

VOCATIONAL EVALUATIONS AND SELF-EFFICACY

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## DEDICATION

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VOCATIONAL EVALUATIONS AND SELF-EFFICACY

by

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Vocational evaluations are not used in every Individualized Plan for Employment, despite evidence that vocational evaluations are helpful in developing employment plans for consumers of vocational rehabilitation services. Vocational evaluation reports contribute to the knowledge base about consumers' abilities, interests, and aptitudes and assist consumers and counselors in deciding the best job match for the consumer. In addition, it is hypothesized in the current study that consumers' career self-efficacy is increased through

participation in the vocational evaluation process, because situational assessments have been shown to increase career self-efficacy (Scroggin, Kosciulek, Sweiven, and Enright, 1999) and vocational evaluations are simulated situational assessments. Career self-efficacy is defined as an individual's perception of her ability to act effectively and competently (Strauser, 1995). This study will explore the influence formal vocational evaluations have on the career self-efficacy of people with disabilities. Specifically, does participation in a formal vocational evaluation increase career self-efficacy? The participants are consumers of a state vocational rehabilitation program in a Texas. A repeated measures ANOVA will be used to compare pre-test and post-test self-efficacy scores for clients participating in vocational evaluations. Results are expected to show that a direct benefit of vocational evaluations may be the increased career self-efficacy of individuals with disabilities.

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## LIST OF ABBREVIATIONS

ADA	Americans with Disabilities Act
ANOVA	Analysis of Variance
CDMSE	Career Decision Making Self-Efficacy Scale
CDS	Career Decision Scale
CDSE	Career Decision Self-Efficacy Scale
CSES-PWD	Career Self-Efficacy Scale for People with Disabilities
IEP	Individual Education Plan
IPE	Individual Plan for Employment
MSPSS	Multi-dimensional Scale of Perceived Social Support
QRC	Quality Rehabilitation Counseling
RSA	Rehabilitation Services Administration
SES	Self-Efficacy Scale
TAI	Trimodal Anxiety Inventory
VEIQ	Vocational Evaluation Information Questionnaire
VR	Vocational Rehabilitation

## **CHAPTER ONE**

### **Introduction**

The Vocational Rehabilitation (VR) Process is designed to place people with disabilities in competitive employment. Effective career decision-making is an important part of the VR process for several reasons. Hackett and Betz (1981) state "there are few other decisions that exert as profound an influence on people's lives as the choice of a field of work or career." The impact of effective career decision-making reaches past the individual lives of workers. Bandura (1977) asserts that "the new realities of the information era require advanced cognitive and self-management competencies to fulfill complex occupational roles and to manage the maze of demands of contemporary life." America must have productive workers who can make successful transitions to the changing workplace. This concept is most important to those workers that are changing occupations because of an onset of disability, an increase in the severity of an existing disability, or complications in the workplace due to disability.

Career decision-making self-efficacy is a relevant construct to consider when addressing the career development needs of people with disabilities. Career decision-making self-efficacy was defined by Taylor and Betz (1983) as "expectations of self-efficacy with respect to the specific tasks and behaviors required in making career decisions." Betz and Hackett (1983) note the usefulness of career self-efficacy and recommended that future research using samples other than college students investigate the effectiveness of theory-based interventions. Very few studies have reported investigation of career decision-making self-efficacy in people with disabilities (Enright, 1997; Scroggin, Kosciulek, Sweiven, &

Enright, 1999). Lent, Brown, and Hackett (1994) state “a slightly different, but related issue involves viewing self-efficacy as, itself, the target of treatment. To the extent that weak self-efficacy expectations may restrict career development, systematic efforts to promote self-efficacy may be necessary.”

There is interest in career decision-making self-efficacy; however, the need exists for additional research to expand knowledge of interventions that enhance career efficacy beliefs in people with disabilities. Career indecision is an additional construct relevant to the career development of people with disabilities re-entering the workplace. Career indecision has been described as a multidimensional construct "which includes, but is not limited to, being unsure of a future career"(Taylor & Betz, 1983). Career decision-making self-efficacy has been found to be negatively related to indecisiveness about employment options (Taylor & Betz, 1983).

Providing career guidance activities as part of the VR process is a way to help consumers learn career decision-making skills and to address career decision-making self-efficacy and career indecision. Crites (1978) identified career choice competencies that address the skills needed for career decision making. These competencies include accurate self-appraisal, gathering occupational information, goal selection, making plans, and problem solving.

Vocational evaluations are interventions used in the VR process to gain information on a consumer's vocational potential. The present study will investigate career self-efficacy based scores from measures of social support, self-efficacy, and anxiety, which all contribute

to the overall construct of career self-efficacy. People with disabilities that were referred for and participated in a formal vocational evaluation will serve as the participants for this study.

Originally, vocational evaluations were designed to provide information on consumers' abilities, interests, and aptitudes. However, it is of interest whether the evaluations additionally provide people with disabilities the opportunity to practice competencies, and thus enable them to apply their knowledge of competencies to their career development and career decision-making.

## **CHAPTER TWO**

### **Review of the Literature**

#### **THE VOCATIONAL REHABILITATION PROCESS**

Vocational Rehabilitation (VR) is a state/federal-funded program providing services to help individuals with disabilities enter work or return to employment. The rehabilitation process is designed to help individuals of working age with physical and/or mental disabilities compete successfully with others in the workplace. VR counseling and individualized consumer planning is the foundation of the state-federal VR program. This process involves a partnership between the consumer and the counselor, which is expressed in the 1990 Americans with Disabilities Act (ADA: P.L. 101-336). In the recent past, it was accepted practice for the vocational rehabilitation counselor to find a job for the consumer and close the consumer's case. However, contemporary concepts such as self-determination (Wehman, 1996) and empowerment (Bolton, Bellini, & Brookings, 2000) dictate that counselors and consumers form an alliance and work together to prepare the consumer for long-term career development after VR services have been discontinued.

Section 103 (a) in the Rehabilitation Act of 1973 lists the services that may be provided to a consumer who is seeking employment. State VR agencies report consumer progress through this process by using a series of different codes. These are (1) Referral, (2) Application, (3) Eligibility Determination, (4) Evaluation and Assessment leading to an Individualized Plan for Employment (IPE), (5) Service Planning, (6) Service Delivery, and (7) Placement (Rubin & Roessler, 2001). The steps in the process are completed in the order

listed, but consumers do not necessarily move through each step. These codes will be referred to throughout the current study and are presented in Table 1.

**Table 1**  
Two Digit Codes used by State-Federal VR Agencies

<b>Code</b>	<b>Name</b>
00	Referral
02	Applicant
06	Extended Evaluation
08	Closed after Application or Extended Evaluation
10	Plan Development
12	Plan Completed
14	Counseling and Guidance
16	Physical and Mental Restoration
18	Training
20	Ready for Employment
22	In Employment
24	Services Interrupted
26	Closed Rehabilitated
28	Closed Unsuccessfully after services began
30	Closed Unsuccessfully before services began
32	Post Employment Services
34	Closed form Post Employment Services with employment maintained
36	Post Employment Services Discontinued (case reopened)
38	Post Employment Services Discontinued (for other reasons)

Together, the consumer and counselor identify the consumer's vocational interests and aptitudes, determine an appropriate employment goal, and develop and implement an action plan to achieve that employment goal. Vocational evaluations were designed to assist in the development of the Individualized Plan for Employment (IPE). In the IPE, which occurs during the Plan Development stage (10), the consumer and counselor identify strengths and barriers and map goals that are realistic and consistent with the consumer's skills, abilities, interests, and values. The counselor and consumer work together to translate the goals into achievable objectives that will be accomplished during the rehabilitation

process. After the plan is written, the consumer moves to the Plan Completed stage (12). Counseling and Guidance (14), Physical and Mental Restoration (16), and Training (18) are services that may be provided based on the individual needs of the consumer. Finally, strategies are developed to accommodate physical, mental, or emotional limitations that may affect the person's ability to work.

The counselor and specialized placement staff frequently work closely with potential employers to explain the consumer's skills, address any concerns the employer may have, and assist the employer in making reasonable accommodations so that the consumer can become a productive and valued employee. In order to determine appropriate vocational potential, rehabilitation professionals utilize both standardized and situational measurements to gauge the consumer's past and present functioning. These consist of different techniques that focus on assessing the relationships between the consumer's skills, mental abilities, personality characteristics, and physical tolerances to the performance demands of potential jobs. The evaluation process and the subsequent results (vocational evaluation report) help the consumer become more cognizant of his or her vocational functioning and interests, potential job options, and rehabilitation services available (Rubin and Roessler, 2001) and move into the Ready for Employment stage (20). The results also provide the vocational counselor with information about the consumer so that the consumer and the counselor can generate employment plans for the consumers. The ultimate goal of this process is placement of the consumer into a suitable position in the community. A consumer is In Employment (22) after hire and considered Closed Rehabilitated (26) after 90 days of successful employment.



## VOCATIONAL REHABILITATION SERVICES

As shown in Table 2, consumers nationwide who obtained competitive employment received an average of 9.7 VR services, compared with 9.2 for consumers whose employment outcome was noncompetitive. While the percentage of these services in various categories did not differ greatly, persons with a competitive outcome received slightly more counseling, guidance, and placement; education and training; and transportation, housing, and maintenance services.

