification. The pool of 50 items was then submitted to two judges, who appraised the comprehensibility, face

validity, and applicability of each item for a range of individuals. The two judges also evaluated the comprehensibility and face validity of 10 additional items that were created to assess general beliefs regarding self-efficacy. Items that garnered poor inter-judge agreement were eliminated, so that 44 items remained of the original 60-item pool. The 44-item scale was further reduced with the removal of items that failed to have each of their response options endorsed, exhibited low variance, or did not increase the internal consistency of the scale. The remaining 36 items constituted the SCS, with higher scores indicating greater degrees of learned resourcefulness: 12 items refer to the control of physiological sensations and emotions, 11 items refer to the application of problem-solving skills, 4 items refer to the ability to delay gratification, and 9 items refer to expectations of self-efficacy (Rosenbaum, 1980). A wide range of scores have been reported when using the SCS, and the median is usually used as the cutoff to discriminate between high-resourceful and low-resourceful individuals (Rosenbaum, 1990).

The internal consistency of the SCS was indicated across seven samples, in which alphas ranged from .78 to .91 (Rosenbaum, 1980; Redden, Tucker, & Young, 1983; Rohde, Lewinsohn, Tilson, & Seeley, 1990). The temporal stability of the SCS was indicated by test-retest correlations of .86 over an interval of four weeks (Rosenbaum, 1980a), .77 over an interval of eleven months (Leon & Rosenthal, 1984), and .76 over an interval of two years (Rohde et al., 1990).

The validity of the SCS has been supported by an extensive research literature (e.g., Rosenbaum, 1990). Some of the supported relationships between the SCS and theoretically related constructs may be highlighted in comparisons between high and low resourceful individuals. High resourceful individuals were found to possess a greater

tolerance for pain, for example in a cold pressor task (Rosenbaum, 1989), better coping with symptoms of illness, such as sea sickness (Rosenbaum & Rolnick, 1983), and a higher likelihood of initiating and persisting in various health-promoting activities, such as quitting smoking, changing eating habits, and curbing alcohol use (Rosenbaum, 1990). Furthermore, the SCS also correlated with measures of coping skills, self-esteem, and ego strength (Rosenbaum, 1990).

The Self-Control Questionnaire (SCQ-Brandon; Brandon et al., 1990) was designed to measure the behavioral outcomes of SCMSk. In the context of instrument development, SCMSk were operationally defined as, “choosing to engage in a low probability behavior over a high probability behavior for emotional or physical health enhancement” (Brandon et al., 1990, p. 5). Hence, this definition closely paralleled Kanfer and Karoly’s (1972) previously presented criteria for the demonstration of effective SCMSk, namely, persistence in a low probability target behavior in opposition to competing higher probability behaviors, without supportive environmental reinforcement. In establishing the content validity of the SCQ-Brandon, Brandon and colleagues (1990) identified 10 areas (e.g., eating behaviors, emotional control, exercise behavior, study habits) in which behavioral outcomes of SCMSk could be assessed, and generated six to eight items for each of these areas. Items were then reviewed by six expert judges who were instructed to select behavioral outcome items that were highly dependent on SCMSk, and that most clearly indicated the presence or absence of SCMSk. Finally, items that were selected by the judges were field tested with undergraduate students, and those that obtained low item-total correlations were

eliminated. The final instrument consisted of 16 items, with higher scores indicating more adaptive SCMSk (Brandon et al., 1990).

The internal consistency of the SCQ-Brandon was indicated by a coefficient alpha of .80 (Brandon et al., 1990). The temporal stability of the SCQ-Brandon was supported by a test-retest correlation of .89 over a one-week interval (Mezo & Heiby, 2004b).

The validity of the SCQ-Brandon has been supported by predicted relationships with health and wellness. Brandon and colleagues (1990), and Brandon and Loftin (1991), found a significant positive correlation between the SCQ-Brandon and the fitness level of cyclists, as measured by maximal oxygen consumption and heart rate. Moreover, Brandon and colleagues (1990) found that SCQ-Brandon scores significantly discriminated between a group of cyclists who exercised regularly and a group of college students who did not. The SCQ-Brandon has also obtained significant correlations with measures of depression and weight-management competencies (Mezo & Heiby, 2004b).

The Lifestyle Approaches Inventory (LSA; Williams et al., 1992) was developed to measure SCMSk as reflected by the construct of lifestyle organization, that is, “defining goals for oneself and then systematically using cognitive and behavioral strategies to reach those goals” (Williams et al., 1992, p. 217), and to serve as a measure of various psychological markers of physical health, including self-efficacy and health habits. The LSA was developed from material presented in the text *Manage Your Life* (Williams & Long, 1991), which summarizes 20 years of self-management research in the context of a self-help book. The LSA was developed by using a combination of principal component analysis and construct validity comparisons to reduce an initial pool

of 48 items to the current 16-item instrument, with higher scores indicating greater degrees of lifestyle organization.

The internal consistency of the LSA was indicated by an alpha of .81 (Williams et al., 1992). In addition, the temporal stability of the LSA was estimated with a test-retest coefficient of .90 over a one-week interval (Williams et al., 1992).

The validity of the LSA has been supported by predicted significant positive correlations with self-efficacy, life satisfaction, purpose in life, optimism, physical health status, and health habits, and significant negative correlations with external locus of control, perceived stress (Williams et al., 1992), and problem drinking (McKee, 1996). Moreover, lower scorers on the LSA tended to report a stronger relationship between life events and experienced illness (Vogelsang, Williams, & Lawler, 1994), which is in line with the theoretical proposition that individuals with low SCMSk are more vulnerable to changes in environmental contingencies.

Symptom measures of psychological distress. Four instruments designed to measure symptoms of psychological distress were used. As discussed earlier, SCMSk interventions have been found to alleviate psychological distress associated with unipolar depression, phobic anxiety, and maladaptive habits, such as overeating (Febbraro & Clum, 1998). Thus, to the extent that SCMSk interventions have acted to improve the SCMSk of individuals experiencing certain types of psychological distress, a general measure of SCMSk should be correlated with differences in these constructs. These instruments therefore served primarily as convergent construct validity measures, and they should each correlate moderately with the proposed instrument.

The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) is a 21-item instrument, with higher scores indicating greater degrees of depression. The BDI was designed to measure intensity of depression in terms of symptoms and attitudes indicative of depressed mood. It was developed based on clinical consensus in the selection of symptoms that were thought to distinguish between depressed and nondepressed psychiatric patients; hence, each of the 21 items represents a symptom or attitude associated with clinically severe depression (Beck, Steer, & Garbin, 1988).

The internal consistency estimates of the BDI among nonpsychiatric samples have ranged from coefficient alphas of .73 to .92 across 15 samples, with a mean coefficient alpha of .81 (Beck et al., 1988). Further, among nonpsychiatric samples, temporal stability correlation coefficients ranged from .62, with a four-month test-retest interval, to .90, with a two-week test-retest interval (Beck et al., 1988).

The validity of the BDI has been supported by positive correlations between the BDI and measures of suicidal behaviors, anxiety, stress, medical symptoms, and social desirability (Beck et al., 1988). The BDI has been shown to have significant positive correlations with numerous alternative measures of depression, including independent clinical ratings, the Hamilton Psychiatric Rating Scale for Depression (Hamilton, 1960), and the Self-Rating Depression Scale (Zung, 1965; Beck et al., 1988).

The Clinical Anxiety Scale (CAS; Westhuis & Thyer, 1989) is a 25-item instrument, with higher scores indicating greater degrees of anxiety. The CAS was designed to measure symptoms of anxiety, particularly symptoms of anxiety associated with phobias and panic (Westhuis & Thyer, 1989). It is a particularly suitable measure of anxiety for the current investigation because much of its validation data were produced

with individuals who met diagnostic criteria for agoraphobia and panic disorder. As it happens, much of the SCMSk intervention outcome research was similarly conducted with individuals primarily presenting with agoraphobic symptomatology (Febbraro & Clum, 1998). Moreover, the literature suggests that anxiety symptoms characterized by sudden autonomic arousal (e.g., phobias, panic) can be distinguished from anxiety symptoms of a more chronic nature (e.g., worry, obsessions), and that separate vulnerabilities are implicated in each case (Watson & Clark, 1992). Therefore, it is desirable to select an anxiety instrument that was designed to measure the types of anxiety symptoms that have received the most attention in the SCMSk intervention literature.

The internal consistency of the CAS was indicated by a coefficient alpha value of .94 (Westhuis & Thyer, 1989). Moreover, the temporal stability of the CAS ranged between .67 and .74 across biweekly administrations (Thyer & Westhuis, 1989).

The validity of the CAS has been supported by its ability to discriminate between individuals diagnosed with anxiety disorders and comparison groups drawn from military and student populations (Westhuis & Thyer, 1989). In addition, the CAS demonstrated a positive significant correlation with another measure of phobic anxiety, the Mobility Inventory for Agoraphobia (Chambless, Caputo, Jasin, Gracely, & Williams, 1985; Westhuis & Thyer, 1989). Finally, scores on the CAS were not affected by status variables such as age, sex, and level of education (Westhuis & Thyer, 1989).

The Positive Affect and Negative Affect Scales (PANAS; Watson, Clark, Tellegen, 1988) consists of two 10-item scales designed to measure the mood dimensions of positive affect (PA) and negative affect (NA). Higher scores on the PA scale indicate

greater degrees of PA, an adaptive affective characteristic. In contrast, higher scores on the NA scale indicate greater degrees of NA, a maladaptive affective characteristic. For each of the 20 mood adjectives, participants are asked to rate the degree to which they have experienced that specific mood state during a specified amount of time, ranging from the present moment to feeling that way generally (Watson et al., 1988). This investigation used the general timeframe to assess positive and negative affect as a trait rather than a state. The PANAS is a useful higher-order measure of affectivity, in which depression (characterized by low PA and high NA) and anxiety (characterized by high NA) are subsumed. This measure should be useful for measuring and distinguishing between affect associated with depression and anxiety in the current nonclinical sample.

Internal consistency has been suggested by alpha coefficients obtained for the NA scale, ranging from .84 to .87, and for the PA scale, ranging from .86 to .90. The temporal stability of the PANAS was shown to be .68 for the PA and .71 for the NA over an eight-week interval (Watson et al., 1988). The PANAS has also been found to display convergent and divergent validity with measures of anxiety and depression (Watson et al., 1988).

The Dieter's Inventory of Eating Temptations (DIET; Schlundt & Zimering, 1988) is a 30-item instrument, with higher scores indicating greater degrees of weight-management competency. Hence, the DIET was designed to measure competencies associated with weight-management, such as eating and exercise habits. It was developed by having weight-management clinicians generate situations that represent frequently encountered challenges to healthy weight maintenance. The resulting 50 situations were grouped into six content areas by expert judges, and the items were subsequently pared

down to a 30-item instrument, while it retained the six-subscale structure (Schlundt & Zimering, 1988).

The internal consistency of the DIET was indicated by an alpha of .93. The stability of the DIET was evaluated with a test-retest interval of seven days, and a correlation coefficient of .96.

The validity of the DIET has been demonstrated by negative correlations with emotional distress associated with binge eating (Goodrick, Pendleton, Kimball, Poston, Reeves, & Foreyt, 1999; Bunn, Poston, Haddock, Dill, Goodrick, & Foreyt, 2000), and a positive correlation with self-esteem (Bunn et al., 2000). Moreover, the DIET accurately discriminated between normal weight and overweight subjects (Schlundt & Zimering, 1988). Finally, DIET scores reliably predicted self-monitored behavioral patterns that are associated with weight-management (Schlundt & Zimering, 1988).

Measures of divergent validity constructs. In addition to demographic variables, four measures were included in this study to serve primarily as indicators of divergent validity. A measure of social desirability was included because there is no theoretical rationale to link SCMSk with social desirability, and a relationship with social desirability can undermine the interpretability of a given instrument (Spector, 1992; Paulhus, 1991). Thus, there should be a very low/nonsignificant correlation between social desirability and the proposed instrument.

The remaining three divergent construct validity instruments represent measures of belief systems, including moral beliefs, religious beliefs, and irrational beliefs. On the one hand, SCMSk should not be directly linked theoretically to any of these belief systems, because SCMSk represent a set of behavioral skills which should be compatible

with a variety of belief systems. Previous research has found that current measures of SCMSk do not correlate significantly with measures of moral or religious beliefs (Mezo & Heiby, 2004a).

On the other hand, however, the proposed measure of irrational beliefs correlates with measures of depression and anxiety, so it may be expected to have an indirect relationship with the proposed instrument. Indeed, these irrational beliefs are thought to influence a host of maladaptive behaviors (Ellis & Harper, 1961; Malouff & Schutte, 1986). Thus, this fourth instrument is deemed to be a sensitive indicator of divergent validity, because it measures belief systems which theoretically and by extension can give rise to low SCMSk. However, if the proposed SCMSk instrument correlates significantly with the measure of irrational beliefs, the relationship should be weaker than any of the correlations with the convergent construct validity measures.

The Marlowe-Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1960) is a 33-item instrument, scored in a “true” or “false” format, with higher scores indicating higher degrees of social desirability. The MCSD was designed to assess social desirability in terms of an individual’s tendency to act in a manner that avoids the disapproval of others (Crowne, 1979). It is frequently used in instrument batteries to help assure the validity of participant reports. Namely, high scorers on the MCSD are considered to have answered with a socially desirable response set, and these cases are typically removed from further analyses.

The internal consistency of the MCSD has ranged from alphas of .73 to .88 (Paulhus, 1991). In addition, the temporal stability of the MCSD was indicated by test-

retest correlation coefficients of .88 over a one-month interval (Crowne & Marlowe, 1964) and .84 over a one-week interval (Fisher, 1967).

