

Florida State University Libraries

2017

The Career State Inventory (CSI) as a Measure of Readiness for Career Decision Making: A Manual for Assessment, Administration, and Intervention 7.0* (Technical Report No. 57)

Stephen J. Leierer, Gary W. Peterson, Robert C. Reardon and Debra S. Osborn

The CSI Manual is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the CSI content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.



**The Career State Inventory (CSI) as a Measure of Readiness for Career Decision Making:
A Manual for Assessment, Administration, and Intervention 7.0*
(Technical Report No. 57)**

Stephen J. Leierer, PhD, East Carolina University

Gary W. Peterson, PhD, Robert C. Reardon, PhD, Debra S. Osborn, PhD, Florida State University

04/18/2017

Abstract

The Career State Inventory (CSI) was developed initially by the authors as the Career Decision State Survey (CDSS) to facilitate research and practice in vocational psychology and career development. This measure may also be used to assess readiness for career problem solving and decision making. The CSI was developed by the authors through the Center for the Study of Technology in Counseling and Career Development at Florida State University and it will be updated periodically. Others may freely use the instrument for research and practice with proper citation of the instrument and credit as noted below. Sale of the CSI for profit is not authorized by the authors or FSU. A link to the CSI and this Manual is provided at <http://career.fsu.edu/Tech-Center>. Manual topics include (a) an examination of the Career Decision State construct as a state of consciousness through the perspective of cognitive information processing theory (CIP); (b) prior research examining the concurrent validity of the CSI in relation to similar constructs; (c) procedures for administering and scoring the instrument; and (d) ways in which CSI results could be interpreted and implemented in the process of career service delivery or training of career services providers.

*The CSI Manual is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the CSI content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.



**The Career State Inventory (CSI) as a Measure of Readiness for Career Decision Making:
A Manual for Assessment, Administration, and Intervention 7.0**

Conceptual Background

At the conceptual level, the career decision state (CDS) is a subjective state of being, or state of momentary consciousness, regarding one's career goals or aspirations. It is composed of both cognitive and affective components. The CDS may also be thought of as a single continuum from being highly goal-directed, satisfied, and confident on the one hand to being immobile or frozen, dissatisfied, and confused on the other. Thus, this existential state carries implicit questions such as "Who am I?" (identity), "To what goal am I headed?" (direction), "What are my feelings regarding my goal?" (satisfaction), and "Do I believe in my capabilities to make an appropriate choice and to attain a career goal?" (self-confidence, self-efficacy). Further, when individuals seek career services or are about to embark on a program of study, an overarching issue is whether this person is ready to make an important career decision, or ready to pursue a training program?

Readiness is a component of cognitive information processing theory (CIP; Sampson, Reardon, Peterson, & Lenz, 2004) that alludes to the extent of one's preparation for deliberate and effortful career problem solving and decision making (Bullock, Saunders, & Peterson, 2015). Readiness consists of two independent dimensions, capability and complexity (Sampson, Peterson, Reardon, & Lenz, 2000). The Career State Inventory (CSI; Leierer, Peterson, Reardon, & Osborn, 2017) is brief questionnaire that assesses one's capability to undertake career decision making and it measures three constructs, (a) certainty about a career goal, (b) satisfaction with a goal, and (c) vocational clarity and confidence in pursuing one's career and life goals.

As a measure of capability, CSI results may identify individuals who are uncertain, or are dissatisfied, and/or confused regarding a career goal. Such persons may well lack the capability to engage effectively in career exploration without assistance from a qualified career practitioner. The complexity aspect of readiness alludes to elements of individuals' personal, social, and economic contexts in which career decisions are made. An assumption is that individuals should not only possess the capability necessary to engage in the challenging process of career problem solving and decision making, but also be able to manage the complexity of one's life circumstances that bear on the decision. Administering the CSI can be an initial step in career services to test the assumption related to the capability for engaging in the challenging task of career decision making.

The Purpose of the CSI

The CSI's ultimate purpose is to assess an individual's readiness for career problem solving and decision making. It consists of five questions measuring three career decision state dimensions: (a) certainty, (b) satisfaction, and (c) clarity. The CSI can be administered in the form of a brief independent survey (see Figure 2), or its questions can be unobtrusively embedded in an in-take form for career counseling or included in a background data form for a career program. CSI results can be used to determine (a) whether a client is ready to engage directly in career problem solving or a program of study, or (b) whether further readiness assessment is needed to ascertain the possible influences of dysfunctional career thoughts, the presence of mental health issues related to the effects of depression or anxiety, or the effects of overwhelming life circumstances.

This Manual can assist practitioners in administering the CSI and using the results to further the career counseling or advising process. Manual topics include (a) an examination of the Career Decision State construct as a state of consciousness through the perspective of cognitive information processing theory (CIP); (b) prior research examining the concurrent validity of the CSI in relation to other related constructs; (c) procedures for administering and scoring the instrument; and (d) ways in which the CSI results could be interpreted and implemented in the process of career service delivery or in the educational advising process.