Persons with a noncompetitive outcome received more diagnostic and evaluation, and physical or mental restoration services than did the competitively employed cohort. Providers of these services did not differ much across the two groups. Over half of all services were purchased from vendors and over one-third were provided directly by agency-employed staff. Very few services were delivered under comparable benefits arrangements (only about 2 percent).

Services received by rehabilitation consumers are designed to improve the probability of successful employment. According to the Disability Statistics Abstract Number 20 (Kaye, 1998), which reported data from 1995, upon completion of vocational rehabilitation, 85.4% of consumers were competitively employed. However, at that time, 26-Closed Rehabilitated was defined as suitably employed for *at least 60 days*. After the case is closed, no follow-up is completed to research whether the consumer remains employed after 60 days or is performing well in the job. Therefore, this number may be deceptively high.

**Table 2***Services Received by Former VR Consumers with an Employment Outcome*

<b>Services</b>	<b>Competitive employment outcome</b>	<b>Other employment outcomes</b>
<i><b>Number of services received</b></i>		
Mean	9.7	9.2
Median	8	8
Minimum	1	1
Maximum	161	102
<i><b>Provider arrangements</b></i>		
	<i><b>Percentage</b></i>	<i><b>Percentage</b></i>
Purchased	51.6	51.9
Provided by the agency	38.5	37.0
Arranged by the agency	1.6	1.7
Other	8.4	9.5
<i><b>Types of services</b></i>		
Diagnostic and evaluation	25.3	27.4
Education and training	12.9	10.7
Physical/mental restoration	11.4	16.7
Counseling, guidance, and placement	33.8	28.7
Transportation, housing, and maintenance	12.1	9.7
Other (e.g., licenses, personal assistance)	4.5	6.9
<i>Source: VR Longitudinal Study, January 1998</i>		

Cappella (2001) used data from the Rehabilitation Services Administration's RSA-911 database to study the predicted earnings of VR consumers with visual impairments. Results indicated that the amount of money a VR counselor spends on a consumer is positively correlated with consumer earnings after closure. Table 3 shows the total closures and the amount of money spent per consumer in Texas. The Rehabilitation Services Administration (RSA) collects data on rehabilitation outcomes and services provided at the individual level for anyone who has applied for or received vocational rehabilitation services.

These data are reported at the time that the case is closed by a rehabilitation counselor and are compiled annually at the federal level by RSA in the RSA-911 output reporting system.

**Table 3**

*Region 6, Texas*

<b>Year</b>	<b>Status 26</b>	<b>Status 28</b>	<b>Status 30</b>	<b>Average money spent per case</b>
1985	17057	769	528	1112.65
1988	17086	8867	517	1243.26
1991	18777	9958	671	1504.36
1993	21200	11175	817	1703.29
1995	240008	14063	6188	1686.73
1997	25714	14209	8148	1425.84
1998	25149	13565	8148	
<i>Source: RSA-911</i>				

Cappella (2001) found that although persons may be closed successfully, their earnings are a better measure of quality of closure than being classified as status 26. States may have a high percentage of 26 closures, but low average wages of their rehabilitated consumers. Therefore, evaluating earnings at closure can provide important information about the quality of successful closures for persons.

The 1992 Amendments to the Rehabilitation Act mandated a change toward a more person-centered approach to vocational rehabilitation in which the consumers have more control over their rehabilitation plans. Because this approach would emphasize the importance of increased employment outcomes and customer satisfaction, Jackson (1995) called for an emphasis on quality rehabilitation counseling (QRC) services. However, at the time, QRC was not well defined and was hard to implement so Mullins (1997) set out to define Quality Rehabilitation Counseling (QRC). Mullins (1997) conducted a qualitative study with eleven rehabilitation field counselors that were considered “skillful practitioners.”

The researchers interviewed five counselors who were nominated by their peers and five counselors who had a high amount of outcomes that resulted in competitive employment. One counselor was nominated and had a high closure rate.

Because these counselors were considered “exemplary” based upon the two criteria described, Mullins (1997) hypothesized that by interviewing them, he could discover the definition of quality rehabilitation counseling. A doctoral student with ten years of counseling experience interviewed the counselors with the intent of eliciting descriptions of quality rehabilitation counseling. The data analysis consisted of a review of transcripts of the interviews by a team of five experienced researchers who were trained to be expert raters. Results indicated that QRC can be seen as a holistic approach to job placement based on a working relationship with the consumer that stresses the importance of consumer participation. The exemplary counselors did not focus on the termination phase of the VR process, but rather concentrated on the preparation to serve their consumers. One counselor’s explanation was that the termination phase was already built into the process – the achievement of the vocational goal. Researchers found that counselors did not really address termination, which, they conclude, may expose a need for on-the-job follow-up and post employment counseling. When a case is closed, the counselor’s job may be completed, but the consumer’s job is just beginning. Because cases are closed after 90 days, it is not known how many job placements are truly successful, which is the ultimate goal of the consumer.

Rubin and Porter (1979) reported on the competencies needed in vocational rehabilitation professionals, specifically counselors and evaluators. They summarized the

relevant findings from the Rehabilitation Services Administration (RSA) supported National Seminar on Competency Based Rehabilitation Education in 1978. This represented one of the first attempts to identify the role of a vocational evaluator. During the conference, over 800 statements on competency were collected from the professionals in attendance. After the statements were combined to reduce redundancy, 298 survived. These 298 statements were judged by conference participants. They judged 241 to be essential for vocational evaluators; 32 to be important, 19 to be desirable, and six to be optional. The competencies seen as needed by both rehabilitation counselors and evaluators, but more by evaluators were: to be able to select and utilize appropriate standardized measurement instruments, to be able to assess client behavior via observation, and to know the process for eliminating specific skill deficiencies and ameliorating client adjustment problems. Competencies needed only by vocational evaluators (and not by counselors) were the abilities of developing and/or utilizing work samples, developing local norms for assessment tools, and instructing clients in the safe use of equipment and tools (Rubin & Porter, 1979). Vocational evaluation centers provide extensive instruction and training to all of the employees that work in the laboratories to ensure a minimum competency level commensurate with the previously described standards.

## **MODELS OF VOCATIONAL REHABILITATION**

### **Consumer Choice Model**

Several studies have examined the relationship between consumer and counselor priorities in VR and results of these studies have shown that a discrepancy exists. Wolf-Branigan, Daeschelin, Cardinal, and Twiss (2000) developed a Consumer Choice model based upon the needs of consumers. The model focused on informed choice and control of funding. Specific components included employment advisors, person-centered planning, vocational profile, vocational profile meeting, job development/carving, job site facilitation, and customer satisfaction. Thirty-six consumers and 22 counselors were included in the study. Face-to-face interviews or phone interviews using a questionnaire were conducted with the consumers and questionnaires were collected from the counselors. The researchers developed questionnaires with parallel items including five statements using a Likert-type Scale (1=strongly disagree to 6=strongly agree) and open-ended formats designed to elicit feelings about satisfaction with the model, customer satisfaction with services and counselor questions about the relative time required to implement each component of the model.

The aspects of the model that the counselors and the consumers rated for their (perceived) level of importance were person-centered planning, vocational profile, employment advisors, job carving, and job support. All of the components were rated satisfactory for both groups with each component of each group having a mean greater than 4.0. The only statistical difference was found between the counselors' ratings and

consumers' ratings of job carving. Job carving was defined as developing job positions using information generated from the vocational profile (similar to a vocational evaluation report). Collaboration between the counselors and employers often resulted in modified jobs that could achieve the best match between the consumers' needs and employers' needs. The counselors' ratings of the importance of this component were higher than the consumers' ratings.

A post hoc analysis of the ranking of components based on the group means showed that employment advising and person-centered planning were rated lowest by counselors and highest by consumers. Counselors cited improved involvement of the consumer in the vocational process, but also reported that the Consumer Choice model was much more time-consuming. Consumers valued most the components that consumed the greatest amount of the counselors' time. The counselors valued outcome-oriented components and the consumers valued components involving relationships. When the consumers were asked what they liked best about the model, they expressed satisfaction with the focus on job obtainment and their involvement in the selection of their choice of jobs.

### **The Income Model**

Another model developed for use in rehabilitation counseling is the INCOME model, which was developed by Beveridge, Craddock, Liesener, Stapleton, and Hershenson (2002). The acronym, INCOME stands for Imagining, iNforming, Choosing, Obtaining, Maintaining,

and Exiting, and describes “statuses” of career development for people with disabilities. Each of the statuses (similar to stages) will be described in order to explain some key components that are present in many models (including the VR system) of career development and are all avenues for intervention.

The INCOME model is based on the work of Super (1957, 1990), Danley and Anthony (1987), Lofquist and Dawis (1969) and Hershenson (1996). Imagining is defined as the period when an individual comprehends that there are occupations and that there are occupations that were previously unknown to the individual. This status is described as a time of awareness, fantasy, and reality-based imagining. INforming is the status in which the individual is acquiring personal insight in the context of work and developing work competencies. During this time, the individual may also acquire knowledge about barriers and limitations. The interaction of these factors results in the development of career self-efficacy. This is an important concept that will be discussed in more detail. The Choosing status is the combining of the information attained from the first two statuses and the subsequent selection from among known occupations. Danley and Anthony’s (1987) model suggested this status, as well as the next two statuses – Obtaining and Maintaining. After the individual has assimilated the knowledge gained in the first three statuses, it is time to implement career decision making and obtain a job (Obtaining status). Maintaining involves what would take place after the 26-Closed Rehabilitated stage in the VR system. Exiting occurs when an individual leaves the world of work or changes to a new position or job. The theoretical framework of the INCOME model can be applied to the traditional VR services model (see Table 4) and can illuminate places for interventions that improve the process for



both the consumer and counselor. As previously discussed, the priorities of consumers and counselors differ, but the common goal is competitive employment.