The validity of the MCSD has been indicated by covariations between the MCSD and a variety of constructs expected to be related to the avoidance of social disapproval. Some of the relationships that were evaluated included correlations between the MCSD and social reinforcement, aggression inhibition, amenability to social influence and evaluation, and a preference for low-risk interpersonal behaviors (see Crowne, 1979, for a review).

The Morally Debatable Behaviors Scales (MDBS; Harding & Phillips, 1986) is a 22-item instrument, with higher scores indicating greater tolerance of moral ambiguities. The MDBS was developed as part of a survey battery assembled to evaluate normative moral values across 10 European nations (Harding & Phillips, 1986). The role of the MDBS was to assess attitudes regarding the moral justifiability of engaging in specific behaviors that were considered morally contentious (Harding & Phillips, 1986).

In a subsequent analysis of the Mezo and Heiby (2004a) database, the internal consistency of the MDBS was indicated by an alpha of .88. However, the temporal stability of the MDBS is not available in the literature.

The validity of the MDBS has been supported by relationships between MDBS scores and various status variables expected to influence tolerance of moral ambiguities. For example, the MDBS was found to differ as predicted among groups varying in age, education, political affiliation, and religiosity (Harding & Phillips, 1986).

The Goal and Mode Values Inventories–Traditional Religiosity Scale (GMVI-TR; Braithwaite & Law, 1985) is a four-item scale, with higher scores indicating greater

degrees of religiosity. More specifically, the GMVI-TR was developed to assess the degree to which being religious is considered a valued personal trait. It is part of a large inventory that was designed to measure the aspirations and cherished beliefs of individuals (Braithwaite & Law, 1985).

The internal consistency of the GMVI-TR was indicated by alphas of .75 and .70. In addition, the temporal stability of the GMVI-TR was suggested by a test-retest correlation of .93, with a test-retest interval of three weeks (Braithwaite & Law, 1985).

The validity of the GMVI-TR has been supported by positive correlations with church attendance and involvement in church organizations (Braithwaite & Scott, 1991). Moreover, the GMVI-TR also achieved predicted significant correlations with instruments that were similarly designed to measure personal values (Braithwaite & Scott, 1991).

The Irrational Belief Scale (IBS; Malouff & Schutte, 1986) is a 20-item instrument, with higher scores indicating greater commitment to irrational or maladaptive beliefs. The IBS was developed to measure irrational beliefs that are hypothesized to create vulnerabilities for experiencing depression and anxiety. The items were rationally derived from the 10 main types of irrational beliefs originally advanced by Rational Emotive Theory (Ellis & Harper, 1961).

The internal consistency of the IBS has been indicated by a coefficient alpha of .80. In addition, the temporal stability of the IBS has been suggested by a test-retest reliability correlation coefficient of .89 over a two-week interval (Malouff & Schutte, 1986).

The convergent construct validity of the IBS is supported by significant positive correlations with other measures of irrational beliefs (e.g., Malouff & Schutte, 1986; Wertheim & Poulakis, 1992). Similarly, the IBS is related to symptom measures of depression and anxiety (e.g., Templeman, 1990).

Procedure

The recruitment of participants proceeded with an introduction of the study to undergraduate classes as an extra-credit opportunity investigating “beliefs, attitudes, and self-control.” Students were informed that participation in the study required participants to be available to complete two packets of questionnaires during their free time, and to return the packets on the days following their distribution. The potential participants were further informed that the packets would be distributed in-class, two weeks apart, and that there would be a research assistant available at a designated on-campus office to accept the completed questionnaire packets during specified hours on the days after each packet was distributed. Finally, the classes were informed that responses to the questionnaires would be anonymous, and that class credit would be assigned by providing participants with a receipt following the return of the second packet.

On the days of questionnaire packet distribution, packets were made available to students at either the beginning or end of their classes. On the days of questionnaire packet collection, participants returned completed packets to a research assistant, who briefly checked the packets for response sets and for completion, removed the questionnaire packet cover sheet which functioned as a receipt, and for the first questionnaire packet, also removed the two signed and dated copies of the consent forms, and provided the participant with one of the consent forms. For each participant, the first

and second questionnaire packets were matched by providing arbitrary matched numbers on each pair of packets, and on the receipt for the first questionnaire packet. The numbers did not identify the participants in any way. Of the 480 time one questionnaire packets distributed, 302 were returned, for a response rate of 63%.

The two questionnaire packets were not composed of identical materials. The first questionnaire packet contained the SCMSk item pool and all of the validity instruments described above, as well as the questionnaire packet cover sheet, the informed consent form, and the demographics form. The first packet took approximately 90 minutes to complete and consisted of 491 study items. The second questionnaire packet, distributed two weeks after the first packet, contained the SCMSk item pool, the MCSD, as well as the questionnaire packet cover sheet. The second packet took approximately 30 minutes to complete and consisted of 178 items. For both the first and second questionnaire packets, the order of instruments was counterbalanced using a Latin square design for unrepeated observations (Namboodiri, 1972). The data from the questionnaire packets was entered and checked by five undergraduate research assistants, with random data quality checks provided by the author.

Results

As a component of conducting the descriptive data analyses, the responses of individual participants were evaluated as to whether a social desirability response set was present. This was deemed an important initial procedure given that, contrary to the theoretical unrelatedness of social desirability and self-control and self-management skills (SCMSk), there is empirical evidence that tendencies for high social desirability may influence scores on measures of SCMSk (Mezo & Heiby, 2004a). Accordingly, the

distribution of scores on the Marlowe-Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1960) were investigated for cases with extreme values, as defined by a convention of values exceeding 3 standard deviations above the mean. However, none of the cases had scores on the MCSD that deviated that drastically from the mean, so that all cases were retained for the following analyses.

Item Reduction and Instrument Formation: Establishing Item Discriminability, Homogeneity, and Factorial Validity

The revised 145-item pool of items that resulted from Study 1 was submitted for data reduction using a combination of systematic factor analyses and the rational selection of items to ensure representativeness of content. The initial phases of item reduction were conducted on each of the three SCMSk components of self-monitoring (SM), self-evaluating (SE), and self-reinforcing (SR), as standalone scales. Each of the SCMSk components was initially factor analyzed with discriminant measures of social desirability and negative affect. Items that preferentially loaded on their SCMSk component were then factor analyzed with the other items in their respective SCMSk component as a means of enhancing item homogeneity. Finally, items that discriminated from nuisance constructs and loaded with other items in their SCMSk component were then compared and contrasted with the remaining items from all the components using factor analyses, and rational item selection guided by the dimensions of SCMSk identified in the literature review of Study 1. The remaining items formed the Self-Control and Self-Management Scale (SCMS).

Item discriminability. A high priority in the creation of the SCMS was embedding the discrimination between the construct of SCMSk and constructs that have been

identified in the literature as potential confounds. For example, as already mentioned, social desirability has been found to correlate with measures of SCMSk (Mezo & Heiby, 2004a), which may complicate the interpretation of instrument results (Spector, 1992; Paulhus, 1991). Similarly, Clark and Watson (1995) identified neuroticism, or negative affect, as another construct that frequently overlaps with measures of behavioral functioning.

Thus, each of the scales of SM, SE, and SR were factor analyzed in an oblique 2-factor solution, with a promax rotation, first with the MCSD, and second with the Negative Affect scale (NA) of the Positive Affect and Negative Affect Scales (PANAS; Watson, Clark, Tellegen, 1988). SCMSk items that loaded with the items of the MCSD or the NA were removed. This procedure was designed to eliminate items that share a closer relationship with the confounding constructs of social desirability or negative affect than they do with the facets of their SCMSk component (see Clark & Watson, 1995; Floyd & Widaman, 1995; Spector, 1992). As a result of this procedure, 19 SM, 32 SE, and 23 SR items were retained.

Item homogeneity. The remaining SCMSk items were submitted to repeated factor analyses for the purpose of producing content homogeneity within each separate SM, SE, and SR subscale. Item homogeneity was pursued with the components of SCMSk because it has been recognized that validity is enhanced when homogeneity is established on the irreducible facets of a construct, as opposed to homogenizing a higher-order construct (Smith & McCarthy, 1995; Smith et al., 2003; Reise et al., 2000). Exploratory factor analyses were conducted on each component, and four-factor unrotated factor structures were investigated. To be retained, items were required to load at least .35 on

the first factor and not load any greater on the remaining three factors (Clark & Watson, 1995). In other words, items that did not load heavily and preferentially on the first factor are likely poor exemplars of the unidimensional SCMSk component they were designed to measure, and they were therefore deleted from the item pool. Repeated factor analyses systematically reduced the number of items in each component, until all items met the criteria for retention. This procedure reduced the pool of items to 12 SM, 21 SE, and 19 SR.

Factor-analytic and rational item selection. Following component-level analyses, item reduction and instrument formation was completed by considering the relationships of all SCMSk items across components (Floyd & Widaman, 1995; Reise et al., 2000). Accordingly, several oblique exploratory factor analyses, using promax rotations, were conducted with items from all three SCMSk components submitted. Simultaneously, the items were inspected to ensure representativeness of item content with regard to the dimensions characterizing each SCMSk component. Thus, items were systematically removed and returned to factor solutions until a stable factor structure was obtained, one in which each item loaded on their respective SCMSk component, and all the constituent dimensions of each of the SCMSk components was represented. Thus, a combination of rational and factor-analytic item derivation methods was used to produce a 16-item scale, with 6 SM items, 5 SE items, and 5 SR items. The list of retained items and the obtained factor structure is presented in Table 1. All subsequent analyses were based upon the 16-item SCMS.

The successful factor solution is now described in greater detail. The initial unrotated eigenvalues for the 16 obtained factors (equal to the number of items or

variables submitted) ranged from .36 to 4.20, with only three factors exceeding an eigenvalue of one, and a Scree plot clearly indicating a 3-factor solution. The initial eigenvalues for Factors 1, 2, and 3 were 4.20, 2.02, and 1.67 respectively, and they accounted for 49.31% of the factor structure variance. Following factor extraction, the three factors accounted for 37.83% of the variance and their eigenvalues were now 3.60 for factor 1, 1.43 for factor 2, and 1.03 for factor 3. With factor rotation, the eigenvalue for factor 1 was 2.71, for factor 2 it was 2.57, and for factor 3 it was 2.67. As this was an oblique solution, factor intercorrelations ranged from .31 to .45. As can be seen in Table 1, all items loaded at least .35 on their respective factors, with most loading well above this criterion, and only one item loaded above .20 on a factor other than its own (Floyd & Widaman, 1995; Nunnally & Bernstein, 1994).

Scale characteristics: Descriptive statistics, Reliability, and Subscale Intercorrelations of the SCMS

The psychometric characteristics of the SCMS were investigated for the overall 16-item instrument, as well as for each of the SCMSk components or subscales of SM, SE, and SR. The scoring of the SCMS and the three subscales was set on a six-point Likert scale so as to prevent a neutral response set. Although participants' responses were given on scale anchors of one to six, the anchors adopted for score reporting are zero to five. The scale anchors of zero to five provide possible total scale score ranges of 0 to 80 on the SCMS, 0 to 30 on the Self-Monitoring Subscale (SMS), and 0 to 25 on each of the Self-Evaluating Subscale (SES) and the Self-Reinforcing Subscale (SRS). Following reverse scoring of the SES, high scores on each of the SCMS, SMS, SES, and SRS indicate adaptive SCMSk, SM, SE, and SR, respectively. The descriptive statistics and

reliability estimates for the SCMS instrument as a whole and for each subscale is presented in Table 2. The SCMS, SMS, SES, and SRS exhibited score distribution means that are above the midpoints of the possible total scale score ranges, and standard deviations indicating that virtually all obtained scores were well within the possible total scale score ranges.

The reliability of the SCMS and its subscales were evaluated in terms of internal consistency and temporal stability. The internal consistency of the SCMS and its subscales was indicated by moderate mean interitem correlations and coefficient alphas of .81 for the SCMS, .74 for the SMS, .75 for the SES, and .78 for the SRS. Temporal stability was evaluated with a subset of participants ($n = 212$), who completed the SCMS with a two-week test-retest interval. The SCMS obtained a test-retest correlation coefficient of .75, while subscale correlations were .66 for the SMS, .62 for the SES and .70 for the SRS.

The intercorrelations among the subscales of the SCMS were evaluated for evidence of content validity, and are presented in Table 3. It is noted that the intercorrelations of the subscales are significant, positive, low to moderate in magnitude, and fall below the mean interitem correlations presented in Table 2.

Validity: Convergent and Divergent Construct Validity of the SCMS

The construct validity of the proposed instrument and its constituent subscales was evaluated by investigating correlations and differences in means with measures of related and unrelated constructs. This involved the computation of 67 *a priori* comparisons. Due to the high number of comparisons, and the potential threat of inflating the Type I error rate, a Bonferroni correction was adopted. Hence, all test statistics

reported in this section were evaluated at the .00075 alpha level to satisfy a Bonferroni-corrected alpha of .05 (i.e., .05 divided by 67).

Specific measures of self-control and self-management skills. The correlations between the SCMS and previously developed measures of SCMSk were hypothesized to be positive and high. These correlations, as well as correlations between the SCMS subscales and extant measures of SCMSk are presented in Table 4. The SCMS, SES, and SRS obtained significant moderate to high positive correlations with the convergent validity measures. However, while the SMS likewise correlated significantly and positively with the Self-Control Questionnaire (SCQ; Rehm et al., 1981) and the Cognitive Self-Management test (CSM; Rude, 1986), it failed to correlate significantly with the Frequency of Self-Reinforcement Questionnaire (FSRQ; Heiby, 1982).