The Career Decision State and Cognitive Information Processing Theory (CIP)

The career decision state is a person's state of being or consciousness during career problem solving and decision making. We view the examination of an individual's career decision state as a vital component of the Communication phase of the CASVE Cycle (i.e., Communication, Analysis, Synthesis, Valuing and Execution) within the Decision-Making Skills Domain of the Pyramid of Information Processing (Sampson et al., 2004). In the Communication phase, at the outset of career services, individuals become "in-touch" with their thoughts, feelings, perspectives, persons, and circumstances associated with the presenting career problem. The Career State Inventory (CSI) is a tool enabling individuals to become aware of important elements within their career decision state. While the career decision state and mindfulness are distinctly different mental phenomena, the literature on mindfulness can be helpful in illuminating the neurocognitive basis of the career decision state and CSI along two important dimensions, state/trait characteristics and cognition.

State and Trait Characteristics

According to Davidson and Kazniak (2015), a key target of meditative practice is awareness of mind and body functions (i.e., state-like) with the ultimate goal of developing skills (e.g., yoga, body scan, walking meditation) to manage daily stress, thus transforming everyday life (i.e., trait-like). Analogous to mindfulness, one purpose for administering the CSI is to help individuals achieve an awareness of their current, existing career decision state (i.e., state-like) along three dimensions of career consciousness, namely certainty toward a goal, satisfaction with the goal, and clarity and confidence in attaining the goal. Attaining a more positive, desired level along each dimension facilitates progressing through the CASVE Cycle. In the process of completing the Cycle and reflecting on the experience, an individual may acquire more permanent career problem-solving and decision-making skills that can help maintain desired levels of career decision state dimensions (i.e., trait-like) along a career path.

Cognition

In terms of phenomenological characteristics of mindfulness (Lutz, Jha, Dunne, & Saron, 2015), one functional dimension is object orientation which entails becoming oriented toward some object or class of objects through perception, memory, or imagination. A second dimension entails dereification in which perceived objects become viewed as mental processes alone rather than depictions of objective reality. The third is meta-awareness where individuals become aware of themselves as mindfulness seekers.

Career Decision State related to Mindfulness

Administering the CSI enables individuals to focus their attention on the three specific dimensions of the career decision state. However, unlike mindfulness, individuals become “in touch” with the nature of their degree of certainty toward a goal, their confidence about it, as well as the clarity of their thoughts and feelings about it. As a result, individuals may attain a sense of reification of these elements of the career decision state rather than vague, amorphous sensations. Finally, like mindfulness, individuals are able to attain meta-awareness of their career decision state as they are able to step outside of themselves and proclaim, “Yes, this is me, and what do I do to attain a more desirable state?” According to cognitive dissonance theory (Festinger, 1964), this “gap” between the existing levels of the career decision state and more desired levels of the career decision state provides the motivation to engage in effortful information processing and career problem solving. In our previous literature (Peterson, Sampson, & Reardon, 1991, Sampson et al., 2004), we have referred to the concept of meta-

awareness as one of the meta-cognitions within the Executive Processing Domain which lies at the apex of the Pyramid of Cognitive Information Processing.

Prior Research

Thus far, nine studies have examined the concept of the career decision state. In one of the earliest studies, Bullock-Yowell, Peterson, Reardon, Leierer, and Reed (2011) examined the relationships among career and life stress, thoughts, and CDS from a cognitive information-processing perspective. According to cognitive information processing theory (Sampson et al., 2004), career thoughts mediate the relationship between career and life stress and the ensuing career decision state. Using a sample of 232 college students and structural equation modeling, this study found that an increase in life and career stress was associated with an increase in negative career thinking and that an increase in such thoughts was associated with a lower level of decidedness and satisfaction with choice, two aspects of the career decision state. However, when the variation associated with negative career thoughts was partitioned in the mediated causal model, life and career stress became associated with less indecision and dissatisfaction with career choice in the CDS. The results suggested that counselors should pay particular attention to negative career thoughts when individuals experience or express symptoms of depression as a precursor to career indecision or dissatisfaction.

Later, Chason, Bullock-Yowell, Sampson, Lenz, and Reardon (2013) investigated the relationships among negative career thoughts, profile elevation and differentiation scores on the Self-Directed Search, and CDS, including level of decidedness and satisfaction with choice. Participants were 226 undergraduate students enrolled in a career course. Measures included the Career Thoughts Inventory (CTI) for career thoughts, the Self-Directed Search (SDS) for profile elevation and differentiation, the Occupational Alternatives Question (OAQ) for career decidedness, and the Satisfaction with Choice item for level of satisfaction with career choice. A series of multiple regression analyses were conducted to determine the amount of variance accounted for by negative career thoughts (i.e., decision-making confusion, commitment anxiety, and external conflict) in profile elevation, differentiation, career decidedness, and satisfaction with choice (two facets of the career decision state). Negative career thoughts were found to account for a significant amount of variance in profile elevation and elements of the career decision state, career decidedness and satisfaction with choice. Findings suggest the need to fully explore negative thinking that interferes with clients making effective career decisions.