During the iNforming status, the consumer is acquiring information about personal qualities in order to discover what occupation fits well with unique abilities, capabilities, and interests. During this time, career self-efficacy is developed. Super (1953) described vocational choice as a series of events. His theory postulates that the process is life-long and consists of five major stages of career development: Growth, Exploration, Establishment, Maintenance, and Disengagement. While Super matched the stages with ages of life, he later talked about disabilities in vocational development, where he saw ages as irrelevant. The Exploration stage is the stage that most coincides with the iNforming status and vocational evaluation. Super's stage of Exploration includes Crystallizing, Specifying, and Implementing.

**Table 4***Comparison of VR service model and INCOME model*

VR System		INCOME Model
Code	Name	
00	Referral	Imagining
02	Applicant	
06	Extended Evaluation	
08	Closed after Application or Extended Evaluation	
10	Plan Development	
12	Plan Completed	Informing
14	Counseling and Guidance	
16	Physical and Mental Restoration	
18	Training	
20	Ready for Employment	
22	In Employment	Choosing Obtaining
24	Services Interrupted	
26	Closed Rehabilitated	Maintaining
28	Closed Unsuccessfully after services began	
30	Closed Unsuccessfully before services began	
32	Post Employment Services	

The result of successful exploration involves selecting and securing a good job - one that has the potential to become a long-term career. Successful completion of the exploration stage requires the person to examine and compare job options on qualitative criteria, such as compatibility of the job with the person's interests, aptitudes, and training; the job's ability to meet the person's needs for earnings and fringe benefits; and the position's potential for promotion and advancement. While many consumers in the VR system may do some career exploration in their counselor's office, it is often necessary to complete a vocational evaluation in order to fully explore and compare the options that are compatible with abilities, interests, and aptitudes. If consumers do not complete exploration tasks satisfactorily, they may become fixed in secondary labor market positions with little future. This translates to a 26-Closed Rehabilitated that does not last because of the poor congruence between the consumer's needs and the job's demands.

## **THE EVALUATION PROCESS**

Formal evaluations in the state-federal VR system include skills assessment evaluations, simulated situational assessments, and comprehensive vocational evaluations (Equal Employment Opportunity Commission, 1992). The Evaluation Phase is the second of three phases in the state-federal VR process and includes both assessment and the planning. The evaluation is between the referral and the service provision phases and is the stage in the rehabilitation process that requires the most participation by the consumer and the most collaboration between the consumer and the counselor. The evaluation always begins with a comprehensive assessment of the consumer's medical, psychosocial, and vocational status (Koch, 2000).

### **Skills Assessment Evaluations**

Skills assessment evaluations are designed for consumers with special needs who may not be appropriate for participation in a traditional vocational evaluation or work activity/sample evaluation due to severity of disability or a combination of challenges involving physical, cognitive, emotional, academic, or other functional barriers. Skills assessments are intended to identify the consumer's specific functional limitations including vocational strengths, assets, deficits, weaknesses and life skills in order to distinguish specific work tasks toward gainful employment outcomes. This evaluation may also result in

an identified need for a simulated situational assessment (also known as a vocational evaluation) depending upon the consumer's performance results in this area. Skills assessment evaluations may also be used as a screening device for the employer and the consumer in identifying appropriate areas for additional exploration. This evaluation may initially employ commercial work samples as appropriate (though modifications and accommodations may be frequently integrated into the assessment process) to assess the individual's full potential.

### **Simulated Situational Assessments**

A simulated situational assessment is an appraisal of a consumer's proficiency towards a specific vocational objective. Simulated situational assessments are helpful in determining the appropriateness of particular vocational goals relative to consumers' interests and abilities. Situational assessments may also be recommended in cases where vocational potential cannot be fully determined within the periods available in a short-term service option. Full situational assessments may be pursued either in an appropriate training shop or with an employer in the consumer's home region.

### **Vocational Evaluations**

Vocational evaluations provide an opportunity for consumers to participate in activities that are similar to those described by Beveridge, Craddock, Liesener, Stapleton, and

Hershenson (2002) and Super (1957). These researchers describe the status “iNforming” as a time for the individual to build on their knowledge of the careers they thought of during the Imagining status. Tasks include exploring and gathering information about what certain careers entail. During this process, individuals receive feedback from outside sources. Career self-efficacy is the combination of these processes (i.e. the consumer’s knowledge about abilities, knowledge of careers, beliefs about capabilities to fulfill career requirements, and beliefs that abilities will not be futile due to environmental or attitudinal barriers). The formal assessment of vocational skills can provide the consumer with an opportunity to explore opportunities in a supportive environment, thus increasing career self-efficacy (Beveridge, Craddock, Liesener, Stapleton, & Hershenson, 2002). During the assessment phase of the VR process (statuses 14, 16, 18) consumers can explore vocational aptitudes, abilities, and interests.

The purpose of a vocational evaluation is to provide reliable and valid data on a person’s (1) ability to work, (2) preferences for different types of jobs and work activities, (3) capacity to perform in a variety of vocational roles, and (4) need for training in specific and general skills required for success in employment (Caston & Watson, 1990). Vocational evaluations are comprehensive evaluations of academic and vocational skills, interests, and aptitudes. Techniques employed during the evaluation include interviews, observation, psychometrics, administration of work samples/activities, career exploration, vocational guidance and counseling. Utilization of hands-on, experiential work samples provides a unique opportunity for consumers to explore the world-of-work, to interact with work samples/activities, and to acquire knowledge relative to individual vocational interests and

abilities. The primary assessment components of each work area include: (1) work behavior and social skills, (2) work performance skills and abilities, (3) strengths/assets relative to successful employment outcomes, (4) barriers to employment, (5) assistive technology, and (6) accommodation needs. A list of vocational evaluation resources used in the current study can be found in Appendix A.

Vocational evaluators develop a cumulative listing of these assessment results and recommendations for integration within the final vocational evaluation report. Following the evaluation, a vocational plan is developed which combines the evaluator's knowledge of the labor market and the useful skills and potentials of the consumer. This plan may include immediate job placement, job training, or further education. The comprehensive vocational evaluation report is used for further rehabilitation planning towards successful, sustained employment outcomes. The vocational evaluation report outlines the services received and the consumer's performance during the vocational evaluation process. It identifies the consumer's vocational interests, aptitudes, acquired skills, functional limitations, and barriers to employment. The report also recommends services to enhance the consumer's ability to fully participate in a rehabilitation program, achieve individual rehabilitation goals, and maximize employment potential.

Examples of services recommended to enhance rehabilitation potential include (1) assistive technology/devices, (2) reasonable job accommodations, (3) further physical restoration, (4) academic instruction, (5) work adjustment training, (6) vocational training, (7) independent living skills instruction, (8) mental health services, and (9) supported employment options. Information and recommendations from the vocational evaluation may

be used, as appropriate, by the rehabilitation counselor and the consumer in developing the consumer's Individual Plan for Employment (IPE) or by school personnel, the student and the family in developing the student's Individual Education Plan (IEP).

The reasons for performing an assessment depend on the individual needs of each client. The evaluator has the responsibility for determining the level of assessment that will best answer the questions from the referring source (VR counselor). Often, a brief evaluation process may be sufficient to provide the necessary information. The vocational evaluations used in this study are comprehensive vocational evaluations, which last anywhere from three to five days. The assessments are planned to meet the specific needs of the consumer. Vocational evaluations provide realistic and objective analyses of consumers' vocational assets and needs. They also give an accurate estimation of a consumer's potential to return or enter and engage in specific gainful employment and can identify different occupations for consumers who need to or want to change occupations. The identification of barriers or obstacles to work (such as doorways too narrow to accommodate wheelchairs, desk height) is also a useful product of evaluations.

Power (1991) defined a vocational assessment as "a comprehensive, intradisciplinary process of evaluating an individual's physical, mental, and emotional abilities, limitations, and tolerance in order to identify an optimal outcome for the disabled or handicapped person." The final goal of a vocational assessment is to provide an interpretation and synthesis of the information from a variety of sources in an attempt to understand work-related strengths and deficits, identify occupations consistent with the individual's interests

and aptitudes, and decide upon the objectives necessary to achieve the specific vocational goals.

Roberts (1992) outlines specific information sought during this assessment, including: (1) whether or not the person can fulfill a vocational role and at what level, (2) the impact of presenting disabilities upon the person's return to work, (3) any behaviors or emotional problems that may interfere with the person's ability to maintain work, (4) motivation toward work and rehabilitation, (5) additional medical or physical limitations, (6) whether or not the expressed job interests are realistic, and (7) the capacity for the person to benefit from a skills training program. Even though the vocational evaluation report is considered the product of the vocational evaluation, the consumer's entire experience (especially the behavioral observations of the staff) should be taken into consideration, as this can provide a more detailed view of the whole person.