Broad measures of self-control and self-management skills. The correlations between the SCMS and previously developed measures of constructs subsuming SCMSk were hypothesized to be positive and moderate. The correlations between the SCMS and its subscales with broad measures of SCMSk are presented in Table 5. The SCMS, SMS, and SES significantly correlated positively and moderately with the convergent construct validity measures. However, while the SRS obtained low to moderate significant positive correlations with the Self-Control Schedule (SCS; Rosenbaum, 1980) and the Lifestyle Approaches Inventory (LSA; Williams et al., 1992), it failed to correlate significantly with the Self-Control Questionnaire (SCQ-Brandon; 1990).

Symptom measures of psychological distress. The correlations between the SCMS and symptom measures of psychological distress were hypothesized to be moderate. The correlations between the SCMS and its subscales with measures of psychological distress

are presented in Table 6. The SCMS and SES obtained low to moderate correlations in the expected direction with all measures of psychological distress. However, the results for the SMS and SRS are more mixed, with several correlations not attaining significance. Positive affect was the only construct that achieved significant correlations with the SCMS and all of the subscales, with more positive affect being associated with greater SCMSk.

Measures of divergent validity constructs. The correlations between the SCMS and measures of social desirability, and religious, moral, and irrational beliefs, were hypothesized to be nonsignificant to low. The correlations between the SCMS and its subscales with measures of divergent constructs are presented in Table 7. The SCMS did not correlate significantly with any of the divergent constructs, and of the subscales, only the SES obtained a significant, negative and low correlation with one of the constructs, namely, irrational beliefs, indicating that more adaptive SE is associated with a lower degree of irrational beliefs. As stated earlier, the Irrational Belief Scale (IBS; Malouff & Schutte, 1986) was included as a sensitive divergent measure, due to its relationship with measures of depression and anxiety. Indeed, all the specific and broad measures of SCMSk included in this study correlated significantly and negatively with the IBS, with correlations ranging from -.21 to -.36.

Demographic variables. The SCMS was not hypothesized to have significant relationships with any demographic variables. As stated earlier, all inferential statistics reported in this section were evaluated with a Bonferroni correction. A comparison of the mean SCMS scores of females ($M = 50.0$, $SD = 9.25$) and males ($M = 46.4$, $SD = 9.83$) indicated a nonsignificant difference, $t(300) = 2.68$, $p > .05$. There were also no

significant differences in means on the SCMS for marital status $F(3, 298) = 2.34, p > .05$, college major, $F(5, 245) = 1.01, p > .05$, or whether participants attended high school in Hawaii, $t(300) = 1.29, p > .05$. Likewise, the SCMS did not correlate significantly with age, $r(302) = .20, p > .05$, or years in college, $r(302) = .01, p > .05$. Potential differences on the SCMS for different ethnic affiliations were evaluated by an analysis of variance limited to monoethnic groups, and included Japanese ($n = 92$), Caucasian ($n = 49$), Chinese ($n = 22$), and Filipino ($n = 19$). There were no significant differences between these ethnic groups, $F(3, 178) = 1.59, p = .19$.

Validity: Incremental Validity

A series of hierarchical multiple regressions were conducted to evaluate whether the SCMS explained additional variance in convergent constructs beyond that accounted for by existing specific measures of SCMSk (Sechrest, 1963). The measures of depression, anxiety, negative affect, positive affect, and weight management competency were systematically set as the dependent variables. Step 1 of each hierarchical regression involved the entering of the SCQ, FSRQ, and CSM as the predictors. The SCMS was entered in Step 2. The SCMS did not explain additional variance in the prediction of the measures of depression ($\beta = .05, R^2\Delta = .001, ps > .05$), anxiety ($\beta = .05, R^2\Delta = .001, ps > .05$), negative affect ($\beta = .10, R^2\Delta = .005, ps > .05$), and positive affect ($\beta = .11, R^2\Delta = .006, ps > .05$). However, the SCMS demonstrated incremental validity by accounting for additional variance in weight-management competency beyond what was explained by the three other measures of SCMSk (refer to Table 8).

General Discussion

The purpose of the current investigation was to develop a general measure of self-control and self-management skills (SCMSk; Kanfer, 1970; Kanfer & Schefft, 1988; Rehm, 1977; Bandura, 1991; Rokke & Rehm, 2001). The need for such a measure was predicated on evidence that extant measures of SCMSk were not content validated as general measures of the construct. This was deemed an important limitation, because although these instruments largely correlate as predicted with convergent and divergent constructs (e.g., Mezo & Heiby, 2004a), based on their development it is not clear whether they relate to other constructs as bona fide, representative measures of SCMSk, or rather as measures of related broader or more specific constructs. This issue has been addressed by Smith and colleagues (2003), where they contend that the measurement of a construct through deductive test construction needs to be guided by the measurement of all facets or components of the construct, and not by establishing high correlations with criterion constructs. Put another way, the goal of deductive test construction is to measure the theoretically established construct, and not to create a set of items that will most closely correlate with related constructs.

Accordingly, the development of the Self-Control and Self-Management Scale (SCMS) proceeded by explicitly defining each component of SCMSk, followed by the writing and revising of items to cleanly assess each of the components. Based on definitions coalesced from a literature review, Study 1 explicated the dimensions of the SCMSk components of self-monitoring (SM), self-evaluating (SE), and self-reinforcing (SR). The generation of the initial item pool was organized to measure each of SM, SE, and SR separately. Previous measures of SCMSk and a measure of mindfulness were

used to contribute to the item pool. When items drawn from extant instruments were deemed to measure more than one component or other extraneous content, they were revised, when possible, to exclusively measure one SCMSk component. This item pool was then submitted to experts in the field of SCMSk for review and revision. Thus, the content validity of the SCMS is established in the appropriateness and component-level specificity of the item pool content, both in the initial generation of items and in the evaluation and revision of items by recognized experts in the field of SCMSk.

Having provided a basis for the content validity of the SCMS in Study 1, the goals of Study 2 were to (a) form a tentative instrument using factor analytic and rational item selection procedures designed to maintain and enhance content and construct validity, (b) examine the item and instrument properties of the instrument to evaluate reliability and content validity, and (c) compare and contrast the instrument with measures of related and unrelated constructs to evaluate construct and incremental validity. To begin, exploratory factor analytic procedures helped reduce the item pool by retaining items that discriminated from confounding constructs, and that were homogenous, as indicated by loading on common factors. The final composition of the SCMS was guided by oblique exploratory factor analyses and rational item selection. The strategy was to design an instrument that was representative of each component while retaining a three factor structure. The resulting 16-item SCMS was then evaluated in terms of internal consistency and temporal stability, component intercorrelations, and relationships with convergent and divergent constructs. Thus, based on these preliminary analyses, the SCMS is submitted as a promising general measure of SCMSk.

Perhaps the greatest advantage of the SCMS was the concerted effort that went into evaluating content validity during initial item selection, although it also performed well in comparisons with convergent and divergent constructs. As a starting point, the content validity of the SCMS was made possible by identifying the component facets and dimensions of SCMSk. By focusing the literature review on the three-component model of SCMSk, the various dimensions of each component could be distilled across independent research programs, and items could be designed to measure them with accuracy. Moreover, where Study 1 provided a pool of diverse and relevant items, the rational item selection in Study 2 assured content representativeness.

As presented in Table 1, each item of the SCMS is designed to play an important role in assessing the scope of the SCMSk construct (see Kanfer & Karoly, 1972; Kanfer & Hagerman, 1981; Kanfer & Schefft, 1988; Bandura, 1991; Rokke & Rehm, 2001; Baer, 2003). The SM1 item assesses the SM dimension of undivided attention; SM2 assesses the SM dimensions of maintaining goal-related tracking and awareness of emotional reactions relevant to task completion; SM3 assesses the dimension of mindfulness during engagement in a task; SM4 assesses the dimension of frequency of tracking task-related cues associated with task attainment; SM5 assesses the SM dimension of awareness of thoughts relevant to task completion; finally, SM6 assesses efficacy and an internal locus of controlling in engaging in SM behaviors.

For the measurement of SE, all the items are negatively keyed. The SE7 item assesses the SE dimension of setting difficult standards for achieving valued goals; SE8 assesses the inability to flexibly formulate clear standards for overcoming unexpected difficulties or tasks, as well as low self-efficacy for doing so; SE9 assesses the dimension

of under-valuation of achieved goals; SE10 assesses low self-efficacy and an external locus of control in setting standards; finally, SE11 assesses the SE dimension of ineffectively discriminating progress on ongoing task performance.

For the measurement of SR, SR12 assesses the dimension of covert SR in terms of positive self-talk; SR13 assesses covert SR with an implied overt reward to follow; SR14 assesses covert SR in terms of positive self-talk and as distinct from environmental reinforcement; SR15 assesses covert SR as the intentional experiencing of positive emotions; finally, SR16 assesses overt SR. In addition, each of the SR items is conceptually related to an internal locus of control.

Therefore, the content validity of the SCMS is rooted in the comprehensive literature review and item pool of Study 1, and the rational and factor-analytic item selection strategies of Study 2. The goal of rational item selection was to select items that would represent the scope of each SCMSk component, and by extension, the SCMSk construct as a whole. The pattern of obtained mean interitem correlations and component intercorrelations were consistent with this hierarchical structure, and provide a third source of evidence for the content validity of the SCMS. The mean interitem correlations within the self-monitoring subscale (SMS), the self-evaluating subscale (SES) and the self-reinforcing subscale (SRS) were higher than the intercorrelations between the SMS, SES, and SRS (refer to Tables 2 and 3). Thus, while the SCMSk components correlated with each other significantly and modestly, the fact that their constituent items correlated more highly within each component suggests both that the SCMSk are related to one another, and also that they are separable as constituent facets of SCMSk. These results are supportive of the content validity of the SCMS, because they indicate that the item

content of the SCMS is consistent with the theoretical structure of SCMSk as a three-component construct.

The reliability of the SCMS, SMS, SES, and SRS ranged from moderate to exemplary (Robinson, Shaver, & Wrightsman, 1991). In terms of both internal consistency and temporal stability, the SCMS obtained values indicating acceptable measurement error (refer to Table 2). Similarly, even with a lower number of scale items, the SMS, SES, and SRS obtained adequate reliability values. The adequacy of temporal stability for the SCMS and the subscales is particularly noteworthy, because the test-retest coefficients were obtained from the time one and time two results of the pool of 145 items, therefore attenuating recognition of items that would be expected if only the scale items were used.

Given that the SCMS is content valid and reliable, the stage is set to evaluate its relationships with convergent and divergent constructs. The convergent construct validity of the SCMS was evaluated in comparisons with three classes of convergent variables, (a) specific measures of SCMSk (refer to Table 4), (b) broad measures of SCMSk (refer to Table 5), and (c) symptom measures of psychological distress (refer to Table 6). As a whole, the SCMS correlated as expected with each set of convergent variables, in support of its construct validity. On average, the SCMS correlated more highly with the specific measures of SCMSk than with the broad measures of SCMSk, although the correlation with the Frequency of Self-Reinforcement Questionnaire (FSRQ; Heiby, 1982) was lower than expected, and is likely attributable to the nonsignificant correlation between the FSRQ and the SMS. Similarly, the SCMS correlated more strongly with the broad measures of SCMSk than it did with the symptom measures of psychological distress.

Thus, as hypothesized, the SCMS correlated most strongly with specific measures of SCMSk, followed by broad measures of SCMSk, and finally it correlated least, although still significantly, with symptom measures of psychological distress.

The divergent construct validity of the SCMS was evaluated in comparisons with measures of demographic variables, social desirability, religiosity, moral beliefs, and irrational beliefs. As hypothesized, the SCMS did not obtain significant relationships with any of the divergent construct validity measures (refer to Table 7). Extant SCMSk instruments have previously been shown to diverge from measures of religiosity and moral beliefs (Mezo & Heiby, 2004a), and the SCMS similarly obtained nonsignificant results. By contrast, as mentioned previously, SCMSk instruments have correlated weakly with social desirability (Mezo & Heiby, 2004a). Hence, the SCMS was developed to discriminate from this potentially confounding construct, and did so successfully by obtaining a nonsignificant correlation with the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). In addition, the fact that the SCMS did not correlate with any demographic variables suggests that the findings associated with the development of the SCMS and its relationships with other constructs may generalize across diverse undergraduate populations. However, it should be noted that the undergraduate sample had restricted variance on several demographic variables, such as age and educational level, so it cannot yet be concluded that demographic variables do not influence scores on the SCMS more generally.

Perhaps the strongest evidence for the divergent construct validity of the SCMS, however, was its nonsignificant correlation with the Irrational Beliefs Scale (IBS; Malouff & Schutte, 1986). Unlike the measures of religiosity or moral beliefs, the IBS is

theoretically and empirically indirectly associable to SCMSk by having in common significant relationships with psychological distress, such as depression and anxiety. Moreover, the item content of the IBS, based on the 10 main types of irrational beliefs originally advanced by Rational Emotive Therapy (RET; Ellis & Harper, 1961), also overlaps with the dysfunctional assumptions or core beliefs of Cognitive Therapy (CT; Beck, 1976), which are both exemplars of cognitive-behavioral therapies (CBT), as are SCMSk interventions (Dobson & Dozois, 2001). Given the support for various forms of CBT (Chambless et al., 1998), this comparison with the IBS helps distinguish between CBT approaches that emphasize irrational beliefs (such as some forms of RET and CT) versus those that emphasize behavioral skills (such as SCMSk interventions). Thus, although all other extant SCMSk instruments correlated significantly with the IBS, the SCMS did not, except for the SES, which may reflect most closely the irrational beliefs construct. Therefore, the SCMS as a whole may be measuring a determinant of psychological distress that does not overlap highly with cognitive theory approaches that emphasize dysfunctional beliefs, and deficits in SCMSk may indicate the selection of SCMSk treatment and prevention strategies rather than approaches in which irrational beliefs, dysfunctional attributions, or core beliefs are the focus of treatment.