A third study by Bertoch, Reardon, Lenz, and Peterson (2014) examined goal instability in relation to career thoughts, CDS, and performance in a career course. Participants completed six instruments measuring the nature of goals, career thinking, occupational decision making, satisfaction with career choice, tension associated with career decisions, and a performance contract of course activities to be completed for a grade. When individuals are compelled to make career decisions in stressful times, several salient factors emerge that may bear on their motivation to engage in career exploration, namely (a) the degree of indecision or uncertainty with respect to a career choice, and (b) the extent of dissatisfaction with the choice. These two items were collectively referred to as the career decision state (CDS; Bullock-Yowell et al., 2011). In this study, another variable was added to the concept of CDS, specifically, the amount of tension or stress to make a decision connoting the extent of urgency or time pressure on individuals to make a decision. In addition to goal instability and negative career thoughts, the respective elements of the career decision state also conceptually relate to readiness for participation in career interventions such as career counseling or courses.

Using bivariate correlations and multiple regression analyses, Bertoch et al. (2014) found that the degree of goal instability was directly related to negative career thoughts, dissatisfaction with career choice, career tension, and inversely related to classroom performance. Results of the analyses suggested that goal instability may serve as an initial global screening measure of readiness for career exploration in a classroom environment. All three elements of the CDS were associated with negative career thoughts (Bullock-Yowell et al., 2011).

Bullock-Yowell, Reed, Mohn, Galles, Peterson, and Reardon (2015) used Structural Equation Modeling to investigate the relationships among neuroticism, coping strategies, and negative career thoughts within the context of attaining a positive CDS, which consisted of being able to identify one or more career options and being satisfied with a choice. Results from the initial model, utilizing a sample of 232 college students enrolled in a career development course, revealed that coping strategies were not a significant contribution to the model. The final model, without coping strategies, showed that neuroticism had a significant indirect effect on the CDS through negative thinking, and that the relationship between neuroticism and career decision state was also significant. Practical implications were presented to aid counselors in assisting clients with personality proclivities related to neuroticism reach a desired career decision state by intervening on negative career thoughts.

Freeman, Lenz and Reardon (2017, in press) used certainty about a career goal and satisfaction with that goal in a study of the career decision state with 108 students in a career course. They

examined the impact of a career course intervention on two factors, the students' CDS and their affective state. These two factors emerged from an Exploratory Factor Analysis using the Eigenvalue 1.0 Rule. The CDS was composed of the Occupational Alternatives Questionnaire and Satisfaction Question, and the affective state was composed of the Goal Instability Scale and Career Thoughts Inventory. Findings revealed that the career course positively affected both factors. At the end of the course, students were more certain and satisfied with their career state, and had more positive motivation for goal setting and less negative career thinking.

Edralin (2016) examined the career decision state, including career certainty, satisfaction, and clarity, with reference to career thoughts and profile elevation on the SDS. Data were obtained from 111 undergraduate students enrolled in a career course who completed the Career Thoughts Inventory (CTI), the Self-Directed Search (SDS), and the Career Decision State Survey (CDSS). Multiple regression analyses were conducted to determine the relationships of career decision state (i.e., career certainty, satisfaction with choice, and vocational clarity) with negative career thoughts (i.e., decision making confusion and commitment anxiety) and profile elevation. Findings revealed that career certainty and clarity were significantly related to the CTI's Decision Making Confusion, and clarity was also related to Commitment Anxiety. SDS profile elevation and CTI External Conflict were not related to the CDSS.

Miller (2016) examined the impact of participation in a career course on students' CDS in relation to class standing during course completion. The repeated measures MANOVA results indicated a significant multivariate effect for the career course, Wilks' Lambda = .68, $F(3, 158) = 25.06$, $p < .001$, partial $\eta^2 = .32$. Through inspection of the univariate tests for the course, it was found that after taking the course students reported significantly lower OAQ (indicating higher decidedness) scores, $F(3, 160) = 49.02$, $p < .001$, partial $\eta^2 = .24$; lower satisfaction scores (indicating higher satisfaction), $F(3, 160) = 70.43$, $p < .001$, partial $\eta^2 = .31$; and lower clarity scores (indicating higher clarity), $F(3, 160) = 113.60$, $p < .001$, partial $\eta^2 = .42$. This means that after taking the career course, students were significantly more decided in an occupational choice, more satisfied in that choice, and clearer about the career decision-making process. In other words, their CDS scores had positively changed in terms of decidedness, satisfaction, and clarity. The effect sizes, .32, .24, .31, .42, were particularly noteworthy indicating the appreciable impact of the career course on the CDS.

While no significant multivariate interaction effect of the career development course by class year (freshman, etc.) was noted, Wilks' Lambda = .94, $F(9, 384) = 1.11$, $p = .358$, partial $\eta^2 = .02$,

additional analyses compared students by lower division class standing (freshman, sophomore) and upper division (junior, senior). Results indicated there was a significant difference between underclassmen and upperclassmen in relation to all CDS factors. Underclassmen and upperclassmen were differentially influenced by the career course in regards to career decision state with underclassmen more significantly influenced by the career course in relation to certainty, satisfaction, and clarity.