### *Outcome Studies*

A study by Weinstein (1978) reported that counselors gain a significant amount of information following a consumer's participation in a vocational evaluation. Lee, Taylor, and Rubin (1995) examined this theory in more depth. Two hundred VR counselors in four Midwestern states were asked to rate how important and sufficient each type of vocational evaluation information is for rehabilitation plan development. They used a tool developed for the study called the Vocational Evaluation Information Questionnaire (VEIQ). The questionnaire consisted of forty-five items that were designed to gather information on the perceived importance and sufficiency of different types of vocational evaluation information.



The questionnaire used a Likert-scale response system (1=not at all, 2=minimally, 3=moderately, 4=very, 5=extremely). Three hundred and seventy four counselors were mailed the questionnaires and 200 (53.3%) responded. The research questions that the researchers wanted answered were:

1. What are the categories of vocational evaluation information identified via factor analysis?
2. Are there significant differences in the perceived importance of the categories of vocational evaluation information for developing rehabilitation plans with clients?

The data showed that there were three factors that accounted for 47.4% of the total variance. Within the three-factor solution, Factor I (Work Personality, Physical and Cognitive Considerations) explained 41% of the total variance, Factor II (Specific Job Selection Considerations) explained 3.8% of the variance, and Factor III (Formal Education and Training Considerations) explained 2.6% of the total variance. Within Factor I, “Client’s motivation to work” received the highest rating. Within Factor II, “Physical capacities of client” was related to potential employment. The majority of the respondents (56%) referred between 20% and 80% of their consumers for vocational evaluations, suggesting that among these respondents evaluations are frequently utilized in public rehabilitation agencies.

Brown, McDaniel, and King (1995) also researched the role vocational evaluations play in the vocational rehabilitation process. A survey was developed and pilot-tested prior to the study to gather information on evaluator characteristics, client characteristics, length of

evaluation, referral questions, evaluation recommendations, and counselor outcome. The research questions were:

1. Are there differences in the types of client disabilities referred for evaluations across districts and/or across the public and private, not-for-profit sectors?
2. Are there differences between the public and private, not-for-profit sectors in the length of time needed to complete all phases of the vocational evaluation process?
3. Are there differences between the type of referral (disability) and the time spent in various phases of the evaluation?
4. Do the types of recommendations vary between public and private sector evaluators?
5. Do the actions of the referring counselor relate to the recommendations made by the evaluator?

Twenty-seven instruments were sent to all vocational evaluators in the state used in the study (not specified). Eleven private sector evaluators completed and returned 167 (41%) usable surveys and 22 public sector evaluators completed and returned 587 (58%) usable surveys. Mental/emotional disabilities was the largest single category evaluated (50.7%). Vocational evaluations that included testing, situational assessment, and completion of the final report lasted an average of one month. Recommendations varied and did not represent a significant difference between groups. Both public and private evaluators recommended employment and adjustment services more than any other service. The most relevant finding from the Brown, McDaniel, and King (1995) study was that when recommendations from the

vocational evaluation report were followed, the percentage of 26 closures was higher than when they were not followed.

A study by Wesolek and McFarlane (1991) measured the perceived needs of four different groups that serve consumers with disabilities: (1) education rehabilitation, (2) proprietary rehabilitation, (3) state rehabilitation agencies, and (4) state employment services. There were 284 usable surveys returned. Of the 47 factors under seven headings (cognitive, education and training, vocational interests and needs, physical functions, career development, personal/social, and behavioral) that were rated, 25 factors (e.g., creativity, motivation) were significant. The analyses provide insights for VR counselors who use vocational assessment information.

Lee, Taylor, and Rubin (1994) examined the type of information that is most important to the rehabilitation counselor, and found that the majority value information concerning the functional limitations of the consumers. Presently, legislation is stimulating a closer look at the importance of environmental factors in rehabilitation. These factors can either supplement or diminish performance in occupational areas of people with disabilities. Singh (1988) and Hahn (1987) suggest that environmental factors also have significant impacts on individuals' abilities to secure and maintain employment.

### *Implementation of Vocational Evaluation Results*

A 1995 study by Kosciulek, Prozonc, and Bell (1995) assessed the congruence between job outcomes and consumers' vocational evaluation, skills training, and jobs obtained (N=78). When examining the congruence between jobs obtained and vocational

evaluation job recommendations, the results indicated that less than half (46.2%) of the consumers obtained jobs that were congruent with the jobs recommended in their vocational evaluation reports. When examining the similarity between vocational skills training and vocational evaluation job recommendations, the results indicated that 61.5% of the consumers entered vocational skills training programs consistent with the jobs recommended in their vocational evaluation reports. The final relationship examined was the relationship between the jobs obtained by the consumers and the vocational skills training they received. The results showed that one-half of consumers (50%) obtained jobs congruent with their vocational skills training. This study shows that many successfully rehabilitated consumers were placed in vocational areas incongruent with their training. Furthermore, as reflected in subject training areas and jobs obtained, vocational evaluation job recommendations were implemented on a limited basis. This is consistent with previous research (Chun & Growick, 1983; Caston & Watson, 1990; and Cook, 1978).

The fact that many counselors may not be implementing the recommendations of vocational evaluations is questionable when viewed in light of research that show that following the recommendations of vocational evaluations relates favorably to positive employment outcomes (Kosciulek, Prozonic, & Bell, 1995). The ADA and the ADA amendments of 1992 provide strong new policies for people with disabilities and direct state agencies to be more efficient and accountable (ADA: P.L. 101-336). The congruence between the three key pieces of the rehabilitation process (vocational evaluations, training, and job placement) can be perceived as one aspect of case service provision important in evaluating the effectiveness of VR programs.

Participation in vocational evaluations can measure consumers' specific vocational needs, strengths, weaknesses, intellectual capabilities, and physical limitations. Suggestions made in the vocational evaluation report can increase the congruence between consumers' job needs and the occupation in which they are placed. After examining consumer employment outcomes, Bolton, Bellini, and Brookings, (2000) found that the provision of job placement services to VR consumers was by far the largest contributing factor to achieving competitive employment. Some personal variables that contribute to job congruence are "basic skills, achievement, behavioral skills, orientation to work, job seeking skills, work feasibility, health status and limitation, work readiness, vocational behaviors, and remedial needs." Also found in the literature is "emotional status and adaptive behaviors, work related attitudes, tolerance," (Pruitt, 1986) "common sense judgment, work history, communication skills, and persistence" (Wesolek & McFarlane, 1991).

Vocational evaluations provide a platform for important educational processes in which consumers obtain greater self- and work-knowledge. Consumers learn about the functional impact of their disability upon career options and identify barriers to employment. They also identify transferable skills, vocational potential, and reasonable accommodations or assistive technology to remove barriers to employment. The evaluation process encourages individuals to become more personally involved in the planning and development of their occupational careers. The acquisition of knowledge regarding themselves and the requirements involved in occupational areas of interest empowers the individual and establishes a greater degree of confidence in career decision-making.

## SELF-EFFICACY IN VOCATIONAL REHABILITATION

### Self-Efficacy Theory

Self-efficacy theory is one approach to the general study of the application of social learning theory to vocational behavior (Lent, Brown, & Hackett, 1994). Efficacy beliefs work as key factors in a system of human competence. Beliefs in capabilities to successfully perform behaviors influence performance, persistence, and future choices. They are postulated to be the major mediators of behavior and behavior change (Bandura, 1977). According to Bandura, a central theme of self-efficacy theory is that cognitive processes can mediate change. Cognitive events are produced and changed most readily through the mastery that comes from effective performance. Strauser (1995) suggests that self-efficacy theory could be applied to rehabilitation counseling and this concept may explain the increased self-efficacy that consumers experience following situational assessment evaluations (Enright, 1997).

Low self-efficacy expectations lead to *avoidance* of those behaviors. Therefore, increases in self-efficacy expectations should increase the frequency of *approach* behavior. Self-efficacy beliefs can be useful in understanding and predicting behavior. Interventions that are designed to facilitate approach behavior are effective because they increase the consumer's expectations of self-efficacy relating to the problematic or previously avoided behavior. Bandura (1977) identified four sources through which self-efficacy expectations are learned and can be modified:

1. Performance accomplishments
2. Vicarious learning or modeling
3. Verbal persuasion
4. Physiological arousal

Performance accomplishments are experiences of successfully performing certain behaviors. Vicarious learning or modeling is exposure to the learning experiences of peers. These experiences can have an educational benefit and increase the occurrences of participation in those behaviors. Verbal persuasion is encouragement and support from others. Physiological arousal is anxiety associated with a certain behavior. According to Bandura, as self-efficacy expectations are increased, anxiety should decrease and vice versa. Therefore, interventions focused on increasing self-efficacy expectations should increase approach behavior and decrease anxiety in relationship to the behavior. The Trimodal Anxiety Inventory (TAI) used in the current research measures three components of anxiety. According to Bandura's theory, as the consumers participating in vocational evaluations experience an increase in self-efficacy following the evaluation process, their scores on the TAI should decrease, indicating they are experiencing less anxiety about employment issues.