The development of a new instrument ideally draws from multiple sources when establishing validity. Consequently, in addition to considering content and construct validity, the incremental validity of the SCMS was evaluated by determining whether it provided additional explained variance in the prediction of symptoms of psychological distress beyond that accounted for by current measures of SCMSk. The SCMS did not provide incremental validity in the explanation of depression, anxiety, negative affect, or

positive affect. However, the SCMS did provide incremental validity in the explanation of weight-management competency. Even so, it is not overly surprising that the SCMS provided incremental validity for only one of the psychological distress variables, because extant SCMSk instruments have consistently obtained strong relationships with convergent constructs, particularly depression and anxiety (Mezo & Heiby, 2004a). It is also interesting to note that the item content of the Dieter's Inventory of Eating Temptations (DIET; Schlundt & Zimering, 1988) may be considered more indicative of SCMSk because it assesses specific situations to which weight-management behavioral skills may be applied. In contrast, the measures of depression, anxiety, negative affect, and positive affect are not situation-specific.

The development of the SCMS and the obtained evidence of its reliability and validity are not without weaknesses and methodological considerations and limitations. For example, during instrument formation, rational item selection was simultaneously constrained by item selection based on the objective of establishing a comprehensible factor structure. This constraint had the effect of setting the response key for each SCMSk component as either positive or negative. Namely, to arrive at a stable factor structure, items included in the SCMS ended up being positively keyed if they were SM or SR items, and negatively keyed if they were SE items. This bias was already introduced in the item homogeneity stage of factor analytic item reduction, but was made unavoidable in the final selection of items. Items that were keyed opposite to the direction of others in their SCMSk component simply did not load cleanly on that component. This outcome should not theoretically undermine the assessment of SM or SE. However, SR is defined in terms of both self-reward as well as self-punishment, so

that positively keyed items fail to include items assessing for self-punishment. Even so, the factor analytic evidence in this investigation does not support grouping self-reinforcement and self-punishment in a single, unidimensional scale. Therefore, self-punishment is not assessed separate from a lack of self-reinforcement.

A second important issue to consider in this investigation is the participant sample that was used for Study 2. One of the clear purposes for developing the SCMS was to serve as a general SCMSk assessment tool in diverse clinical applications (Dobson & Dozois, 2001). However, an undergraduate sample was used in this study, and these results are therefore not generalizable to clinical populations. Nevertheless, some characteristics of the SCMS make it tenable to investigate in a clinical sample. One such characteristic is the item reading level that does not exceed the sixth grade level, making it accessible for populations at lower levels of literacy. A second characteristic of the SCMS that might make it tenable in a clinical sample is the distribution of scores. As presented in Table 2, the means of the score distributions are above the midpoints of the possible total scale score ranges, and standard deviations indicate that virtually all obtained scores were well within the possible total scale score ranges. This suggests that samples drawn from populations with theoretically lower SCMSk would not produce scores that bottom-out on the possible total scale score range.

A third characteristic of this investigation which somewhat complicates interpretation pertains to the construct validity of the SMCSk components. That is, while the SCMS related as predicted to each class of convergent and divergent constructs, the results for the SMS, SES, and SRS were far less consistent. In some respects these results are not surprising. All things being equal, constituent facets of a construct are, by

definition, less reliable and valid than the construct as a whole (Smith et al., 2003). Specifically, fewer items and items representing a narrow-band facet are more likely to fluctuate in terms of reliability and may fail to converge or diverge with theoretically related and unrelated constructs. Moreover, the subscales may also be affected by the relatively constricted variability of responses endorsed by this nonclinical student sample. Finally, the possibility remains that additional expert content validity judges in Study 1, or the use of expert content validity judges in Study 2, may have produced subscale items which would have correlated as hypothesized with measures of convergent and divergent constructs. Nevertheless, it is important to note that all three subscales correlated significantly with positive affect, deficits in which are unique to low mood and depression (Clark & Watson, 1991). This is noteworthy given the substantial relationship to date between SCMSk and depression (e.g., Dobson & Dozois, 2001).

The limitations of this investigation and avenues for further scale evaluation and refinement suggest future research endeavors. Future research in which the SCMS is administered apart from the pool of 145 items could provide more accurate psychometric indices, such as temporal stability. Administering the SCMS to a clinical sample could help address many of the concerns that have been mentioned, and to establish its use in clinical settings. A clinical sample could also provide an additional, complementary estimate of SCMS score distributions, and evaluate the appropriateness of item content in a typically less literate participant sample. In addition, the subscales of the SCMS may perform differently in a participant sample possessing a greater likelihood of exhibiting clinically severe, functionally impairing presentations of SCMSk deficits. Replication of these results with clinical or nonclinical samples could also provide a more rigorous

evaluation of the convergent and divergent construct validity of SCMS subscales. Moreover, the feasibility of assessing self-punishment as an additional factor could be explored in future research, and the SCMS could be revised accordingly. Finally, the methodology of future research endeavors could include predictive analyses as an additional evaluation of construct validity, and confirmatory factor analyses as a verification of the obtained factor structure.

Notwithstanding the limitations inherent in the first steps of developing the SCMS, and the continued research necessary to replicate and extend these findings, the overall favorable outcomes with regard to the reliability and validity of the SCMS suggests it may be cautiously administered in certain applied settings. For example, the evidence to date indicates that the SCMS is clearly appropriate as a research instrument for investigating the SCMSk construct. The efforts at establishing its content validity alone makes the SCMS an important contribution to the research literature on SCMSk. In addition, it may be appropriate to administer the SCMS to undergraduate students in counseling settings, due to the wide range of scores obtained in the current undergraduate sample. Given the success of the SCMS in comparisons with weight management competency, it may be particularly useful in guiding the design and evaluation of health regimens, or as a measure applied to the enhancement of training regimens for student athletes, where external reinforcement is frequently delayed. Prior to replication, however, it would be preferable to administer the SCMS with other measures of SCMSk as a criterion check.

In conclusion, the SCMS appears to be a promising general measure of the SCMSk construct. This dissertation investigation explicated the development of the

SCMS, from item generation and content validation, to reliability, construct validity, and incremental validity. Throughout the development process, a vigorous empirical position was adopted, in which rational and factor-analytic procedures were combined to produce a reliable and valid instrument. Even so, subsequent research should be conducted to establish the usefulness of the SCMS and to provide opportunities for instrument revision. If the reliability and validity of the SCMS holds up in future investigations, it could provide a unique contribution to the field of self-report assessment of SCMSk. Indeed, not only could it contribute to current research and applied assessment purposes, but also to emerging applications of training in SCMSk as a cognitive-behavioral intervention.

Appendix A

Table 1

Factor Structure of the Self-Control and Self-Management Scale (SCMS)

Item Type and Num.	Self-Control and Self-Management Skills Item	<u>Factor Loadings</u>		
		1 SR	2 SE	3 SM
SM1	When I work toward something, it gets all my attention.	.012	-.102	.504
SM2	I keep focused on tasks I need to do even if I do not like them.	-.082	.074	.621
SM3	I become very aware of what I am doing when I am working towards a goal.	-.054	.000	.656
SM4	I make sure to track my progress regularly when I am working on a goal.	.018	.083	.587
SM5	I pay close attention to my thoughts when I am working on something hard.	.218	.054	.438
SM6	I know I can track my behavior when working toward a goal.	.051	-.123	.514
SE7	When I set important goals for myself, I usually do not achieve them.*	-.011	.673	-.059
SE8	I do not seem capable of making clear plans for most problems that come up in my life.*	-.127	.648	.083
SE9	The goals I achieve do not mean much to me.*	.115	.560	-.107
SE10	I have learned that it is useless to make plans.*	.036	.573	-.022
SE11	The standards I set for myself are unclear and make it hard for me to judge how I am doing on a task.*	-.019	.634	.022
SR12	I congratulate myself when I make some progress.	.731	.039	-.022
SR13	I get myself through hard things by planning to enjoy myself afterwards.	.533	-.012	.012

				57
SR14	I silently praise myself even when others do not praise me.	.666	-.080	-.021
SR15	When I do something right, I take time to enjoy the feeling.	.623	.139	.015
SR16	I give myself something special when I make some progress.	.656	-.056	.033
	Percentage of variance accounted for	22.5	8.9	6.4

Note. SM: Self-Monitoring. SE: Self-Evaluating. SR: Self-Reinforcing.

*Negatively keyed items.

Table 2

Descriptive Statistics and Reliability Estimates of the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES) and Self-Reinforcing Subscale (SRS)

	Mean	SD	Range	Mean Interitem Correlation	Coefficient alpha	Test-retest correlation coefficient ($n = 212$) ^a
<u>SCMS</u>	49.2	9.48	10-77	.41	.81	.75*
<u>SMS</u>	16.4	4.43	5-29	.47	.74	.66*
<u>SES</u>	18.0	4.14	0-25	.51	.75	.62*
<u>SRS</u>	14.8	4.37	0-25	.55	.78	.70*

Note. ^aTest-retest coefficients are based on a subset sample of 212.

* $p < .05$.

Table 3

Intercorrelations among the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS)

	SCMS	SMS	SES	SRS
<u>SCMS</u>	-			
<u>SMS</u>	.77*	-		
<u>SES</u>	.70*	.33*	-	
<u>SRS</u>	.73*	.35*	.24*	-

* $p < .05$.

Table 4

Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Established Specific Self-Control Skills Instruments

	<u>Established Specific Self-Control Skills Instruments</u>		
	SCQ	FSRQ	CSM
<u>SCMS</u>	.65*	.45*	.57*
<u>SMS</u>	.36*	.17	.31*
<u>SES</u>	.52*	.37*	.49*
<u>SRS</u>	.56*	.47*	.45*

Note. SCQ: Self-Control Questionnaire (Rehm, Kornblith, O'Hara, Lamparski, Romano, & Volkin, 1981). FSRQ: Frequency of Self-Reinforcement Questionnaire (Heiby, 1982). CSM: Cognitive Self-Management Test (Rude, 1986).

* $p < .00075$.

Table 5

Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Established Broad Self-Control Skills Instruments

	<u>Established Broad Self-Control Skills Instruments</u>		
	SCS	SCQ-Brandon	LSA
<u>SCMS</u>	.51*	.41*	.55*
<u>SMS</u>	.43*	.26*	.39*
<u>SES</u>	.30*	.46*	.53*
<u>SRS</u>	.39*	.19	.28*

Note. SCS: Self-Control Schedule (Rosenbaum, 1980). SCQ-Brandon: Self-Control Questionnaire (Brandon, Oescher, & Loftin, 1990). LSA: Lifestyle Approaches Inventory (Williams, Moore, Pettibone, & Thomas, 1992).

* $p < .00075$.

Table 6

Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Symptom Measures of Psychological Distress

Construct	Measure	SCMS	SMS	SES	SRS
Depression	BDI	-.33*	-.13	-.37*	-.23*
Anxiety	CAS	-.29*	-.09	-.37*	-.20*
Negative Affect	PANAS	-.24*	-.04	-.38*	-.11
Positive Affect	PANAS	.44*	.27*	.39*	.30*
Weight-management competencies	DIET	.24*	.18	.30*	.04

Note. BDI: Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979). CAS: Clinical Anxiety Scale (Westhuis & Thyer, 1989). PANAS: Positive Affect and Negative Affect Scales (Watson, Clark, Tellegen, 1988). DIET: Dieter's Inventory of Eating Temptations (Schlundt & Zimering, 1988).

* $p < .00075$.

Table 7

Correlations between the Self-Control and Self-Management Scale (SCMS), Self-Monitoring Subscale (SMS), Self-Evaluating Subscale (SES), and Self-Reinforcing Subscale (SRS) with Measures of Divergent Validity Constructs

Construct	Measure	SCMS	SMS	SES	SRS
Social Desirability	MCS D	.15	.18	.14	.01
Religiosity	GMVI-TR	-.01	.09	-.03	-.08
Moral Beliefs	MDBS	-.09	-.13	-.08	.01
Irrational/Maladaptive Beliefs	IBS	-.06	.05	-.26*	.06

Note. MCS D: Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). GMVI: Goal and Mode Values Inventories–Traditional Religiosity Scale (Braithwaite & Law, 1985). MDBS: Morally Debatable Behaviors Scales (Harding & Phillips, 1986). IBS: Irrational Belief Scale (Malouff & Schutte, 1986).

* $p < .00075$.

Table 8

Hierarchical regression with Self-Control and Self-Management Skills Instruments as Predictors and the Dieter's Inventory of Eating Temptations as the Dependent Variable

Self-Control and Self-Management Skills Instrument	<i>B</i>	<i>SE B</i>	β
Step 1			
SCQ	1.23	2.01	.05
FSRQ	-4.43	3.71	-.12
CSM	8.62	2.97	.29*
Step 2			
SCQ	-.94	2.26	-.04
FSRQ	-3.18	3.74	-.09
CSM	6.98	3.06	.24*
SCMS	6.77	3.31	.16*

Note. SCQ: Self-Control Questionnaire (Rehm, Kornblith, O'Hara, Lamparski, Romano, & Volkin, 1981). FSRQ: Frequency of Self-Reinforcement Questionnaire (Heiby, 1982). CSM: Cognitive Self-Management Test (Rude, 1986). $R^2 = .058$ for Step 1; $\Delta R^2 = .013$ for Step 2 ($ps < .05$). * $p < .05$.