McCain (2016) examined the extent to which the CDS predicts levels of congruence between expressed interests and standardized measured interests via a self-report rating scale. Participants consisted of 140 students from a large southeastern university enrolled in an undergraduate career-planning course. As a part of the study, the participants completed the Career Decision State Survey, the Self-Directed Search, and the Self-Assessment of Interest Survey. The study yielded no significant ($p < 0.05$) relationship between expressed and measured interests as a function of one's CDS.

In another study of the career decision state (Leierer, Wilde, Peterson, & Reardon, 2016), undergraduate and graduate students enrolled in rehabilitation counselor education programs with varying degrees of commitment to a career goal in the field were examined. The Career Decision State Survey (CDSS) comprised of certainty, satisfaction, and clarity provided a snapshot of the student's career goals and is described in more detail in the sections below. The researchers found the CDSS was bi-dimensional, differentiated between undergraduate and graduate rehabilitation counseling students, and was associated with negative career thinking. Implications for using CDSS in the form of a brief questionnaire in student orientation or on-going advising and in future research were discussed.

The career decision state concept has consistently included the Occupational Alternatives Question (OAQ) and Satisfaction Item (Satisfaction with Choice Question) as measures of career certainty and satisfaction. However, in prior studies other constructs were added to the conceptualization and measurement of the CDS, including career tension, career and life stress, SDS profile elevation and differentiation, and coping strategies. As presently operationalized, the career decision state concept now also includes a measure of vocational clarity, an indicator of one's vocational self-confidence in pursuing a career goal as measured by three items from the MVS Vocational Identity Scale (See Figure 1).

In conclusion, findings from the above studies suggests that the three respective dimensions of the original CDSS, now renamed the Career State Inventory (CSI), are related to negative career thoughts as measured by the CTI and career and life stress, thus providing evidence of convergent and concurrent validity. Therefore, we suggest the use of the CSI as a potential readiness screening tool at

the outset of career advising and counseling in order to examine career certainty, satisfaction, and clarity, as well as explore possible mental health issues associated with career choice.

CSI Description, Administration, and Scoring

The CSI may be used at no charge by other researchers and practitioners to study career behavior and improve career services. Appropriate credit for use must be shown by anyone using the CSI. The CSI is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the CSI content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way. It is not to be sold for a fee and researchers and practitioners are encouraged to inform the authors of experiences using the CSI. Ongoing research with the CSI is anticipated by the authors and updates to this Manual will be posted on the Tech Center Website periodically (<http://career.fsu.edu/Tech-Center>).

The CSI (see Figure 1 Professional Version; Figure 2 Research Version) can be described as a measure of career decision-making readiness (Leierer et al., 2016) and is composed of three dimensions alluding to career certainty, satisfaction, and clarity. It can be presented on a single page and it can be included in an intake form in career counseling or as part of a background data form in orientation to a program of study. A scoring key can be attached on the back of the instrument or on a separate page for easy scoring (see Figure 1). The CSI typically takes no more than 5 minutes to complete and score. Depending on agency procedures, a receptionist, career practitioner, or administrator can introduce the CSI by saying, “*The Career State Inventory is a brief questionnaire designed to help you to begin thinking about your career goals and a career choice you may be making.*”

There are four scores derived from administering the CSI, three component scores and the total score. The three components of this state, described more fully in the following sections, include (a) the degree of certainty with respect to a career choice as measured by the Occupational Alternatives Question (OAQ), (b) the extent of satisfaction with the choice as measured by the Satisfaction Item, and (c) vocational clarity, an indicator of one’s vocational self-confidence in pursuing a career goal as measured by three items from the MVS Vocational Identity Scale. Scores from the three dimensions are summed to provide a total CDS score ranging from 2 – 12 (see Figure 1). The 11-point continuum of the CDS profile ranges from being highly certain, satisfied, clear, and confident in one’s choice at one pole (i.e., 2-3), to being completely frozen, dissatisfied, confused, and lacking confidence in making a choice (i.e., 11-12). Mid-range scores (i.e., 6 - 8) may be described as having one or more options but

still uncertain about them, having doubts about one's capability to make an appropriate career decision, and tentative in approaching one's career choice. A scoring key is provided with the CSI (see Figure 1 Professional Version).

The Occupational Alternatives Question (OAQ)

The OAQ is a simple, novel career indecision measure. The OAQ is an unpublished, well-researched measure of client career certainty that is as old as the SDS itself. Indeed, this instrument was initially used in SDS validity studies to measure the impact of the SDS on the career decision making of high school students (Zener & Schnuelle, 1972). The OAQ was revised by Slaney (1978, 1980) and the concurrent validity and the test-retest reliability was demonstrated in early studies (see Bullock-Yowell et al. (2011)).

The OAQ has been used in the FSU Career Center by imbedding it into various registration and intake forms because it is a simple, quick measure of a client's level of career certainty or decidedness. It has also been used as a pre- and post-measure of the impact of career interventions in our career center and career planning class. Based on responses from participants in our SDS workshops, the OAQ is a measurement tool that many practitioners seem to have little experience in using and might find helpful in their work.

The OAQ consists of two parts:

Part 1. List all the occupations you are considering right now. (This first item is followed by blank lines; the format is much like the SDS Daydreams section)

Part 2. Circle (or write in the space provided) the occupation that is your first choice (if undecided, write undecided).