### *Career Self-Efficacy*

Although Bandura focused primarily on the role of self-efficacy expectations in the treatment of clinical disorders, Hackett and Betz (1981) found that self-efficacy has significance for the understanding and treatment of career development problems. Self-efficacy theory has been applied to an assortment of career- and vocational- related behaviors

such as job search intentions, career choice (Betz & Hackett, 1981), task performance and persistence, and interview readiness and employment outcomes for individuals with psychiatric disorders. There is also strong support for the role of self-efficacy as a predictor of academic performance and career decision-making intentions and behaviors (Hackett, 1985; Lent, Brown, & Hackett, 1994).

Hackett and Betz (1981) applied self-efficacy theory to career psychology and counseling and Betz developed a number of major measures of career-related self-efficacy, including the Occupational Self-efficacy Scale (Betz & Hackett, 1981), the Mathematics Self-efficacy Scale (Betz & Hackett, 1983), and the Career Decision-Making Self-efficacy Scale (Taylor & Betz, 1983)<sup>1</sup>. This research supports the hypothesis that self-efficacy expectations drastically influence consumers' career choices. Hackett and Betz (1981) asked college women and men to report whether they thought they were capable of completing diverse educational majors. The men and women did not differ in their tested abilities. However, they did vary significantly in their self-perceived abilities. Betz and Hackett (1981) also found that lower self-efficacy is related to a lower probability of choosing a nontraditional (male-dominated) career. They also found that self-efficacy for mathematics influences choice of a science career (Betz & Hackett, 1983; Hackett, 1985). Thus, their research supports Bandura's approach/avoidance consequence.

Betz, Klein, and Taylor (1996) demonstrated that self-efficacy concerning content domains is related to career decision self-efficacy. In their study, they demonstrated that

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<sup>1</sup> The Career Decision Making Self-Efficacy Scale's name was changed to the Career Decision Self-Efficacy Scale (CDSE). Betz, Hammond, & Multon, (in press).



college students' confidence in desirable competence outcomes of a liberal arts education (i.e., mathematics, science, writing, leadership, using technology, and cultural sensitivity), account for 44% to 79% of the variance in career decision self-efficacy. Taylor and Betz's (1983) Career Decision Self-Efficacy Scale measures self-efficacy with respect to the process of making career decisions. Low self-efficacy is associated with (1) career indecision, (2) problems in developing a clear vocational identity, and (3) struggling with career choice (as indicated by the number of changes of college major) (Betz & Hackett, 1981). Hence, self-efficacy with respect to both content and process domains is relevant to the process of career counseling.

From Taylor and Betz's (1983) Career Decision Self-Efficacy Scale, Enright (1997) developed the Career Self-Efficacy Scale for People with Disabilities (CSES-PWD) to measure self-efficacy in people with disabilities seeking employment. The researchers hypothesized that self-efficacy would increase in people with disabilities after they participated in situational assessments. Results showed that there was a significant difference in the pre-test and post-test scores of the individuals that participated in situational assessments ( $t=3.37$ ,  $df=20$ ,  $p<.10$ ). When combined with exit interviews with the participants, these results suggest that the majority of participants believed participation in the situation assessment increased their knowledge of the careers they were interested in, helped them become more aware of accommodations they may need, and improved their confidence in their ability to find a job.

In traditional counseling, counselors assist the consumer in increasing expectations of self-efficacy with respect to specific behavioral domains. Counselors often use interventions

based on (Bandura's, 1977) previously mentioned sources of efficacy information (such as performance accomplishments, physiological arousal, vicarious learning, and verbal persuasion and encouragement). This is important when concerning evidence that unemployment and disability put people with disabilities at increased risk of poor mental health (Caplan, Vinokur, Price, & van Ryn, 1989). Caplan, Vinokur, Price, & van Ryn (1989) found that the incidence of depression, anxiety, and psychiatric morbidity are often very high in the population of people with disabilities.

### *Career Maturity*

Theoretically derived from Super's career development theory, Crites' (1978) career maturity theory is the basis for another approach to understanding career behavior. The theory involves an evaluation of an individual's level of career progress in relation to career-relevant development tasks. Crites (1978) hypothesized that "good" career decisions will be facilitated by competence with respect to five career choice processes:

- 1) goal selection
- 2) occupational information
- 3) problem solving
- 4) planning
- 5) self-appraisal

There are affective and cognitive dimensions. The affective dimension includes attitudes toward the career decision-making process. The cognitive dimension is composed of decision-making skills. It refers to an individual's readiness to make educated,

age-appropriate career decisions and cope with career development tasks (i.e. the ability to understand what is required to make a career decision and the degree to which choices are realistic and consistent).

### *Career Decision-Making Self-Efficacy*

Self-efficacy theory is defined in relationship to competence in specific behavioral domains and career decision-making self-efficacy refers to the individual's self-confidence in successfully completing certain activities. People can feel higher or lower expectations of efficacy in specific vocational activity areas. Career choice content refers to these areas and is usually explored through the vocational evaluation process. To measure certainty and indecision related to career choice, Osipow, Carney, Winer, Yanico, and Koschier (1976) developed the Career Decision Scale (CDS). It consists of two scales: the Certainty Scale and the Indecision Scale. The two-item Certainty Scale assesses the degree of certainty about career and the 16-item Indecision Scale has respondents indicate their similarity to statements about reasons for career indecision. Responses are obtained using a 4-point Likert scale with alternatives ranging from "exactly like me" (4) to "not at all like me" (1). The Indecision Scale score is calculated by adding the responses to items 3 through 18. The range of scores is 16 to 64 with higher scores being indicative of greater career indecision. Item 19 is open-ended, allowing respondents to list barriers not represented in the scale items or to expand on prior items.

Recent attention has focused on the acquisition of mature career decision-making attitudes and competencies. In some cases, consumers receiving VR services have not

mastered the process of making a career decision (Walsh & Betz, 1990). Career maturity is a measure of readiness to make career decisions based on attitudes toward career decision-making and knowledge of what is required to make a career decision. The assessment of career indecision is relevant to the vocational rehabilitation process because it provides information about specific issues that might inhibit individuals in making career decisions.

### **Vocational Evaluations and Self-Efficacy**

Beveridge, Heller Craddock, Liesener, Stapelton, and Hershenson (2002) theorized that an individual's task performance is directly affected and supported by the individual's work personality and work competencies. They indicate that there is a reciprocal effect between self-efficacy and work competency and that it would appear to be critical in that the vocational rehabilitation process can be a source of work personality development. More specifically, the vocational evaluation process was theorized to be a primary source of work competency development. The vocational evaluation process recreates some aspects of the work environment, which can subsequently enhance work competencies. This is more readily accomplished in a vocational evaluation than by placing an individual in competitive employment and having them try to build a work personality on-the-job.

## **STATEMENT OF THE PROBLEM**

The contributions of vocational evaluations to the rehabilitation plans of people with disabilities cannot be minimized. The United States legislature authorized the use of public funds for vocational evaluation services because of the importance evaluations play in the rehabilitation process. The Rehabilitation Act of 1973 assisted people with disabilities by mandating extended evaluations in cases where feasibility for VR could not be easily determined. It also authorized formula grants to state VR agencies for services related to the rehabilitation potential of people with severe disabilities. Several researchers have expressed some concern about the utilization of the evaluation information by state VR counselors (Peters, Scalia, & Fried, 1993; Wesolek & McFarlane, 1991). The 1992 amendments to the ADA (Equal Employment Opportunity Commission, 1992) strengthened the teamwork between vocational evaluators and other rehabilitation professionals. Recent studies (Scroggin, Kosciulek, Sweiven, & Enright, 1999; Strauser, 1995) suggest that in addition to providing counselors with information about consumers' abilities interests, and aptitudes, comprehensive evaluations may also increase career self-efficacy.

## **THE PURPOSE OF THE STUDY**

The purpose of this study is to examine whether consumers' concepts of self-efficacy are affected by the vocational evaluation process. Specifically, the question this research will

address is: *Are there significant differences in VR consumers' pre-vocational evaluation and post-vocational evaluation career self-efficacy reports?*

# **CHAPTER THREE**

## **Methodology**

### **RESEARCH DESIGN**

#### **Sampling Design**

This project will take place in a state-federal vocational evaluation center in Texas. The VR program provides VR services to adult consumers with disabilities through 130 field offices and 3 regional offices across the state, which employs over five hundred counselors. VR services are provided based on the individual needs and circumstances of each consumer and are directed towards the consumer attaining an employment goal. Most VR consumers have multiple vocational needs and have been unable to access traditional methods for achieving employment because of their disability and the resulting barriers to employment. People that use VR services have a wide variety of disabilities such as mental illness, hearing impairment, impaired functioning of arms or legs, back injury, alcoholism or drug addiction, mental retardation, learning disability, traumatic brain injury, and other physical or mental disabilities that prevent satisfying placement in the community.

#### **Participants**

Participants in this study will be individuals referred by the state rehabilitation agency for vocational evaluations at a local vocational evaluation center. The clinic is staffed by a

full-time Certified Vocational Evaluator and trained assistants. All vocational evaluation testing material will be administered and scored according to the standardized procedures developed for each instrument. Scores obtained will be interpreted and a report will be generated by an evaluator for each consumer. The reports will include recommendations for services (i.e. accommodations) and job placements based on the results of performance during the vocational evaluation.