Appendix B

Developing a general measure of self-control and self-management skills

Preamble

I would like to thank you for agreeing to assist in the development of a general self-report measure of self-control and self-management skills (SCMSk). SCMSk is a construct that may be situated within the coping skills literature. The specific delineation of this construct as defined here is primarily obtained from Kanfer and Karoly (1972). Kanfer and Karoly defined SCMSk as an iterative process of self-monitoring (SM), self-evaluation (SE), and self-reinforcement (SR). This construct has been adopted for numerous clinical interventions, and has shown some promise (see Febbraro & Clum, 1998). However, there are currently no self-report measures that were developed to assess SCMSk as a general construct (Mezo & Heiby, in press). This investigation involves the development of a SCMSk instrument that is content validated in terms of the constituent components of SM, SE, and SR, and many items were drawn and/or adapted from existing instruments. Moreover, the definition of SCMSk has been greatly enriched over the years, and these insights were integrated into item development.

Definitions of self-monitoring, self-evaluation, and self-reinforcement

The basic definitions of self-monitoring (SM), self-evaluation (SE), and self-reinforcement (SR) are cited from Kanfer and Karoly (1972). The next section provides further clarification of SM, SE, and SR based on contemporaneous and subsequent theoretical developments.

- SM is the utilization of input from the external environment, as well as from response-produced cues, which can include verbal-symbolic, proprioceptive, or autonomic stimuli (Kanfer & Karoly, 1972).
- SE involves making a discrimination or judgment about the adequacy of an action relative to a subjectively held standard or comparison criterion (Kanfer & Karoly, 1972).

- SR is self-administered positive or aversive stimulation, occurring within the parameters of the individual's social learning history and current situational factors (Kanfer & Karoly, 1972).

Theoretical context of self-monitoring, self-evaluation, and self-reinforcement

The following bulleted statements provide a more complete context for evaluating the proposed self-monitoring (SM), self-evaluation (SE), and self-reinforcement (SR) items (see Kanfer & Schefft, 1988; Bandura, 1991; Rokke & Rehm, 2001). This additional information is minimal in detail due to constraints on space, and thus your expertise with self-control and self-management skills is greatly respected and appreciated.

- Attributional and locus of control processes are implicated in each of SM, SE, and SR. These processes involve whether individuals will engage in self-control and self-management skills, whether they take credit for their successes, and whether they punish themselves for their failures.
- Self-efficacy expectations of one's ability to successfully SM or SE are included as an important dimension in whether these SCMSk are applied effectively.
- SM includes tracking task-related cues as well as emotional reactivity relevant for goal accomplishment. The importance of undivided attention is also stressed. Finally, the construct of mindfulness (see Baer, 2003) was integrated to emphasize present-centered awareness in monitoring goal progress.
- SE is strongly influenced by high and/or inflexible standards in both goal development as well as goal evaluation. In addition, the devaluing of achievements is an important dimension.

Instructions for rating items

I understand the raters of these items are extremely busy professionals. Thus, the rating of these items is intended to be simple. I ask that you read each item, and if you do not like the item for any reason, just place an * following the 'comments' prompt. In addition, please feel free to type any comments you may have, although doing so is entirely voluntary. Any suggestions for item improvement that you might want to contribute are greatly appreciated.

Self-Monitoring

1.	When I feel sad, I focus on all the bad things happening to me. Comments:
2.	If something bad happens it stays in my mind for a long time. Comments:
3.	Keeping track of what I do wrong is more helpful than watching what I do correctly. Comments:
4.	When I approach a challenging task I tend to think a lot about what might go wrong. Comments:
5.	I am aware of my accomplishments each day. Comments:
6.	I try to concentrate on more than one goal at a time. Comments:
7.	When I have a goal, I observe what I am actually doing so I can know what to do next. Comments:
8.	I notice big life changes instead of small ones. Comments:
9.	When I am working towards a goal, I take time to stop and think of the gains I have made so far. Comments:
10.	As I work towards a goal my mood changes a lot. Comments:
11.	I feel confidence when starting a new task. Comments:

12.	I feel discouraged when approaching a new task. Comments:
13.	When I feel happy, I focus on all the good things happening to me. Comments:
14.	I remember the bad things that happen to me more than the good. Comments:
15.	Keeping my attention on a task is hard for me. Comments:
16.	I notice I am calm when I approach a challenging task. Comments:
17.	I notice what I say to myself regarding problem areas in my life. Comments:
18.	My emotions come on for no real reason. Comments:
19.	When I am happy, I focus on how good it feels. Comments:
20.	My mind wanders to happy thoughts when I am working on a goal. Comments:
21.	My mind wanders to sad thoughts when I am working on a goal. Comments:
22.	It is easier for me to remember when I fall short than when I accomplish a goal. Comments:

23.	Many thoughts interfere when I am trying to achieve a task. Comments:
24.	I know I have succeeded when other people let me know. Comments:
25.	I do not get enough done because I try to do too many things at once. Comments:
26.	When I work toward something it gets all my attention. Comments:
27.	When I start working on a new goal in my life I get anxious. Comments:
28.	I keep focused on tasks I need to do even if I do not like them. Comments:
29.	I keep focused on tasks I like doing even though I should be doing something else. Comments:
30.	I am lucky if I notice things while doing a task that can help me do it better. Comments:
31.	I become very aware of what I am doing when I am working towards a goal. Comments:
32.	I make sure to regularly track my progress when I am working on a goal. Comments:
33.	The more things I can do at once the better. Comments:

34.	If I get emotional, I can take a step back and see how it is affecting me. Comments:
35.	I do things based on the emotions I am feeling towards them. Comments:
36.	I could be feeling happy or sad and not realize it until later. Comments:
37.	I find it difficult to stay focused on what is happening in the present. Comments:
38.	I rush through tasks without being attentive to them. Comments:
39.	I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there. Comments:
40.	I do tasks without being aware of what I am doing. Comments:
41.	My body gets tense when I am working on a goal. Comments:
42.	I find myself preoccupied with the future or the past. Comments:
43.	One of my problems is that I cannot get down to work when I should. Comments:
44.	If I monitor a task closely I will find ways to do it better.

	Comments:
45.	I put off working on a goal until I feel ready to start. Comments:
46.	I start working on a goal soon after I decide to. Comments:
47.	I pay close attention to my thoughts when I am working on something hard. Comments:
48.	I cannot help dwelling on things that have gone wrong. Comments:
49.	I have a hard time ignoring distractions while working on a goal. Comments:
50.	I know I can track my behavior when working toward a goal. Comments:

Self-evaluation

51.	I always have a clear sense of what behaviors would be right or wrong for me in reaching a goal. Comments:
52.	I need to do a task perfectly to be satisfied. Comments:
53.	I have such high standards for what I demand of myself that I rarely meet them. Comments:
54.	If I do not see progress towards my goals I do not feel good about myself.

	Comments:
55.	To work on a goal it is better to plan in general than to list the specifics. Comments:
56.	I would just be fooling myself if I tried to judge my reactions myself. Comments:
57.	I have a hard time designing my goals because I do not really know what I want. Comments:
58.	I depend on other people to know if I am doing well in reaching my goals. Comments:
59.	Unless I set and reach high goals, my efforts have been wasted. Comments:
60.	I am reluctant to scale my goals down even when I cannot seem to attain them. Comments:
61.	I write down the pros and cons of any change I am considering. Comments:
62.	Planning each step of what I have to do will help me get things done well. Comments:
63.	I am pleased by even small successes. Comments:
64.	I can reach a goal by making small specific changes in what I do. Comments:
65.	My expectations for myself are often too high for me to reach.

	Comments:
66.	I am generally satisfied with how well I do my work. Comments:
67.	It is success at the little things that encourages me to go on trying. Comments:
68.	My goals seem distant and unreachable. Comments:
69.	I set up step by step plans for what I want to accomplish. Comments:
70.	A good way to know how well I am doing is to compare myself to how others are doing. Comments:
71.	I do fine on new tasks and goals when I first try them. Comments:
72.	I can make my plans work to reach a goal. Comments:
73.	I keep working on the specifics of a goal if I cannot reach it the first time. Comments:
74.	When I set important goals for myself, I usually do not achieve them. Comments:
75.	If it looks like I will not be able to reach a goal, I do not bother trying to get close. Comments:

76.	If something is complicated, I make sure I can do it all before I try it. Comments:
77.	I am encouraged when I reach a partial success. Comments:
78.	When unexpected problems occur, I do not like to change my plans. Comments:
79.	I avoid trying to learn new things when they look too difficult for me to learn them well. Comments:
80.	I regularly adjust my plans when new things come up. Comments:
81.	I can only reach big goals by making drastic changes in my life. Comments:
82.	No matter what happens, I am responsible for reaching my goals. Comments:
83.	I do not seem capable of making clear plans for most problems that come up in my life. Comments:
84.	I compete with others. Comments:
85.	I will not scale down my goals, even if some things happen that are out of my control. Comments:
86.	I get frustrated when I do not achieve a goal in the time I had set aside to do it. Comments:

87.	When I achieve a goal I can usually find that it was mostly due to good luck. Comments:
88.	I am to blame when I cannot achieve a goal. Comments:
89.	When I do well at a task, I usually assume I would do well on similar tasks. Comments:
90.	Just because I do well on a task, that does not mean I will do well on similar tasks. Comments:
91.	It is important for me to do better than average on tasks I want to do. Comments:
92.	Sometimes I feel like I can never do well enough. Comments:
93.	People tell me my standards are too high. Comments:
94.	I am at fault for my failures. Comments:
95.	My hard work is the only reason I achieve goals. Comments:
96.	I break goals down into very specific steps. Comments:
97.	When I achieve a goal I realize it was not that hard to begin with. Comments:

98.	After I achieve a goal I realize how challenging it was. Comments:
99.	After I achieve a goal I realize it was not that important to begin with. Comments:
100.	The goals I achieve are of low value. Comments:
101.	I have not made progress on the goals I value most. Comments:
102.	When I cannot reach a goal I take it personally. Comments:
103.	I am responsible for my failures. Comments:
104.	I deserve the credit for my successes. Comments:
105.	I have learned that it is useless to make plans. Comments:
106.	There is no use in breaking goals into specific steps because they change once you start. Comments:
107.	I have to exceed the standards achieved by others. Comments:
108.	My plans are clear when I am working toward a goal.

	Comments:
109.	At any given time, I know whether I am meeting my standards for reaching a goal. Comments:
110.	The standards I set for myself are unclear and make it hard for me to judge how I am doing on a task. Comments:

Self-reinforcement

111.	I should be upset if I make a mistake. Comments:
112.	I spend time to enjoy my successes. Comments:
113.	If I do not do the best job, I think less of myself. Comments:
114.	The way to achieve my goals is to reward myself along the way. Comments:
115.	I need to reward myself to make progress toward a goal. Comments:
116.	To help me change, I praise myself for every step in the right direction. Comments:
117.	If I reward myself for progress toward a goal I may get spoiled. Comments:
118.	I encourage myself like one friend would to another. Comments:

119.	When I make mistakes, I take time to criticize myself. Comments:
120.	I blame myself when I do something wrong. Comments:
121.	It is best to save special treats until after I reach a goal. Comments:
122.	If I did not criticize myself frequently, I would do things poorly. Comments:
123.	I congratulate myself when I make some progress. Comments:
124.	Whether I reach a goal due to luck or effort, I do not get conceited and praise myself. Comments:
125.	I do not praise myself for reaching a goal because it is due to luck more than anything else. Comments:
126.	When I do something right, I take the time to feel good about it. Comments:
127.	I silently praise myself for small gains. Comments:
128.	I react to a setback by purposely feeling bad about it. Comments:
129.	I should not dwell on things I have done well in hopes of feeling good about myself.

	Comments:
130.	When I do not feel like working on a goal, it helps if I take time out to do something I enjoy. Comments:
131.	I reach goals by rewarding myself every step along the way. Comments:
132.	It is more helpful to receive criticism than praise for my actions. Comments:
133.	Thinking about how well I am doing so far is what keeps me trying. Comments:
134.	I criticize myself more often than others do. Comments:
135.	I give myself a "pat on the back" for even small successes. Comments:
136.	I get myself through hard things by planning to enjoy myself afterwards. Comments:
137.	The smart way to keep pressure on and get the job done is to punish myself when I make partial gains. Comments:
138.	I silently praise myself even when others do not praise me. Comments:
139.	I give myself a treat whenever I make progress toward a goal. Comments:

140.	When I do something right, I take time to enjoy the feeling. Comments:
141.	If I do something wrong I tend to make myself suffer for it. Comments:
142.	Often the best way to help me get through a difficult task is to criticize myself. Comments:
143.	If I am not making gains on a goal I keep pushing myself as a kind of punishment. Comments:
144.	I spend time to think about my successes. Comments:
145.	I reward myself when approaching a goal so I can keep up my efforts. Comments:
146.	I blame myself when things go wrong. Comments:
147.	I give myself something special when I make some progress. Comments:
148.	When I reach a goal I praise myself because I know it was due to my efforts. Comments:
149.	People tell me I am too hard on myself. Comments:
150.	I praise myself more frequently than others praise me. Comments:

Overall Comments:**AGREEMENT TO PARTICIPATE IN****A Study of Beliefs, Attitudes, and Self-Control**

Peter Mezo, Department of Psychology, University of Hawaii at Manoa, Gartley Hall, Rm. 207B.
E-mail: mezo@hawaii.edu

This is a research project exploring the relationships between beliefs, attitudes, and skills associated with self-control. Your participation in this study involves completion of two questionnaire packets on the same day they are assigned. The first questionnaire packet will take about 90 minutes to complete, and the second questionnaire packet will take 30 minutes to complete. By participating in this project, you are eligible for class credit.

The information you provide will be kept confidential to the extent allowed by law. Efforts to maintain the confidentiality of your responses to questionnaire items include storage of questionnaires in a locked room, and the use of numbers to match the first and second questionnaire packets that may not be directly linked to you.

Your completion of these questionnaires may provide benefits both for yourself and for others. Information elicited by questionnaire items may provide you with further insight about yourself. Moreover, your responses to these questionnaires may enable the development of more effective treatment and training programs across diverse applications, thus potentially improving the lives of others.