The OAQ produces four scores:

1. = A first occupational choice is listed with no alternatives.
2. = A first choice is listed with alternatives.
3. = No first choice is listed, just alternatives.
4. = Neither a first choice nor alternatives are listed.

These four scores range from higher to lower levels of career decidedness, with lower scores (1, 2) indicating more decidedness and higher scores (3, 4) indicating less career decidedness. The OAQ is positively correlated with the CTI, higher scores indicating more decision-making confusion, commitment anxiety, and external conflict.

Satisfaction with Choice Question (Satisfaction Item)

This instrument, first reported by (Zener & Schnuelle (1972) and modified by Holland, Gottfredson, and Nafzinger (1975), asked the single question, “How well satisfied are you with your first choice?” The Satisfaction Item as originally presented was rated on a six-point scale in which 1 = well satisfied, 2 = satisfied, but have a few doubts, 3 = not sure, 4 = dissatisfied and intend to remain, 5 = very dissatisfied and intend to change, and 6 = undecided about my future career; the lower the score, the greater the degree of satisfaction with choice. Holland and Holland (1977) examined responses to alternatives 3 and 6 in the Satisfaction Item in their study of 1,005 high school juniors and 692 college juniors and found that being dissatisfied or undecided was related to a wide range of psychological variables, including negative attitude, indecisiveness, anxiety, anomie, immaturity, and alienation.

We have restructured this scale on the CSI to make it a 5-point scale by editing item responses to remove elements of decidedness and future intentionality and focus the item more homogeneously on the construct of satisfaction. Our goal was to ensure that all item responses measured a single concept, thus making it easier for the individual to understand item response options and making it easier for consumers of the results to understand the meaning of the scale (see Figure 1). The Satisfaction Item now asks respondents, “How well satisfied are you with your responses to No. 1 above? Place a check next to the appropriate statement below.” This restructuring now makes the scale a normally-distributed, single, satisfaction-dissatisfaction item with the responses on a 5-point Likert-type continuum. Restructured response scores on the Satisfaction Item are:

- 1 = very satisfied;
- 2 = satisfied;
- 3 = not sure;
- 4 = dissatisfied;
- 5 = very dissatisfied.

Vocational Clarity

Three true-false items, drawn from the My Vocational Situation (MVS; Holland, Johnston, & Asama, 1993), measure the CSI’s vocational clarity dimension:

- (a) “If I had to make an occupational choice right now, I’m afraid I would make a bad choice” (#6);
- (b) “Making up my mind about a career has been a long and difficult problem for me” (#8); and
- (c) “I am confused about the whole problem of deciding on a career” (#9).

These items were selected a priori (by reason alone) by the CSI authors as having content validity for the career decision state with respect to vocational clarity regarding a career goal.

As with certainty and satisfaction, a false response to one of the items is scored “0” and a true response is scored “1.” The range of scores on vocational clarity is 0 to 3, with a low score indicating a high degree of clarity and confidence in career decision making, and a higher score indicating decision-making difficulty and confusion.

In summary, this section has introduced the CSI as a measure of readiness for career decision making. We believe it measures can be useful in determining readiness for moving from the Communication phase to the Analysis phase of the CASVE Cycle in which clients explore self-knowledge and option knowledge as a basis for identifying alternatives in the Synthesis phase.

Reliability and Validity of the CSI

Reliability

Reliability of the CSI alludes to internal consistency or the precision of scores associated with the overall career decision state at the time the measure is administered. Combining data across several studies reviewed earlier in this Manual ($n = 425$), this 3-item scale (uncertainty, satisfaction, and clarity) possessed a Cronbach alpha of $r = .74$, inter-item correlations of $.63$ (OAQ/SAT), $.36$ (OAQ/Clarity), and $.59$ (SAT/Clarity). Thus, this scale possesses a desirable level of commonality across the items as well as independence among them. This measure may also be considered as producing normally distributed scores in college student populations with mean = 6.21, SD = 2.45, median = 6.00, skew = $-.004$, and kurtosis = 1.33. The standard error of measure (SEM) = 0.12.

We do not report stability or test-retest coefficients since the CSI is designed as a state measure as opposed to a trait measure. To reiterate, it is a snapshot of one’s state of consciousness regarding one’s career goals in the moment along three dimensions (certainty, satisfaction, and clarity) and a total score. Further, as an aspect of stability, we also believe the CSI is very sensitive to developmental events that might alter the career decision state in either direction. For example, McClain (2016) administered the CSI twice with a three-week interval to 44 students in an undergraduate psychology class. No career intervention was associated with the class. At the time of the second administration, she also asked students to indicate whether or not they had visited the career center or seen their academic advisor in the past three weeks and 16 of the 44 (36%) had done so. Figure 3 shows that students going to career services appear to have been stimulated by the CSI, to have become more

conscious and aware of their career decision state. Perhaps the CSI items reified their career decision situation, triggered a schema or mental framework for career thinking, and increased the students' awareness of a state of being regarding their career aspirations. Moreover, this increased level of consciousness might have had a direct effect on the 16 students going to the career services office to discuss their career situation.