Vocational Rehabilitation counselors refer consumers for a three-day, four-day, or five-day assessment. When the consumers are referred for a four- or five-day evaluation a psychological assessment is usually performed and the results are considered in conjunction with the vocational evaluation report. The psychological and vocational evaluators may exchange information in order to glean a clearer picture of the consumer.

When the consumers arrive on the first day of their evaluation, they sign a consent form, which gives their consent to participate in the evaluation. Then they are introduced to the evaluators and the other consumers that are having vocational evaluations. The process of the evaluation is described to them in detail and they are given general written information about the times of the evaluations, breaks, and important phone numbers. They are told that some of the measures will be administered one-on-one in a separate room and some tasks will be completed as a group. There may be times that the consumers can use the resources available in the lab for job exploration purposes, such as the Dictionary of Occupation Titles, the Occupational Outlook Handbook, and the Self-Directed Search. Consumers are encouraged to ask questions and use the evaluators as resources. The demographic variables



of age, gender, race, and disability type will be obtained from intake interview information. One hundred participants (referrals) are expected over a 6-month period.

### **Instrumentation**

The career self-efficacy variable is operationally defined as the combined scores on measures that relate to Bandura's (1977) self-efficacy sources. The Career Decision Self-Efficacy Scale (CDSE) will provide a career-specific measure of a person's self-efficacy. While career self-efficacy should give a reliable measure of the consumers' self-efficacy beliefs, the addition of three measures will provide further explanation of the factors contributing to career self-efficacy. The Self-Efficacy Scale (SES) will provide a general level (across many situations) of belief in one's own competence. The Multi-dimensional Scale of Perceived Social Support (MSPSS) will give a measure of perceived social support that contributes to a person's exposure to vicarious learning experiences and modeling. The Trimodal Anxiety Inventory (TAI) will measure physical arousal (specifically, components of anxiety). Rationale for the applicability of self-efficacy measures to vocational evaluation is based on the similarity of the strategies used in situational assessments and comprehensive vocational evaluations. Vocational evaluations are, in essence, simulated situational assessments.

### *Career Decision Self-Efficacy Scale (CDSE)*

The 50-item Career Decision Self-Efficacy Scale (CDSE; Taylor and Betz, 1983) assesses self-efficacy with regard to career decision-making. The CDSE contains five ten-item subscales reflective of career choice competencies: goal selection, gathering occupational information, problem solving, planning for the future, and accurate self-appraisal. Respondents indicate by using a 10-point scale (ranging from 0 = No Confidence to 9 = Complete Confidence) their level of confidence in their abilities to successfully complete the tasks. Scores for each subscale are obtained by summing responses to the 10 items; a maximum score is 90. Summing the subscale scores yields an overall CDSE score. The maximum score is 450. Taylor and Betz (1983) reported a coefficient  $\alpha$  of .97 as an internal consistency estimate. Reliabilities (coefficient  $\alpha$ ) calculated for the five subscales revealed values of .87, .89, .86, .89, and .88 for goal setting, occupational information, problem solving, planning, and self-appraisal, respectively.

### *The Self-Efficacy Scale (SES)*

The Self-Efficacy Scale (SES; Sherer, et al., 1982) was designed to measure general levels of belief in one's own competence. It is a 30-item instrument that measures *general* expectations of self-efficacy that are not tied to specific situations or behavior. The assumptions underlying this instrument are that personal expectations of mastery are a major determinant of behavioral change and that the individual differences in experiences and acknowledgment of success lead to different levels of generalized self-efficacy expectations. The SES has two subscales: the general self-efficacy sub-scale and the social self-efficacy

sub-scale. The instrument was normed on 376 undergraduate students in an introductory psychology class and 150 inpatients from a Veterans Administration alcohol treatment clinic. Seven items are filler items and are not scored. Items are keyed as follows: A = 1, B = 2, C = 3, D = 4, E = 5. After negatively presented items are reverse-scored, the scores for all of the items are summed. A high score on the SES indicates high self-efficacy expectations of the consumer.

The SES has fairly good internal consistency, with alphas of .86 for the general self-efficacy sub-scale and the social self-efficacy sub-scale. The SES was shown to have good criterion related validity in that it accurately predicts that people with higher self-efficacy will have greater success than those who score low in self-efficacy in past vocational, educational, and monetary goals. The SES has demonstrated construct validity by correlating significantly with the Ego Strength Scale, the Interpersonal Competency Scale and the Rosenberg Self-Esteem Scale.

#### *The Multidimensional Scale of Perceived Social Support (MSPSS)*

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-item instrument designed to measure perceived social support from three sources: family, friends, and a significant other. It assesses the extent to which respondents perceive social support from each of the three sources divided into subscales (family, friends, and a significant other). The MSPSS was normed on a sample of 154 students in a two- or four-year college on a large urban campus. The mean age of the 122 women and 32 men was 26.5 (range = 18-51). The students were from ethnically and

socioeconomically diverse backgrounds. Means for the group were 5.58 (SD = 1.07) for the total score, 5.31 (SD = 1.46) for the family subscale, 5.50 (SD = 1.25) for the friends subscale, and 5.94 (SD = 1.34) for the significant other subscale.

The MSPSS is scored by summing individual item scores for the total and subscale scores and dividing by the number of items. Higher scores represent higher perceived social support. The MSPSS has excellent internal consistency. Alphas were .91 for the total score and .90 to .95 for the subscales. The MSPSS has good factorial validity and demonstrates good concurrent validity, as it is negatively correlated with degree of coronary artery disease and depression.

#### *The Trimodal Anxiety Inventory (TAI)*

The Trimodal Anxiety Inventory<sup>2</sup> (TAI; Lehrer & Woolfolk) is a 36-item instrument designed to measure the three key components of anxiety: behavior (social avoidance), cognition (worrying), and somatic (hyperventilation). The development of the TAI was based on five studies. Six hundred and twenty-one subjects (mostly male and female college students, 70 neurotic psychiatric patients, 67 stress workshop participants, 67 nonpsychotic anxious clients) were involved in the study. The TAI is scored by adding up item scores for scores on subscales as well as the total score. A higher score represents a greater the level of anxiety.

The internal consistency is excellent, with split-half reliability coefficients of .93 for the somatic factor, .92 for the behavioral factor, and .92 for the cognitive factor. The TAI

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<sup>2</sup> The original instrument was called the Somatic, Cognitive, Behavioral Anxiety Inventory (SCBAI).

has good concurrent validity, correlating significantly with the Spielberger Trait Anxiety, Eysenck Neuroticism, Eysenck Introversion, Symptom Checklist (SCL-90), and the IPAT Anxiety Inventory. It is also sensitive to change in clinical practice. The behavioral subscale shows significant change after a behavioral treatment group and the cognitive subscale shows significant change after a cognitive therapy group.

### **Data Collection**

Participants will be administered the battery of four measures (CDSE, SES, MSPSS, TAI) when they attend the vocational evaluation. The first administration will occur at the time of intake (prior to the vocational evaluation). The second administration will occur as part of the closure procedure following the vocational evaluation. In this study, the vocational evaluation process includes a variety of career exploration and skill assessment activities. Participants will attend a local assessment clinic for an average of three consecutive days. The vocational evaluation will utilize interviews, observation, psychometrics, administration of work samples/activities, and career exploration. Hands-on, experiential work samples will provide opportunities for consumers to explore the world-of-work, to interact with work samples and occupational activities, and to acquire knowledge relative to individual vocational interests and abilities.

## **Data Analysis**

The Career Decision Self-Efficacy scale (CDSE), the Self-Efficacy Scale (SES), the Multi-dimensional Scale of Perceived Social Support (MSPSS), and the Trimodal Anxiety Inventory (TAI) will be the dependent variables in all analyses performed in this study. The independent variable is participation in the vocational evaluation process. To assess the hypothesis that consumers who complete a vocational evaluation will exhibit higher levels of career self-efficacy, a repeated measure analysis of variance (ANOVA) will be performed. This design using within-subjects variables will involve taking repeated measurements from each subject. In within-subject designs, the same subjects are tested in each condition. Therefore, differences among subjects can be measured and separated from error. The null hypothesis is that there is no significant difference between consumers' pre-vocational evaluation and post-vocational evaluation self-efficacy measures scores. ( $\mu_1 = \mu_2$ )

## CHAPTER FOUR

### Anticipated Findings

#### NULL HYPOTHESIS

$H_0$ : There is no significant difference between consumers' pre-vocational evaluation and post-vocational evaluation self-efficacy measures scores. ( $\mu_1 = \mu_2$ )

#### Fail to reject the null hypothesis

Table 5  
**Comparisons of Self-Efficacy Measures at Pre-test and Post-test  
for VR Consumers who Participated in a Vocational Evaluation**

<b>Dependent variables</b>	Pre-test		Post-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Career Decision Self-Efficacy Scale (CDSE)	m	sd	m	sd
Self-Efficacy Scale (SES)	m	sd	m	sd
Multidimensional Scale of Perceived Social Support (MSPSS)	m	sd	m	sd
Cognitive, Behavioral Anxiety Inventory (TAI)	m	sd	m	sd

Results of the study indicate that participation in vocational evaluations does not show a beneficial impact on career self-efficacy. There was no significant difference between pre-test and post-test self-efficacy measures ( $\mu_1 = \mu_2$ ). This indicates that vocational evaluations may not be successful in increasing career self-efficacy for people with disabilities. Consumers' scores on the Career Decision Self-Efficacy Scale (CDSE), the Self-Efficacy Scale (SES), and the Multidimensional Scale of Perceived Social Support (MSPSS) either did not change or decreased, indicating the vocational evaluation did not

impact self efficacy in regards to career decision-making, general levels of belief in one's own competence, and perceived social support. In addition, consumers' scores on the Trimodal Anxiety Inventory (TAI) did not change or increased, indicating that the vocational evaluation process did not affect level of anxiety or in some cases, increased anxiety. However, vocational evaluations are useful for consumers with poor insight, as the report from the vocational evaluation will provide the VR counselor with important information on the consumers' abilities, aptitudes, and interest that will be helpful in placing them in competitive employment.