At the same time, the completion of questionnaire items may cause you distress. If after completing the questionnaires you experience feelings of wanting to harm yourself or others, it is very important that you call the Crisis Line phone number at 521-4555. However, if after completing the questionnaires you are left feeling troubled or upset, we encourage you to contact the principal investigator, Peter Mezo, by e-mail: mezo@hawaii.edu; or the faculty advisor, Dr. Elaine Heiby, by e-mail: heiby@hawaii.edu.

Participation in this study is absolutely voluntary. Whether you participate in this research study or not has no effect on your grade in this class. Participation in this study is strictly an opportunity to obtain extra credit, and you may obtain equivalent extra credit by completing an alternative project provided by your instructor.

For the results of this study to be useful to others, it is crucial that guidelines be followed. Thus, it is very important that the directions for each questionnaire be read carefully, and that questionnaires be completed in their entirety. Also, the initial questionnaire packet must be completed on the same day that it is assigned, and the second questionnaire packet must be completed during the day on which it is assigned two (2) weeks later. Finally, by signing this consent form you indicate that it is you who will complete both questionnaire packets, and not another individual. If it is unlikely that you will be able to follow these guidelines, the choice of an alternative method to achieve course credit is requested and strongly encouraged.

If you have any questions, comments, or concerns about this research project, you may contact Peter Mezo by e-mail: mezo@hawaii.edu; or Dr. Elaine Heiby by e-mail: heiby@hawaii.edu.

I herewith give my consent to participate in this project with the understanding that such consent does not waive any of my legal rights, nor does it release the principal investigator or the institution or any employee or agent thereof from liability for negligence.

Signature of individual participant

Printed name of individual participant

Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this study, contact: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, Hawaii 96822. Phone: (808) 956-5007.)

c: Signed copy to subject

Demographics

Please provide the following information.

1. Gender: _____ (M or F)
2. Age: _____
3. Marital Status (please circle one): 1. Married 2. Single 3. Cohabiting 4. Divorced
4. Ethnicity – the ethnic group(s) with which you **most** identify (please circle one or two):
 1. African American
 2. Caucasian (please specify) _____
 3. Chinese
 4. Filipino
 5. Hawaiian
 6. Hispanic (please specify) _____
 7. Japanese
 8. Korean

9. Portuguese
10. Samoan
11. Vietnamese
12. Other Pacific Islander (please specify) _____
13. Other (please specify) _____
5. Did you attend high school in Hawaii? ____ (Y or N)
6. What year of college are you completing? ____ (please give number)
7. College major (please circle one):
- | | | |
|----------------------|---------------------------------|-------------------------|
| 1. Psychology | 2. Other Social Science | 3. Humanities/Languages |
| 4. Education | 5. Natural Sciences | 6. Business |
| 7. Computer Sciences | 8. Other (please specify) _____ | |

SCMS

Please read each of the following statements and rate how well each statement describes you, using the follow scale:

- 6 = *Very descriptive of me*
 5 = *Somewhat/Mostly descriptive of me*
 4 = *A little descriptive of me*
 3 = *A little undescriptive of me*
 2 = *Somewhat/Mostly undescriptive of me*
 1 = *Very undescriptive of me*

1. ____ When I feel sad, I focus on all the bad things happening to me.
2. ____ If something bad happens, I think about it for a long time.
3. ____ Keeping track of what I do wrong is more helpful than watching what I do correctly.
4. ____ When I approach a challenging task, I tend to think a lot about what might go wrong.
5. ____ I am aware of my accomplishments each day.
6. ____ I try to concentrate on more than one goal at a time.

7. ____ When I have a goal, I observe what I am actually doing so I can know what to do next.
8. ____ I notice big life changes instead of small ones.
9. ____ When I am working towards a goal, I take time to stop and think of what I have done so far.
10. ____ As I work towards a goal, I notice my mood changes a lot.
11. ____ I feel confidence when starting a new task.
12. ____ I feel discouraged when approaching a new task.
13. ____ When I feel happy, I focus on all the good things happening to me.
14. ____ I remember the bad things that happen to me more than the good.
15. ____ Keeping my attention on a task is hard for me.
16. ____ I notice I am calm when I approach a challenging task.
17. ____ I notice what I say to myself regarding problem areas in my life.
18. ____ My emotions come on for no real reason.
19. ____ When I am happy, I focus on how good it feels.
20. ____ My mind wanders to happy thoughts when I am working on a goal.
21. ____ My mind wanders to sad thoughts when I am working on a goal.
22. ____ It is easier for me to remember when I fall short of my goal than when I accomplish a goal.
23. ____ Many thoughts interfere when I am trying to achieve a task.
24. ____ I know I have succeeded when other people let me know.
25. ____ I do not get enough done because I try to do too many things at once.
26. ____ When I work toward something, it gets all my attention.
27. ____ When I start working on a new goal in my life, I get anxious.
28. ____ I keep focused on tasks I need to do even if I do not like them.

29. ____ I keep focused on tasks I like doing even though I should be doing something else.
30. ____ I am lucky if I notice things that can help me do better at a task.
31. ____ I become very aware of what I am doing when I am working towards a goal.
32. ____ I make sure to track my progress regularly when I am working on a goal.
33. ____ The more things I can do at once the better.
34. ____ If I get emotional, I can take a step back and see how it is affecting me.
35. ____ What I do depends upon how I feel.
36. ____ I could be feeling happy or sad and not realize it until later.
37. ____ I find it difficult to stay focused on what is happening in the present.
38. ____ I rush through tasks without being attentive to them.
39. ____ I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.
40. ____ I do tasks without being aware of what I am doing.
41. ____ My body gets tense when I am working on a goal.
42. ____ I find myself preoccupied with the future or the past.
43. ____ One of my problems is that I cannot get down to work when I should.
44. ____ If I monitor a task closely, I will find ways to do it better.
45. ____ I put off working on a goal until I feel ready to start.
46. ____ I start working on a goal soon after I decide to.
47. ____ I pay close attention to my thoughts when I am working on something hard.
48. ____ I cannot help dwelling on things that have gone wrong.
49. ____ I have a hard time ignoring distractions while working on a goal.
50. ____ I know I can track my behavior when working toward a goal.
51. ____ I always have a clear sense of what behaviors would be right or wrong for me in

reaching a goal.

52. ____ I need to do a task perfectly.
53. ____ I have such high standards for what I demand of myself that I rarely meet them.
54. ____ To work on a goal it is better to plan in general than to list the specifics.
55. ____ I have a hard time designing my goals because I do not really know what I want.
56. ____ I depend on other people to let me know if I am doing well in reaching my goals.
57. ____ Unless I set and reach high goals, my efforts have been wasted.
58. ____ I am reluctant to scale my goals down even when I cannot seem to attain them.
59. ____ I think about the pros and cons of any change I am considering.
60. ____ Planning each step of what I have to do will help me get things done well.
61. ____ I am okay with small successes.
62. ____ I can reach a goal by making small specific changes in what I do.
63. ____ My expectations for myself are often too high for me to reach.
64. ____ I am generally okay with how well I do my work.
65. ____ Success at the little things helps me to go on trying.
66. ____ My goals seem distant and unreachable.
67. ____ I set up step-by-step plans for what I want to accomplish.
68. ____ A good way to know how well I am doing is to compare myself to how others are doing.
69. ____ I do fine on new tasks and goals when I first try them.
70. ____ I can make my plans work to reach a goal.
71. ____ I keep working on small steps toward a goal if I cannot reach it the first time.
72. ____ When I set important goals for myself, I usually do not achieve them.
73. ____ If it looks like I will not be able to reach a goal, I do not bother trying to get close.
74. ____ If something is complicated, I make sure I can do it all before I try it.

75. ____ I am okay with reaching a partial success.
76. ____ When unexpected problems occur, I do not like to change my plans.
77. ____ I avoid trying to learn new things when they look too difficult for me to learn them well.
78. ____ I regularly adjust my plans when new things come up.
79. ____ I can only reach big goals by making drastic changes in my life.
80. ____ No matter what happens, I am responsible for reaching my goals.
81. ____ I do not seem capable of making clear plans for most problems that come up in my life.
82. ____ I will not scale down my goals, even if some problems happen that are out of my control.
83. ____ It is not all right with me when I do not achieve a goal in the time I had set aside to do it.
84. ____ When I achieve a goal, I can usually find it was mostly due to good luck.
85. ____ When I do well at a task, I usually assume I would do well on similar tasks.
86. ____ Just because I do well on a task, that does not mean I will do well on similar tasks.
87. ____ It is important for me to do better than average on tasks I want to do.
88. ____ Sometimes I feel like I can never do well enough.
89. ____ People tell me my standards are too high.
90. ____ My hard work is the only reason I achieve goals.
91. ____ I break goals down into very specific steps.
92. ____ When I achieve a goal, I realize it was not that hard to begin with.
93. ____ After I achieve a goal, I realize how challenging it was.
94. ____ After I achieve a goal, I realize it was not that important to begin with.
95. ____ The goals I achieve do not mean much to me.

96. ____ I have not made progress on the goals I value most.
97. ____ I am the one who decides if I fail at something.
98. ____ I am the one who decides if I succeed at something.
99. ____ I have learned that it is useless to make plans.
100. ____ There is no use in breaking goals into specific steps because they change once you start.
101. ____ I have to exceed the standards achieved by others.
102. ____ My plans are clear when I am working toward a goal.
103. ____ At any given time, I know whether I am meeting my standards for reaching a goal.
104. ____ The standards I set for myself are unclear and make it hard for me to judge how I am doing on a task.
105. ____ I should be upset with myself if I make a mistake.
106. ____ I spend time to enjoy my successes.
107. ____ If I do not do the best job, I think less of myself.
108. ____ The way to achieve my goals is to reward myself along the way.
109. ____ I need to reward myself to make progress toward a goal.
110. ____ To help me change, I praise myself for every step in the right direction.
111. ____ If I reward myself for progress toward a goal, I may get spoiled.
112. ____ I encourage myself like one friend would to another.
113. ____ When I make mistakes, I take time to criticize myself.
114. ____ I blame myself when I do something wrong.
115. ____ It is best to save special treats until after I reach a goal.
116. ____ If I did not criticize myself frequently, I would do things poorly.
117. ____ I congratulate myself when I make some progress.

118. ____ If I reach a goal due to luck, I do not praise myself.
119. ____ If I reach a goal due to effort, I do not praise myself.
120. ____ I do not praise myself for reaching a goal because it is due to luck more than anything else.
121. ____ When I do something right, I take the time to feel good about it.
122. ____ I silently praise myself for small gains.
123. ____ I react to a setback by purposely feeling bad about it.
124. ____ I should not dwell on things I have done well in hopes of feeling good about myself.
125. ____ When I do not feel like working on a goal, it helps if I take time out to do something I enjoy.
126. ____ I reach goals by rewarding myself every step along the way.
127. ____ It is more helpful to receive criticism than praise for my actions.
128. ____ Thinking about how well I am doing so far is what keeps me trying.
129. ____ I criticize myself more often than others do.
130. ____ I give myself a “pat on the back” for even small successes.
131. ____ I get myself through hard things by planning to enjoy myself afterwards.
132. ____ The smart way to keep pressure on and get the job done is to punish myself when I make partial gains.
133. ____ I silently praise myself even when others do not praise me.
134. ____ I give myself a treat whenever I make progress toward a goal.
135. ____ When I do something right, I take time to enjoy the feeling.
136. ____ If I do something wrong I tend to make myself suffer for it.
137. ____ Often the best way to help me get through a difficult task is to criticize myself.
138. ____ If I am not making gains on a goal, I keep pushing myself as a kind of

punishment.

139. ____ I spend time to think about my successes.
140. ____ I reward myself when approaching a goal so I can keep up my efforts.
141. ____ I blame myself when things go wrong.
142. ____ I give myself something special when I make some progress.
143. ____ When I reach a goal, I praise myself because I know it was due to my efforts.
144. ____ People tell me I am too hard on myself.
145. ____ I praise myself more frequently than others praise me.

SCQ

Please read each of the following statements and indicate just how characteristic or descriptive of you the statement is by using the letters of the code given below:

- A = *Very characteristic of me, extremely descriptive*
 B = *Rather characteristic of me, quite descriptive*
 C = *Somewhat characteristic of me, slightly uncharacteristic*
 D = *Rather uncharacteristic of me, quite uncharacteristic*
 E = *Very uncharacteristic of me, extremely uncharacteristic*

- ____ 1. Rewarding myself for progress toward a goal is unnecessary and may actually spoil me.
- ____ 2. Concentrating on the final goals as well as the immediate results of my efforts can help me feel better about my work.
- ____ 3. When things are going well, I often feel that something bad is just around the corner and there's nothing I can do about it.
- ____ 4. I am aware of my accomplishments each day.
- ____ 5. Thinking about how well I'm doing so far is what keeps me trying.
- ____ 6. When I do something right, I take the time to enjoy the feeling.
- ____ 7. It usually works best for me to save my special treats until after I carry out what I intended to accomplish.
- ____ 8. What is most important is how I feel about my actions, not what others think.
- ____ 9. There is nothing I can do to change things that are upsetting me.
- ____ 10. The way to achieve my goals is to reward myself along the way, in order to keep up my own efforts.
- ____ 11. Punishing myself for only making partial gains toward a goal is the smart way to keep pressure on and get the job done.