Validity

In terms of concurrent or convergent validity, according to several studies, all three dimensions of the CSI, certainty, satisfaction, and clarity were significantly associated with CTI scores. In a recent aggregation of the data from such studies reported above ($N = 373$), the CSI total score was significantly ($p < .001$) related to the CTI total score, $r = .63$, DMC, $r = .63$, CA, $r = .60$, and EC, $r = .42$. Further, Leierer et al. (2016) found vocational clarity scores were significantly related to MVS Vocational Identity scores ($r = .72$, $p < .001$). Thus, the CSI's vocational clarity subscale can be viewed as an abbreviated measure (3 items) of the MVS Vocational Identity Scale (18 items). Moreover, in terms of criterion-related validity, the dimensions of certainty and vocational clarity significantly ($p < .05$) differentiated students enrolled in undergraduate rehabilitation programs from students enrolled in graduate rehabilitation programs, as well as lower division and upper division students in a career development course.

Use and Interpretive Guide

In this section we discuss low, middle, and high scores on the CSI Profile in terms of CIP theory and career decision-making readiness for potential career interventions.

Low scores. Low total scores (2 - 4) on the 11- point overall Career State Inventory (CSI) profile along with low scores on each of the three dimensions, e.g., 1 on OAQ, 1 on Satisfaction and 0 on Vocational Clarity, indicate a high state of readiness and suggest individuals' focused on career goals, well satisfied with their choices, and self-confident in their choices. A score in this range may well indicate an individual is at the Valuing or Execution phase of the CASVE Cycle where one has recently arrived at a first choice and is seeking confirmation, or ready to implement a choice. A person scoring in this range would be a likely candidate for self-help career services, and perhaps brief-staff assisted services (Sampson et al., 2004).

Midrange scores. The question is asked, "What is a minimum score (or "cut score") in which the administration of follow-up assessments, e.g., CTI and/or DSW is recommended?" On the basis of linear regression analysis of extant data from combined studies ($n = 373$), a score of 8 on the CSI total

scale predicts a total score of 60 on the CTI. We believe this score on the CTI (1 SD above the mean or 84th percentile) represents a moderate level of negative thinking about career choice and deserves attention before moving on to the Analysis or Synthesis phases of the CASVE Cycle. However, taking the standard error of estimate (SEE = 19.4) of the prediction formula [CTI-Total = 15.24 + (CSI *5.63)] into consideration, we believe a CSI total score of 6 is worthy of further inquiry to reduce the likelihood of false negatives (i.e., those individuals with slightly lower CSI total scores, but moderate to severe negative career thoughts). Persons scoring in this range on the CSI would be likely to have a CTI score of 49 and benefit from brief staff-assisted career services.

High scores. Higher total scores on the overall CSI (10 – 12) as well as high scores on the three respective dimensions, e.g., 3 on the OAQ, 3 - 5 on the Satisfaction Scale, endorse 2 or 3 items as True on the Vocational Clarity Scale, suggest individuals who are highly uncertain or even frozen regarding a career goal, very dissatisfied with their career decision state, and experiencing considerable confusion and lack of self-confidence in making a choice. A score in this range may indicate that the individual is at the Communication phase of the CASVE Cycle and still getting “in touch” with all elements related to the career problem. Furthermore, an individual who earns high scores may be in a low state of readiness for effective career decision making or for matriculating in a professional training program. In such cases, further readiness assessment is warranted such as administering the Career Thoughts Inventory (CTI; Sampson, Peterson, Lenz, Reardon, & Saunders, 1998) as a measure of capability for career decision making, or the Decision Space Worksheet (DSW; Peterson, Leasure, Carr, & Lenz, 2009-10) to assess the complexity of an individual’s decision context. We advocate that higher scores on any of the three individual dimensions warrant serious consideration of further diagnostic assessment and the likelihood of an individual case-managed career intervention.

Possible Uses of the CSI

1. The CSI could be used as a screening instrument for clients seeking career assistance to ascertain whether further diagnostic readiness assessment would be in order. The CSI may be administered on a client intake form along with other routine background information. Higher total scores on the CSI or any of the three individual CSI dimensions may alert a practitioner to the possibility of important personal or contextual issues associated with a presenting career problem that may impede effective career decision making. Scores on the CSI are associated with all dimensions of the CTI. In addition to identifying negative career thoughts, elevated scores on the CTI are associated with anxiety, depression, low vocational identity, locus of

control, and general psychological adjustment. Therefore, the CTI is considered a useful follow-up instrument to the CSI along with the Decision Space Worksheet.

2. The CSI could also be used as a measure of readiness for matriculation to a program of study administered at orientation to ascertain the degree of certainty, satisfaction, and confidence in embarking on a career-related training program. The CSI may also be administered routinely in academic advising throughout a student's tenure in the program to ascertain whether there are changes in certainty and commitment to a career goal.
3. The CSI could also be used as an evaluation measure in career counseling or another career intervention to assess changes in the career decision state. For example, the CSI could be administered in a pretest-posttest manner in relation to a career course.
4. Finally, the CSI could be used as a recurring indication of readiness for career problem solving and decision making in a continuing fashion to measure progression toward a more positive career decision state, much like the thermometer can be used to measure body temperature for someone being treated for a fever. Repeated measures can also be used to track progress along the CASVE Cycle. Higher scores may be indicative of someone at the Communication phase of the cycle, i.e., getting in touch with capability and complexity of readiness, whereas low scores may suggest someone at the Execution phase, i.e., ready to implement a choice.