The results are congruent with previous research (Chun & Growick, 1983; Caston & Watson, 1990; and Cook, 1978) that shows that jobs obtained by the consumers were incongruent with their training. Furthermore, vocational evaluation job recommendations were implemented on a limited basis. If the vocational evaluation report is not used to place the consumer, money should not be spent on vocational evaluations. There is a limited amount of money available for the vocational rehabilitation of people with disabilities. Services that are not effective should be discontinued.

Research shows that career self-efficacy can be increased with situational assessments and the hypothesis in this study was that vocational evaluations could increase self-efficacy as well. The results did not support that hypothesis. Therefore, vocational evaluations do not increase career self-efficacy in people with disabilities. It may not be feasible to place a consumer in the occupation that is most compatible to his or her abilities, interests, and aptitudes. In conclusion, vocational evaluations do not appear to be effective in predicting successful employment matches and they do not increase consumer self-efficacy.



For some consumers, participation in vocational evaluations may actually *decrease* career self-efficacy. People with lower cognitive levels may have lower insight into realistic goals for employment and they may set expectations too high. The vocational evaluation process may highlight consumers' weaknesses and pull their post-test scores down, which will reduce the group mean of all participants. Therefore, some outliers may affect the overall mean scores and skew the distribution.

The instruments used in this study all have high internal consistency (CDMSE = .97, SES = .86, MSPSS = .91, and TAI = .93). Therefore, they should accurately measure the individual constructs that they are supposed to measure. However, scores may not be accurate representations of consumers due to the brief amount of time between the pre-test and post-test administration. People may require more time or repeated exposure to activities in order to show a measurable increase in career self-efficacy.

### Reject the null hypothesis

Table 6  
**Comparisons of Self-Efficacy Measures at Pre-test and Post-test  
for VR Consumers who Participated in a Vocational Evaluation**

<b>Dependent variables</b>	Pre-test		Post-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Career Decision Self-Efficacy Scale (CDSE)	m	sd	M	SD
Self-Efficacy Scale (SES)	m	sd	M	SD
Multidimensional Scale of Perceived Social Support (MSPSS)	m	sd	M	SD
Cognitive, Behavioral Anxiety Inventory (TAI)	M	SD	m	sd

Results indicated that there was a significant difference between pre-test and post-test vocational evaluation participant mean scores on all four measures ( $\mu_1 \neq \mu_2$ ). This suggests

that individuals with disabilities may benefit from vocational evaluations. Consumers' scores on the Career Decision Self-Efficacy Scale (CDSE), the Self-Efficacy Scale (SES), and the Multidimensional Scale of Perceived Social Support (MSPSS) increased, indicating higher self efficacy in regards to career decision-making, general levels of belief in one's own competence, and perceived social support. The consumers' scores on the Trimodal Anxiety Inventory (TAI) decreased, indicating lower levels of anxiety. Vocational evaluations can provide important knowledge that benefits the person relative to attaining and maintaining career choice. Individuals may become more confident in their ability to find a job and to succeed in the workplace because of increased feelings of career self-efficacy.

The results of this study show that rehabilitation counselors should strive to increase the self-efficacy of people with disabilities. Increasing consumer participation in the rehabilitation process is a catalyst for increasing career self-efficacy (Kosciulek, 1999). The more an individual is involved in the rehabilitation process, the more likely it is that barriers to employment can be overcome. Barriers include low self-esteem, poor career decision-making, and limited knowledge about the labor market (Enright, 1997).

Counselors and consumers should consider the elevation of career self-efficacy to be one of the most important goals in the vocational rehabilitation process. Increasing career self-efficacy can play a key role in maintaining gains in the vocational rehabilitation process (including post placement on-the-job training). Increases in career self-efficacy can reduce symptoms of depression that are often seen in people with disabilities, therefore improving productivity. Vocational evaluation reports often make recommendations for assistive

technology or accommodations. Exploring these options during a vocational evaluation can introduce consumers to the options that are available to support them in the workplace.

During the vocational evaluation process, consumers participate in vicarious learning experiences that can lead to hope and increased confidence in the ability to perform target tasks and cope effectively with challenges. Group experiences with other people with disabilities provide opportunities for individuals to observe each other and share experiences of how they have dealt with disability issues. Verbal persuasion can be used to provide the individual participating in the vocational evaluation with reinforcement for successful accomplishments. Betz (1992) found that when individuals set goals in new or feared behaviors, reinforcement for accomplishing these goals could provide encouragement to enhance self-efficacy.

Consumers referred for vocational evaluations are told that they are participating in an experience to explore their strengths and weaknesses. Efforts are made to ensure that the environment is non-threatening. A non-judgmental atmosphere can diminish emotional reactions and can increase self-efficacy. With the employment difficulties people with disabilities encounter, increasing career self-efficacy can assist in the career decision-making process.

## **CHAPTER FIVE**

### **Limitations and Suggestions for Further Research**

This study has several limitations that may have implications for the generalizability of and confidence in the findings. First, the measures used in the study were self-report scales (which was necessary given the construct of self-efficacy). It would be preferable in further research to use multiple evaluations of additional constructs that may contribute to self-efficacy. For example, information elicited from VR counselors and vocational evaluators could provide documentation of actual social support of the consumer that would substantiate the responses on measures such as the MSPSS. Second, longitudinal research is needed to examine whether an increase in career self-efficacy actually influences employment outcomes. A study that follows consumers from the beginning of the VR process until they have been employed for 90 days could show a causal relationship between increased career self-efficacy and more appropriate placements. Third, this study examined a limited number of variables to understand career self-efficacy. Other variables should be included in future research to better understand career self-efficacy. For example, decision-making styles and ego identity variables could be explored. A design that would allow for differentiation between disability groups would parse out whether type of disability influences career self-efficacy.

Another limitation is that the role of the vocational evaluator as a variable was not taken into account. Consumers may have varying experiences with the employees at the vocational evaluation center that could influence the reports of career self-efficacy, as one

aspect of the career self-efficacy model is related to verbal persuasion. Although the vocational evaluation is to be non-judgmental and provide no feedback for the consumer during the process, it is almost impossible to control for this variable.

## **CHAPTER SIX**

### **Conclusions**

In conclusion, this study attempted to provide additional research to support inclusion of vocational evaluations in Individualized Plans for Employment (IPE) by showing that in addition to providing information on consumers' aptitudes, abilities, and interests, vocational evaluations can also increase career self-efficacy. Numerous studies have shown a correlation between career self-efficacy and employment outcomes (Lent, Brown, & Hackett, 1994; Taylor & Betz, 1983; Taylor & Popma, 1990). It is important to emphasize that the present study has fundamental practical implications. Counselors should be aware that their behavior could have an important influence on their clients' self-efficacy. For clients that have low career self-efficacy, referral to situational or vocational assessments may be a positive experience and results in a higher career self-efficacy and more suitable placement in the workplace.

## **APPENDIX A**

### **Measures in a Comprehensive Evaluation**

Beck Depression Inventory  
Beck Depression Inventory, 2nd Edition  
Career Ability Placement Survey  
Career Occupational Preference Survey  
Crawford Small Parts Dexterity Test  
Forer  
Haptic Visual Discrimination Test  
Health Status Questionnaire  
Inventory of Depressive Symptomatology  
McCarron Assessment of Neurological Development  
Mental Status Examination  
Mini-Mental Status Examination  
Minnesota Multiphasic Personality Inventory, 2nd Edition  
Multidimensional Pain Inventory  
Oswestry Disability Rating Scale  
Pain Assessment Inventory  
Peabody Individual Achievement Test  
Peabody Picture Vocabulary Test , 3rd Edition  
Perceptual Memory Test  
Purdue Pegboard Dexterity Test  
Self-Directed Search  
Sixteen Personality Factor Test  
Spielberger State/Trait Questionnaire  
Street Skills Survival Questionnaire  
Trail Making Tests A and B  
TRAPS  
Valpar Work Sample #3: Numerical Sorting  
Valpar Work Sample #6: Independent Problem Solving  
Valpar Independent Work Sample #7: Multi-Level Sorting  
Valpar Work Sample #9: Range of Motion  
Valpar Work Sample # 11: Eye-Hand-Foot Coordination  
Wechsler Adult Intelligence Scale, 3rd Edition  
Wide Range Achievement Test, 3rd Edition  
Woodcock-Johnson Achievement Test, Revised

## APPENDIX B

### Consent Form

Department of Rehabilitation Counseling Psychology  
THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS

I agree to participate in a study that is investigating health-related behaviors. I understand that my participation is voluntary: I can leave the experiment at any time and this will have no bearing on any remuneration I receive, nor will it have any other undesirable result.