- ___ 12. I get myself through hard things largely by planning on enjoying myself afterwards.
- ___ 13. I depend heavily on other people's opinions to evaluate objectively what I do.
- ___ 14. When I don't feel like doing anything, sometimes it helps if I take time out to do something I really enjoy.
- ___ 15. I always seem to remember the bad things that happen to me more than the good.
- ___ 16. It's success at the little things that encourages me to go on trying.
- ___ 17. To get good results, I have to observe what I'm actually doing in order to decide what I need to do next.
- ___ 18. The things in life that are most important depend on chance more than anything I can do.
- ___ 19. Planning each step of what I have to do helps me to get things done well.
- ___ 20. It's no use trying to change most of the things that make me miserable.
- ___ 21. My mood is unrelated to my behavior.
- ___ 22. There isn't anything to do when I want something important other than be patient and hope for good luck.
- ___ 23. Activities which fail to lead to something immediately should be dropped in favor of those that do so.
- ___ 24. My goals seem distant and unreachable.
- ___ 25. I think talking about what you've done right or well is just boastful and tooting your own horn.
- ___ 26. Unless I set and reach very high goals, my efforts are likely to be wasted.
- ___ 27. When I feel blue, the best thing to do is focus on all the negative things happening to me.
- ___ 28. Judging what I've done realistically is necessary for me to feel good about myself.
- ___ 29. How I feel about myself has a lot to do with what I'm accomplishing.
- ___ 30. I shouldn't dwell on things I've done well in hopes of feeling good about myself.
- ___ 31. When there is some goal I'd like to reach, I find it best to list specifically what I have to do to get there.
- ___ 32. My mood changes in relation to what I'm doing.
- ___ 33. It's just as important to think about what will happen later as a result of my actions, as it is to watch for immediate effects.
- ___ 34. I'd just be fooling myself if I tried to judge my reactions myself.
- ___ 35. Keeping watch on what I do wrong is more helpful than watching what I

do correctly.

- ___ 36. Criticizing myself is often the best way to help me get through a difficult task.
- ___ 37. Not only what goes on around us, but also the things we say and do to ourselves determine how we feel from day to day.
- ___ 38. I encourage myself to improve by treating myself to something special whenever I make progress.
- ___ 39. It's more helpful to receive criticism than praise for my actions.
- ___ 40. I'd be unlikely to change for the better if I didn't silently praise myself or feel good for every step in the right direction.

FSRQ

Below are a number of statements about beliefs or attitudes people have. Indicate how descriptive the statements are for you by rating each item, as indicated below. There are no right or wrong answers. Your answers are confidential, so do not put your name on this sheet. Thank you!

Rate each item for how much of the time it is descriptive for you. In the blank before each item, rate:

- 0 = Never descriptive of me
 1 = A little of the time descriptive of me
 2 = Some of the time descriptive of me
 3 = Most of the time descriptive of me

- ___ 1. When I fail at something, I am still able to feel good about myself.
- ___ 2. I can stick to a boring task that I need to finish without someone pushing me.
- ___ 3. I have negative thoughts about myself.
- ___ 4. When I do something right, I take time to enjoy the feeling.
- ___ 5. I have such high standards for what I expect of myself that I have a hard time meeting my standards.
- ___ 6. I seem to blame myself and be very critical of myself when things go wrong.
- ___ 7. I can have a good time doing some things alone.
- ___ 8. I get upset with myself when I make mistakes.
- ___ 9. My feelings of self-confidence go up and down.
- ___ 10. When I succeed at small things, it helps me go on.
- ___ 11. If I do not do something absolutely perfectly, I don't feel satisfied.

- _____ 12. I get myself through hard things mostly by thinking I'll enjoy myself afterwards.
- _____ 13. When I make mistakes, I take time to criticize myself.
- _____ 14. I encourage myself to improve at something by feeling good about myself.
- _____ 15. I put myself down so that I will do things better in the future.
- _____ 16. I think talking about what you've done right is bragging.
- _____ 17. I find that I feel better when I silently praise myself.
- _____ 18. I can keep working at something hard to do when I stop to think of what I've already done.
- _____ 19. The way I keep up my self-confidence is by remembering any successes I have had.
- _____ 20. The way I achieve my goals is by rewarding myself every step along the way.
- _____ 21. Praising yourself is being selfish.
- _____ 22. When someone criticizes me, I lose my self-confidence.
- _____ 23. I criticize myself more than others criticize me.
- _____ 24. I feel I have a lot of good qualities.
- _____ 25. I silently praise myself when other people do not praise me.
- _____ 26. Any activity can provide some pleasure no matter how it comes out.
- _____ 27. If I don't do the best possible job, I don't feel good about myself.
- _____ 28. I should be upset if I make a mistake.
- _____ 29. My happiness depends more on myself than it depends on other people.
- _____ 30. People who talk about their own better points are just bragging.

CSM

Directions: In answering the questions below, think about how you typically react to the sorts of situations described. Try to disregard thoughts of how you feel you should or would like to react and mark the point along the scale which best describes your actual reactions. PLEASE CIRCLE ONE OF THE NOTCHED POINTS ON THE SCALE.

1. I am more attentive to evidence that I have been rejected or criticized than to positive or flattering information.

--	--	--	--

Extremely
UNcharacteristic
of me

Extremely
Characteristic
of me

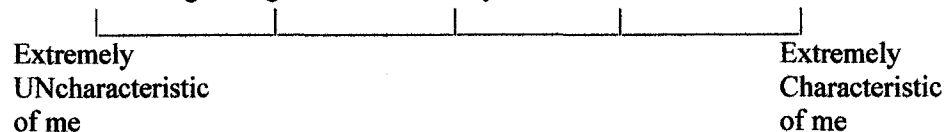
2. If something bad happens and there's nothing to be done about it I put it out of my thoughts.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
3. When I approach a challenging task I'm fairly good at thinking positively enough to boost my confidence.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
4. I tend to blame myself for things that go wrong.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
5. I am pleased and encouraged by even small or partial successes.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
6. I can't help dwelling on things that have gone wrong.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
7. I can usually overcome any initial difficulties I experience in learning something new.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me
8. Insecurities or other negative feelings often make it difficult for me to perceive a situation clearly.
- Extremely UNcharacteristic of me
- Extremely Characteristic of me

17. I generally feel fairly accepting of my work and my behavior.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
18. My expectations for myself are often too high for me to reach.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
19. If I have trouble achieving a goal I tend to figure out where the problem lies and then correct it.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
20. When I approach a challenging task I tend to think a lot about what might go wrong.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
21. I give myself emotional support much as one friend would give another support.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
22. I feel little confidence when approaching a new task.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
23. I set up step by step plans for what I want to accomplish.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
24. I'm reluctant to scale my goals down even when I can't seem to attain them.
- Extremely UNcharacteristic of me |-----| Extremely Characteristic of me
25. If a task seems too big I break it down into smaller parts and take it one step at a

time.



26. If I do something wrong I tend to make myself suffer for it.



SCS

Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

- +3 = Very characteristic of me
- +2 = Rather characteristic of me
- +1 = Somewhat characteristic of me
- 1 = Somewhat uncharacteristic of me
- 2 = Rather uncharacteristic of me
- 3 = Very uncharacteristic of me

Thank you for your cooperation

- | | | | | | | | |
|----|---|----|----|----|----|----|----|
| 1. | When I do a boring job, I think about the less boring parts of the job and about the reward I will receive when I finish. | -3 | -2 | -1 | +1 | +2 | +3 |
| 2. | When I have to do something that makes me anxious, I try to visualize how I will overcome my anxiety while doing it. | -3 | -2 | -1 | +1 | +2 | +3 |
| 3. | By changing my way of thinking, I am often able to change my feelings about almost anything. | -3 | -2 | -1 | +1 | +2 | +3 |
| 4. | I often find it difficult to overcome my feelings of nervousness and tension without outside help. | -3 | -2 | -1 | +1 | +2 | +3 |
| 5. | When I am feeling depressed, I try to think about pleasant events. | -3 | -2 | -1 | +1 | +2 | +3 |
| 6. | I cannot help thinking about mistakes I made. | -3 | -2 | -1 | +1 | +2 | +3 |
| 7. | When I am faced with a difficult problem, I try to approach it in a systematic way. | -3 | -2 | -1 | +1 | +2 | +3 |
| 8. | I usually do what I am supposed to do more quickly when someone is pressuring me. | -3 | -2 | -1 | +1 | +2 | +3 |
| 9. | When I am faced with a difficult decision, I prefer to | -3 | -2 | -1 | +1 | +2 | +3 |

- postpone it even if I have all the facts.
10. When I have difficulty concentrating on my reading, I look for ways to increase my concentration. -3 -2 -1 +1 +2 +3
 11. When I plan to work, I remove everything that is not relevant to my work. -3 -2 -1 +1 +2 +3
 12. When I try to get rid of a bad habit, I first try to find out all the reasons why I have the habit. -3 -2 -1 +1 +2 +3
 13. When an unpleasant thought is bothering me, I try to think about something pleasant. -3 -2 -1 +1 +2 +3
 14. If I smoked two packs of cigarettes a day, I would need outside help to stop smoking. -3 -2 -1 +1 +2 +3
 15. When I feel down, I try to act cheerful so that my mood will change. -3 -2 -1 +1 +2 +3
 16. If I have tranquilizers with me, I would take one whenever I feel tense and nervous. -3 -2 -1 +1 +2 +3
 17. When I am depressed, I try to keep myself busy with things I like. -3 -2 -1 +1 +2 +3
 18. I tend to postpone unpleasant tasks even if I could perform them immediately. -3 -2 -1 +1 +2 +3
 19. I need outside help to get rid of some of my bad habits. -3 -2 -1 +1 +2 +3
 20. When I find it difficult to settle down and do a task, I look for ways to help me settle down. -3 -2 -1 +1 +2 +3
 21. Although it makes me feel bad, I cannot help thinking about all sorts of possible catastrophes. -3 -2 -1 +1 +2 +3
 22. I prefer to finish a job that I have to do before I start doing things I really like. -3 -2 -1 +1 +2 +3
 23. When I feel physical pain, I try not to think about it. -3 -2 -1 +1 +2 +3
 24. My self-esteem increases when I am able to overcome a bad habit. -3 -2 -1 +1 +2 +3
 25. To overcome bad feelings that accompany failure, I often tell myself that it is not catastrophic and I can do anything. -3 -2 -1 +1 +2 +3
 26. When I feel that I am too impulsive, I tell myself to stop and -3 -2 -1 +1 +2 +3

- think before I do something about it.
- | | | | | | | |
|---|----|----|----|----|----|----|
| 27. Even when I am terribly angry at someone, I consider my actions very carefully. | -3 | -2 | -1 | +1 | +2 | +3 |
| 28. Facing the need to make a decision, I usually look for different alternatives instead of deciding quickly and spontaneously. | -3 | -2 | -1 | +1 | +2 | +3 |
| 29. Usually, I first do the thing I really like to do even if there are more urgent things to do. | -3 | -2 | -1 | +1 | +2 | +3 |
| 30. When I realize that I am going to be unavoidably late for an important meeting, I tell myself to keep calm. | -3 | -2 | -1 | +1 | +2 | +3 |
| 31. When I feel pain in my body, I try to divert my thoughts from it. | -3 | -2 | -1 | +1 | +2 | +3 |
| 32. When I am faced with a number of things to do, I usually plan my work. | -3 | -2 | -1 | +1 | +2 | +3 |
| 33. When I am short of money, I decide to record all my expenses in order to budget more carefully in the future. | -3 | -2 | -1 | +1 | +2 | +3 |
| 34. If I find it difficult to concentrate on a task, I divide it into smaller segments. | -3 | -2 | -1 | +1 | +2 | +3 |
| 35. Quite often, I cannot overcome unpleasant thoughts that bother me. | -3 | -2 | -1 | +1 | +2 | +3 |
| 36. When I am hungry and I have no opportunity to eat, I try to divert my thoughts from my stomach or try to imagine that I am satisfied. | -3 | -2 | -1 | +1 | +2 | +3 |

SCQ-Brandon

This is a questionnaire designed to measure your level of self-control. You are asked to respond to 16 statements. Each statement describes a specific situation. You are to decide the extent to which you agree that the statement is typical of your behavior. To do so, circle one of the five descriptors beneath the statement. The following key explains the meaning of each of the descriptors.

SD = Strongly Disagree

D = Disagree

N = Neutral

A = Agree

SA = Strongly Agree

Here is a practice statement.

I have disciplined work habits.

SD D N A SA

You must decide the degree to which you agree that this statement is typical of your behavior. If you feel you almost always exhibit disciplined work habits, you would circle "SA". If you feel you almost never exhibit disciplined work habits, you would circle "SD". A response of "A" would indicate you often exhibit disciplined work habits, and a response of "D" would indicate you seldom do so. A response of "N" should be selected only if you truly feel ambivalent about your behavior.

This is not a test. There are no "right" or "wrong" responses to any of the statements. Please answer each question as honestly as you can. Please work carefully and quickly. Do not spend a long time on any one statement. Please respond to each statement, and circle only one response to each.

1. I manage my personal or family budget well.
SD D N A SA
2. I manage my time carefully.
SD D N A SA
3. I snack between meals.
SD D N A SA
4. I control my anger in interpersonal conflicts.
SD D N A SA
5. I make major purchases on impulse.
SD D N A SA
6. I exercise regularly.
SD D N A SA
7. I procrastinate on work/study assignments.
SD D N A SA
8. I find it difficult to assert my own needs and desires.
SD D N A SA
9. I control the size of the portions of the food I eat.
SD D N A SA
10. I avoid eating high-caloric, fatty, or sweet foods.