Works in Progress

Several studies involving the career decision state concept are presently underway. Dozier, Osborn, Kronholz and Reardon (research in progress) are using the online Self-Directed Search (SDS) with college students in a self-help counselor-free mode. It is hypothesized that individuals preferring to work independently and in a positive career decision state will engage in more exploratory behavior and have a more positive outcome with the SDS than those not preferring to work independently or having a negative CDS. Understanding the impact of the career decision state has implications for who benefits from taking an interest inventory in a counselor-free mode. Another study will examine results of CSI administration at the beginning and end of a college career course in order to assess changes in the students' career decision state.

Summary

This Manual described the purpose of the Career State Inventory (originally named the Career Decision State Survey (CDSS)) as an assessment of an individual's readiness for career problem solving and decision making or engaging in a program of study for career development. The CSI consists of

five questions measuring three dimensions of the career decision state: (1) certainty, (2) satisfaction, and (3) clarity. The CSI can be administered in the form of a brief independent survey or its questions can be unobtrusively embedded in an intake form for career counseling. This Manual can assist practitioners in understanding the CSI conceptual and research background, administering it, and using the results to further the career counseling or advising process.

References

- Bertoch, S. C., Reardon, R. C., Lenz, J. G., & Peterson, G. W. (2014). Goal instability in relation to career thoughts, decision state, and performance in a career course. *Journal of Career Development, 41*(2), 104-121. doi:0894845313482521
- Bullock-Yowell, E., Peterson, G. W., Reardon, R. C., Leierer, S. J., & Reed, C. A. (2011). Relationships among career and life stress, negative career thoughts, and career decision state: A cognitive information processing perspective. *The Career Development Quarterly, 59*, 302-314.
- Bullock-Yowell, E., Reed, C. A., Mohn, R., Galles, J., Peterson, G. P., & Reardon, R. C. (2015). Neuroticism, negative thinking, and coping with respect to career decision state. *The Career Development Quarterly, 63*, 333-347. doi:10.1002/cdq.12032
- Bullock-Yowell, E., Saunders, D. E., & Peterson, G. W. (2015). Thinking about vocational choice. In P. J. Hartung, M. L. Savickas, & W. B. Walsh (Eds.), *APA handbook of career intervention: Vol. 2 applications* (pp. 269–281). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/14439-020>
- Chason, A. K., Bullock-Yowell, E., Sampson, J. P., Jr., Lenz, J. G., & Reardon, R. C. (2013). Relationships among career thoughts, career interests, and career decision state. *The Canadian Journal of Career Development, 12*(1), 41-47.
- Davidson, R. J., & Kaszniak, A. W. (2015). Conceptual and methodological issues in research on mindfulness and meditation. *American Psychologist, 70*, 581-592. <http://dx.doi.org/10.1037/a0039512>
- Dozier, V. C., Osborn, D., Kronholz, J., & Reardon, R. C. (research in progress). A counselor-free career intervention using the Self-Directed Search.
- Edralin, C. (2016, February; article in preparation; thesis). Relationships between career decision state, negative career thoughts, and profile elevation.

- Festinger, L. (1964). Motivations leading to social behavior. In R. C. Teevan & R. C. Burney, (Eds), *Theories of motivation and personality and social psychology* (pp. 138–161). New York: Van Nostrand.
- Freeman, V. F., Lenz, J. G., & Reardon, R. C. (2017, article in press). Career course impact on college students' career decision and affective states. *VISTAS 2017*.
- Holland, J. L., Gottfredson, G. D., & Nafziger, D. (1975). Testing the validity of some theoretical signs of vocational decision-making ability. *Journal of Counseling Psychology*, 22, 411-422.
- Holland, J. L., & Holland, J. E. (1977). Vocational indecision: More evidence and speculation. *Journal of Counseling Psychology*, 24, 404-414.
- Leierer, S., Peterson, G. W., Reardon, R. C., & Osborn, D. S. (2017, March 9). Career State Inventory. Tallahassee, FL: Center for the Study of Technology in Counseling and Career Development, Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license.
- Leierer, S., Wilde, C., Peterson, G. W., & Reardon, R. C. (2016). The career decision state and rehabilitation counselor education programs. *Rehabilitation Counseling Bulletin*, 59, 133-142. doi:10.1177/0034355215579278 Also available at <http://rcb.sagepub.com/content/early/2015/03/27/0034355215579278.full.pdf>
- Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. *Trends in Cognitive Sciences*, 12, 163-169. doi: <http://dx.doi.org/10.1016/j.tics.2008.01.005>
- McCain, S.C. (2017). The congruence between expressed interests and measured interests as a function of career decision state (unpublished master's thesis). Florida State University, Tallahassee, FL.
- McClain, M-C. (2016, October 5). The Career Decision State Survey: Test/retest reliability on career readiness. Unpublished study.
- Miller, A. K. (2016). The impact of a career development course on career decision state in relation to class standing (Unpublished thesis). Florida State University, Tallahassee, FL.
- Peterson, G., Sampson, J., & Reardon, R. (1991). *Career development and services: A cognitive approach*. Pacific Grove, CA: Brooks/Cole.
- Peterson, G. W., Leasure, K. K., Carr, D. L., & Lenz, J. L. (2009-2010). The Decision-Space Worksheet: An assessment of context in career decision making. *Career Planning & Adult Development Journal*, 25(4), 87-100.