- | | | | | | |
|-----|--|---|---|---|----|
| | SD | D | N | A | SA |
| 11. | I schedule leisure activities regularly. | | | | |
| | SD | D | N | A | SA |
| 12. | I have nervous habits like nail-biting, smoking, or grinding my teeth. | | | | |
| | SD | D | N | A | SA |
| 13. | I lose my temper regularly. | | | | |
| | SD | D | N | A | SA |
| 14. | I have difficulty saying "no" to others. | | | | |
| | SD | D | N | A | SA |
| 15. | I eat a balanced diet. | | | | |
| | SD | D | N | A | SA |
| 16. | I prioritize activities and work on the most important ones first. | | | | |
| | SD | D | N | A | SA |

LSA

Indicate how similar each of the following items is to your personal lifestyle by using the following format:

- A = Very different from me
 B = Somewhat different
 C = Uncertain
 D = Somewhat similar to me
 E = Very similar to me

- ___ 1. In most situations, I have a clear sense of what behaviors would be right or wrong for me.
- ___ 2. When confronted with many different things to do, I have difficulty deciding what is most important to do.
- ___ 3. After making a decision about what is most important to do at any given time, I easily get sidetracked from that activity.
- ___ 4. Once I decide what is most important to do at any given time, I start on that task right away.
- ___ 5. I write down the pro's and con's of any behavior change I am considering.
- ___ 6. I have difficulty judging how long it will take me to complete a task.

- ___ 7. I seldom analyze what I am saying to myself regarding problem areas in my life.
- ___ 8. I have written down my life goals.
- ___ 9. When I begin a personal change project, I generally keep my plans to myself.
- ___ 10. I keep my work space well-organized.
- ___ 11. I have a clear sense of what I most want to experience in my life.
- ___ 12. I seldom ask for feedback from others about behaviors I need to change and how best to change those behaviors.
- ___ 13. I complete tasks at the time I say I'm going to complete them.
- ___ 14. I seldom write down my yearly goals.
- ___ 15. I'm confused as to the kind of qualities I want to develop in my life.
- ___ 16. I have difficulty matching various tasks with my energy level.

BDI

On this questionnaire are groups of statements. Please read each group of statement carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. If several statements within the group seem to apply really well, circle each one. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
 1 I feel sad.
 2 I am sad all the time and I can't snap out of it.
 3 I am so sad or unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
 1 I feel discouraged about the future.
 2 I feel I have nothing to look forward to.
 3 I feel that the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
 1 I feel I have failed more than the average person.
 2 As I look back on my life, all I can see is a lot of failures.
 3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
 1 I don't enjoy things the way I used to.
 2 I don't get real satisfaction out of anything anymore.
 3 I am dissatisfied or bored with everything.
5. 0 I don't feel particularly guilty.
 1 I feel guilty a good part of the time.
 2 I feel quite guilty most of the time.
 3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.
1 I feel I may be punished
2 I expect to be punished.
3 I feel I am being punished.
7. 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
8. 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
9. 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.
10. 0 I don't cry anymore than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.
11. 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.
12. 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.
13. 0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.
14. 0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.
15. 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.

- 3 I can't do anything at all.
16. 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours than I used to and cannot get back to sleep.
17. 0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.
- 18 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.
19. 0 I haven't lost much weight, if any lately.
1 I have lost more than 5 pounds
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.
- I am purposely trying to lose weight by eating less. Yes ___ No ___
20. 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am worried about my physical problems, that I cannot think about anything else
21. 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

CAS

This questionnaire is designed to measure how much anxiety you are currently feeling. It is not a test, so there are no right or wrong answers. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows.

- 1 Rarely or none of the time
2 A little of the time
3 Some of the time
4 A good part of the time
5 Most or all of the time

1. ___ I feel calm.

2. ___ I feel tense.
3. ___ I feel suddenly scared for no reason.
4. ___ I feel nervous.
5. ___ I use tranquilizers or antidepressants to cope with my anxiety.
6. ___ I feel confident about the future.
7. ___ I am free from senseless or unpleasant thoughts.
8. ___ I feel afraid to go out of my house alone.
9. ___ I feel relaxed and in control of myself.
10. ___ I have spells of terror or panic.
11. ___ I feel afraid in open spaces or in the streets.
12. ___ I feel afraid I will faint in public.
13. ___ I am comfortable traveling on buses, subways or trains.
14. ___ I feel nervousness or shakiness inside.
15. ___ I feel comfortable in crowds, such as shopping or at a movie.
16. ___ I feel comfortable when I am left alone.
17. ___ I feel afraid without good reason.
18. ___ Due to my fears, I unreasonably avoid certain animals, objects or situations.
19. ___ I get upset easily or feel panicky unexpectedly.
20. ___ My hands, arms or legs shake or tremble.
21. ___ Due to my fears, I avoid social situations, whenever possible.
22. ___ I experience sudden attacks of panic which catch me by surprise.
23. ___ I feel generally anxious.
24. ___ I am bothered by dizzy spells.
25. ___ Due to my fears, I avoid being alone, whenever possible.

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on the average. Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

___ interested	___ irritable
___ distressed	___ alert
___ excited	___ ashamed
___ upset	___ inspired
___ strong	___ nervous
___ guilty	___ determined
___ scared	___ attentive
___ hostile	___ jittery
___ enthusiastic	___ active
___ proud	___ afraid

DIET

Each item in this questionnaire describes a situation and a behavior that promotes weight loss or weight control. Imagine that you are in the situation described and rate the percent of the time you would behave in the way described. If you would always act in the way described then give a rating of 100%. If you would never act that way give a rating of 0%. If you would sometimes act that way then circle the number at the point on the scale that shows how often you would act as described. If you feel that you never get into a situation like the one described (it does not apply to you), then rate how often you engage in the kind of behavior described in general.

- You're having dinner with your family and your favorite meal has been prepared. You finish the first helping and someone says, "Why don't you have some more?" What percent of the time would you turn down a second helping?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
- You would like to exercise every day but it is hard to find the time because of your family and work obligations. What percent of the time would you set aside a daily time for exercise?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
- You like to eat high calorie snack food (e.g., cookies, potato chips, crackers, cokes, beer, cake) while watching television. What percent of the time would you watch TV without eating a high calorie snack?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

4. When you eat in a good restaurant, you love to order high calorie foods. What percent of the time would you order a low calorie meal?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
5. When planning meals, you tend to choose high calorie foods. What percent of the time would you plan low calorie meals?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
6. You are at a party and there is a lot of fattening food. You have already eaten more than you should and you are tempted to continue eating. What percent of the time would you stop with what you have already eaten?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
7. You like to flavor your vegetables with butter, margarine, ham, or bacon fat. What percent of the time would you choose a low calorie method of seasoning?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
8. You often prepare many of your foods by frying. What percent of the time would you prepare your food in a way that is less fattening?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
9. You allow yourself a snack in the evening, but you find yourself eating more than your diet allows. What percent of the time would you reduce the size of your snack?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
10. Instead of putting foods away after finishing a meal, you find yourself eating the leftovers. What percent of the time would you put the food away without eating any?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
11. You are asked by another person to go for a walk but you feel tired and kind of low. What percent of the time would you overcome these feelings and say "yes" to the walk?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
12. You often overeat at supper because you are tired and hungry when you get home. What percent of the time would you not overeat at supper?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
13. When you have errands to run that are only a couple of blocks away you usually drive the car. What percent of the time would you walk on an errand when it only involves a couple of blocks?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

14. You are invited to someone's house for dinner and your host is an excellent cook. You often overeat because the food tastes so good. What percent of the time would you not overeat as a dinner guest?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

15. You like to have something sweet to eat on your coffee break. What percent of the time would you only have coffee?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

16. When you cook a meal you snack on the food. What percent of the time would you wait until the meal is prepared to eat?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

17. You planned to exercise after work today but you feel tired and hungry when the time arrives. What percent of the time would you exercise anyway?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

18. There is a party at work for a co-worker and someone offers you a piece of cake. What percent of the time would you turn it down?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

19. You would like to climb the stairs instead of taking the elevator. What percent of the time would you take the stairs to go one or two flights?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

20. You are happy and feeling good today. You are tempted to treat yourself by stopping for ice cream. What percent of the time would you find some other way to be nice to yourself?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

21. You are at a friend's house and your friend offers you a delicious looking pastry. What percent of the time would you refuse this offer?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

22. You feel like celebrating. You are going out with friends to a good restaurant. What percent of the time would you celebrate without overeating?

0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

23. You finished your meal and you still feel hungry. There is cake and fruit available. What percent of the time would you choose fruit?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
24. You are at home feeling lonely, blue, and bored. You are craving something to eat. What percent of the time would you find another way of coping with these feelings besides eating?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
25. Today you did something to hurt your ankle. You want to get something to eat to make yourself feel better. What percent of the time would you find some other way to take your mind off your mishap?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
26. When you spend time alone at home you are tempted to snack. You are spending an evening alone. What percent of the time would you resist the urge to snack?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
27. You are out with a friend at lunch time and your friend suggests that you stop and get some ice cream. What percent of the time would you resist the temptation?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
28. You just had an upsetting argument with a family member. You are standing in front of the refrigerator and you feel like eating everything in sight. What percent of the time would you find some other way to make yourself feel better?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
29. You are having a hard day at work and you are anxious and upset. You feel like getting a candy bar. What percent of the time would you find a more constructive way to calm down and cope with your feelings?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100
30. You just had an argument with your (husband, wife, boyfriend, girlfriend). You are upset, angry, and you feel like eating something. What percent of the time would you talk the situation over with someone or go for a walk instead of eating?
0 --- 10 --- 20 --- 30 --- 40 --- 50 --- 60 --- 70 --- 80 --- 90 --- 100

MCS D

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

- | | | |
|---|---|--|
| T | F | 1. Before voting I thoroughly investigate the qualifications of all the candidates. |
| T | F | 2. I never hesitate to go out of my way to help someone in trouble. |
| T | F | 3. It is sometimes hard for me to go on with my work if I am not encouraged. |
| T | F | 4. I have never intensely disliked anyone. |
| T | F | 5. On occasion I have doubts about my ability to succeed in life. |
| T | F | 6. I sometimes feel resentful when I don't get my way. |
| T | F | 7. I am always careful about my manner of dress. |
| T | F | 8. My table manners at home are as good as when I eat out in a restaurant. |
| T | F | 9. If I could get into a movie without paying and be sure I was not seen, I would probably do it. |
| T | F | 10. On a few occasions, I have given up doing something because I thought too little of my ability. |
| T | F | 11. I like to gossip at times. |
| T | F | 12. There have been times when I felt like rebelling against people in authority even though I knew they were right. |
| T | F | 13. No matter who I'm talking to, I'm always a good listener. |
| T | F | 14. I can remember "playing sick" to get out of something. |
| T | F | 15. There have been occasions when I took advantage of someone. |
| T | F | 16. I'm always willing to admit it when I make a mistake. |
| T | F | 17. I always try to practice what I preach. |
| T | F | 18. I don't find it particularly difficult to get along with loud-mouthed, obnoxious people. |
| T | F | 19. I sometimes try to get even, rather than forgive and forget. |
| T | F | 20. When I don't know something I don't at all mind admitting it. |
| T | F | 21. I am always courteous, even to people who are disagreeable. |
| T | F | 22. At times I have really insisted on having things my own way. |

- T F 23. There have been occasions when I felt like smashing things.
- T F 24. I would never think of letting someone else be punished for my wrongdoings.
- T F 25. I never resent being asked to return a favor.
- T F 26. I have never been irked when people expressed ideas very different from my own.
- T F 27. I never make a long trip without checking the safety of my car.
- T F 28. There have been times when I was quite jealous of the good fortune of others.
- T F 29. I have almost never felt the urge to tell someone off.
- T F 30. I am sometimes irritated by people who ask favors of me.
- T F 31. I have never felt that I was punished without cause.
- T F 32. I sometimes think when people have a misfortune they only got what they deserved.
- T F 33. I have never deliberately said something that hurt someone's feelings.

MDBS

For each of the following statements indicate whether you think it can always be justified, never be justified, or something in between by circling the corresponding number.

1. Claiming state benefits that you are not entitled to
 1 2 3 4 5 6 7 8 9 10
 NEVER ALWAYS

2. Avoiding a fare on public transport
 1 2 3 4 5 6 7 8 9 10
 NEVER ALWAYS

3. Cheating on tax if you have the chance
 1 2 3 4 5 6 7 8 9 10
 NEVER ALWAYS

4. Buying something you knew was stolen
 1 2 3 4 5 6 7 8 9 10
 NEVER ALWAYS

5. Taking and driving away a car belonging to someone else (Joyriding)

1 2 3 4 5 6 7

4. Sexual Intimacy (having a satisfying sexual relationship)

1 2 3 4 5 6 7

IBS

Please use the scale below to express how much you agree with each of the following statements. Write your response next to the statement number.

1. Strongly disagree
2. Disagree somewhat
3. Neither agree nor disagree
4. Agree somewhat
5. Strongly agree

- ___ 1. To be a worthwhile person, I must be thoroughly competent in everything I do.
- ___ 2. My negative emotions are the result of external pressures.
- ___ 3. To be happy, I must maintain the approval of all the persons I consider significant.
- ___ 4. Most people who have been unfair to me are generally bad individuals.
- ___ 5. Some of my ways of acting are so ingrained that I could never change them.
- ___ 6. When it looks as if something might go wrong, it is reasonable to be quite concerned.
- ___ 7. Life should be easier than it is.
- ___ 8. It is awful when something I want to happen does not occur.
- ___ 9. It makes more sense to wait than to try to improve a bad life situation.
- ___ 10. I hate it when I cannot eliminate an uncertainty.
- ___ 11. Many events from my past so strongly influence me that it is impossible to change.
- ___ 12. Individuals who take unfair advantage of me should be punished.
- ___ 13. If there is a risk that something bad will happen, it makes sense to be upset.
- ___ 14. It is terrible when things do not go the way I would like.
- ___ 15. I must keep achieving in order to be satisfied with myself.
- ___ 16. Things should turn out better than they usually do.

- ___ 17. I cannot help how I feel when everything is going wrong.
- ___ 18. To be happy I must be loved by the persons who are important to me.
- ___ 19. It is better to ignore personal problems than try to solve them.
- ___ 20. I dislike having any uncertainty about my future.

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