- Sampson, J., Peterson, G., Lenz, J., Reardon, R., & Saunders, D. (1998). The design and use of a measure of dysfunctional career thoughts among adults, college students, and high school students: The Career Thoughts Inventory. *Journal of Career Assessment*, 6, 115-134.
- Sampson, J.P. Jr., Peterson, G.W., Reardon, R.C., & Lenz, J.G. (2000). Using readiness assessment to improve career services: A cognitive information processing approach. *The Career Development Quarterly*, 49, 146-174.
- Sampson, J. P., Jr., Reardon, R. C., Peterson, G. W., & Lenz, J. L. (2004). *Career counseling and services: A cognitive information processing approach*. Pacific Grove, CA: Cengage. [book rights returned to authors November 19, 2014]
- Slaney R. B. (1978). Expressed and inventoried vocational interests: A comparison of instruments. *Journal of Counseling Psychology*, 25, 520-529.
- Slaney, R. B. (1980). Expressed vocational choice and vocational indecision. *Journal of Counseling Psychology*, 27, 122-129.
- Zener, T. B., & Schnuelle, L. (1972). *An evaluation of the Self Directed Search (Research Rep. 124)*. Baltimore: Johns Hopkins University, Center for Social Organization of Schools. (ERIC Document Reproduction Services No., ED 061 458).

Figure 1 CSI Professional Version

Career State Inventory (CSI)*

Professional Version 7.0

Florida State University

Stephen J. Leierer, PhD; Gary W. Peterson, PhD; Robert C. Reardon, PhD; Debra S. Osborn, PhD

Name _____ Date _____

- List all occupations you are considering right now.

_____	_____
_____	_____
_____	_____

Which occupation is your first choice? If undecided, write "undecided."

CERT (1 – 4)

- How well satisfied are you with your responses to No. 1 above? Place a check next to the appropriate statement below:

Very satisfied

Satisfied

Not sure

Dissatisfied

Very dissatisfied

SATI (1 – 5)

- Please circle True (T) or False (F) to the statements below

- T F If I had to make an occupational choice right now, I'm afraid I would make a bad choice.
- T F Making up my mind about a career has been a long and difficult problem for me.
- T F I am confused about the whole problem of deciding on a career.

CLAR (0 – 3)

TOTAL (2 – 12)

Overall Career Decision State Profile

Total Scoring Range 2 – 12

2	3	4	5	6	7	8	9	10	11	12
---	---	---	---	---	---	---	---	----	----	----

Goal-directed
Satisfied
Confident

Uncertain
Doubts
Tentative

Frozen
Dissatisfied
Confused

Scoring Key

Certainty (1 – 4)

- 1 = First choice only
- 2 = First choice plus alternatives
- 3 = Alternatives only
- 4 = No options or blank

Satisfaction (1 – 5)

1 = Very satisfied, 2 = Satisfied, 3 = Not sure, 4 = Dissatisfied, 5 = Very dissatisfied

Clarity (0 – 3)

One point for each TRUE response. All FALSE = 0, All TRUE = 3.

Total Career Decision State (2 – 12)

CSI Total = Subtotal Certainty + Subtotal Satisfaction + Subtotal Clarity

*The CSI is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the CSI content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.



Figure 2 CSI Research Version

Career State Inventory (CSI)*

Research Version 7.0
Florida State University

Stephen J. Leierer, PhD; Gary W. Peterson, PhD; Robert C. Reardon, PhD; Debra S. Osborn, PhD

Name _____ Date _____

4. List all occupations you are considering right now.

_____	_____
_____	_____
_____	_____

Which occupation is your first choice? If undecided, write "undecided."

CER (1 – 4)

5. How well satisfied are you with your responses to No. 1 above? Place a check next to the appropriate statement below:

- ___ Very satisfied
- ___ Satisfied
- ___ Not sure
- ___ Dissatisfied
- ___ Very dissatisfied

SAT (1 – 5)

6. Please circle True (T) or False (F) to the statements below

- d. T F If I had to make an occupational choice right now, I'm afraid I would make a bad choice.
- e. T F Making up my mind about a career has been a long and difficult problem for me.
- f. T F I am confused about the whole problem of deciding on a career.

CLA (0 – 3)

TOT (2 – 12)

*The CSI is published by the Florida State University Libraries under a Creative Commons Attribution-No Derivatives 4.0 license, allowing any reader to copy and distribute the CSI content without permission of the authors or the Florida State University Libraries, provided that the authors of the content are given proper attribution and that the content is not modified in any way.