The following points have been explained to me:

1. The purpose of this research is to find out about vocational evaluations. I understand I will be asked questions about my experience during the time I am participating in the vocational evaluation. The benefits I may expect from the study are: (a) an appreciation of research on vocational rehabilitation and (b) an opportunity to contribute to scientific research.
2. The procedure will be as follows: During the first day of the evaluation, I will complete a questionnaire. The time required to fill out the questionnaire is approximately ten minutes. On the last day of the evaluation, I will complete another questionnaire and answer five questions about my experience during the vocational evaluation.
3. The researchers do not foresee any risks to me for participating in this study, nor do they expect that I will experience any discomfort or stress.
4. All of the data collected will remain strictly confidential. Only people associated with the study will see my responses. This consent form will be detached from the questionnaire and stored separately. My responses will not be associated with my name; instead, my name will be converted to a code number when the researchers store the data.
5. The experimenter will answer any other questions about the research either now or during the course of the experiment. If I have any other questions or concerns, I can address them to the experimenter or to the research directors [**Jennifer Featherston (479) 487-8305; Bobbie Vash (214) 648-1750**]
6. Upon completion of my participation, if I choose, I can receive a full written explanation about the rationale and predictions underlying this experiment.

---

Participant Name

Participant Signature

Date

---

Experimenter Name

Participant Number



**APPENDIX C**  
**Permission to Use the Scales**

**PERMISSION TO SES SCALE (SES)**

From	<a href="mailto:jbogard@uark.edu">&lt;jbogard@uark.edu&gt;</a>
Sent	Friday, March 4, 2005 8:16 pm
To	<a href="mailto:marks@mmrc rehab.org">marks@mmrc rehab.org</a>
Cc	
Bcc	
Subject	SES

With the final assembly of my thesis, my committee and I are requesting clarification on the information that can be used in the final format in regards to the Self-Efficacy Scale. I currently plan to reference the SES in the appendix.

What is the preferred reference to the SES for this purpose?

- 1) A brief description of the instrument, examples of the confidence statements and information referring the reader where to obtain a copy of the instrument; OR
- 2) Is it permissible to place a copy of the format of the actual instrument used in the study?

Your consideration of this request is greatly appreciated.

Thank you.

Jennifer Featherston

~~~~~  
Jennifer Featherston  
Rehabilitation Education and Research Program  
University of Arkansas - Fayetteville  
Department of Rehabilitation,  
Human Resources, and Communication Disorders  
100 Graduate Education Building  
Fayetteville, Arkansas 72701  
(479)200-7680  
~~~~~

From	"Mark Sherer, Ph.D., ABPP-Cn" <marks@MMRCREHAB.ORG>
Sent	Tuesday, March 8, 2005 7:49 am
To	<a href="mailto:jbogard@uark.edu">jbogard@uark.edu</a>
Cc	
Bcc	
Subject	RE: SES

This is a second try. The first try "bounced."

Mark Sherer, Ph.D., ABPP-Cn  
 Neuropsychology Department  
 Methodist Rehabilitation Center  
 1350 E. Woodrow Wilson  
 Jackson, MS 39216

-----Original Message-----

From: Mark Sherer, Ph.D., ABPP-Cn [[marks@mmrcrehab.org](mailto:marks@mmrcrehab.org)]  
 Sent: Monday, March 07, 2005 12:21 PM  
 To: 'jbogard@uark.edu'  
 Subject: RE: SES

Jennifer

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 Psychological Reports  
 Box 9229  
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Mark Sherer, Ph.D., ABPP-Cn  
 Neuropsychology Department  
 Methodist Rehabilitation Center  
 1350 E. Woodrow Wilson  
 Jackson, MS 39216

Jennifer Featherston  
5738 West Chattel Street  
Fayetteville, Arkansas 72704  
(479) 200-7680  
fax: (479) 587-8305

March 8, 2004

Carol H. Ammons, Ph.D.  
Senior Editor  
Psychological Reports  
Box 9229  
Missoula, Montana 59807

Dear Dr. Ammons:

I am a student at the University of Texas Southwestern Medical Center. I would like your permission to reprint the Self-Efficacy Scale (SES) in the appendix of my thesis, titled "Vocational Evaluations and Self-Efficacy". I have contacted Dr. Sherer and he instructed me to contact you for permission to reproduce the instrument.

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Please indicate your approval of this permission by signing the letter where indicated below and returning it to me as soon as possible. My fax number is set forth above. Your signing of this letter will also confirm that you own the copyright to the above-described material.

Thank you very much.

Sincerely,

Jennifer Featherston

---

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Rogers, R. W. The Self-efficacy Scale: construction and validation.  
*Psychological Reports*, 1982, 51, 663-671. © Psychological Reports 1982

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Sincerely,

CHA:slp  
Enclosure (1)

Carol H. Ammons, Ph.D.  
Senior Editor

cc: Dr. Mark Sherer  
Director of Neuropsychology ,  
Mississippi Methodist Rehabilitation Center  
1350 East Woodrow Wilson  
Jackson, MS 39216

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C. H. Ammons, Editor

R. B. Ammons, Editor

January 1, 1978

**PERMISSION TO USE THE MULTIDIMENSIONAL SCALE OF  
PERCEIVED SOCIAL SUPPORT (MSPSS)**

From	<a href="mailto:jbogard@uark.edu">&lt;jbogard@uark.edu&gt;</a>
Sent	Friday, March 4, 2005 8:17 pm
To	<a href="mailto:gzimet@iupui.edu">gzimet@iupui.edu</a>
Cc	
Bcc	
Subject	MSPSS

Dr. Zimet--

With the final assembly of my thesis, my committee and I are requesting clarification on the information that can be used in the final format in regards to the Multidimensional Scale of Perceived Social Support. I currently plan to reference the MSPSS in the appendix. What is the preferred reference to the MSPSS for this purpose?

- 1) A brief description of the instrument, examples of the confidence statements and information referring the reader where to obtain a copy of the instrument; OR
- 2) Is it permissible to place a copy of the format of the actual instrument used in the study?

Your consideration of this request is greatly appreciated.

Thank you.

Jennifer Featherston

~~~~~

Jennifer Featherston  
Rehabilitation Education and Research Program  
University of Arkansas - Fayetteville  
Department of Rehabilitation,  
Human Resources, and Communication Disorders  
100 Graduate Education Building  
Fayetteville, Arkansas 72701  
(479)200-7680

~~~~~

From	"Zimet, Gregory D." <gzimet@iupui.edu>
Sent	Friday, March 4, 2005 9:17 pm
To	<a href="mailto:jbogard@uark.edu">jbogard@uark.edu</a>
Cc	
Bcc	
Subject	RE: MSPSS

Dear Jennifer,

It is fine with me for you to place a copy of the MSPSS in the appendix of your thesis. You should probably cite the first article I published on the MSPSS for the reference (from 1988). Let me know if you need any further information.

Sincerely,  
Greg Zimet

-----  
Gregory D. Zimet, PhD  
Professor of Pediatrics & Clinical Psychology  
Section of Adolescent Medicine  
Indiana University School of Medicine  
575 N. West Dr., Rm. 070  
Indianapolis, IN 46202  
317-274-8812

**PERMISSION TO USE THE TRIMODAL  
ANXIETY INVENTORY (TAI)**

From	<a href="mailto:&lt;jbogard@uark.edu&gt;">&lt;jbogard@uark.edu&gt;</a>
Sent	Friday, March 4, 2005 8:19 pm
To	<a href="mailto:lehrer@umdnj.edu">lehrer@umdnj.edu</a>
Cc	
Bcc	
Subject	TAI

Dr. Lehrer –

With the final assembly of my thesis, my committee and I are requesting clarification on the information that can be used in the final format in regards to the Somatic, Cognitive, Behavioral Anxiety Inventory (SCBAI).

. I currently plan to reference the SCBAI in the appendix. What is the preferred reference to the SCBAI for this purpose?

- 1) A brief description of the instrument, examples of the confidence statements and information referring the reader where to obtain a copy of the instrument; OR
- 2) Is it permissible to place a copy of the format of the actual instrument used in the study?

Your consideration of this request is greatly appreciated.

Thank you.

Jennifer Featherston

~~~~~  
 Jennifer Featherston  
 Rehabilitation Education and Research Program  
 University of Arkansas - Fayetteville  
 Department of Rehabilitation,  
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 Fayetteville, Arkansas 72701  
 (479)200-7680  
 ~~~~~



From	Paul Lehrer <lehrer@umdnj.edu>
Sent	Saturday, March 5, 2005 8:34 am
To	<a href="mailto:jbogard@uark.edu">jbogard@uark.edu</a>
Cc	
Bcc	
Subject	RE: TAI

I call it the Trimodal Anxiety Inventory

1) A brief description of the instrument, examples of the confidence statements and information referring the reader where to obtain a copy of the instrument; OR

It is a factor-analytically designed instrument that measures cognitive, psychophysiological, and behavioral aspects of anxiety.

2) Is it permissible to place a copy of the format of the actual instrument used in the study?

It was done many years ago, and I do not have such a copy any more. However the wording of the items is in the ms. I can give you a copy of one formatted later, but it is not the original format

Paul Lehrer, PhD  
 Professor of Psychiatry  
 UMDNJ -- Robert Wood Johnson Medical School  
 671 Hoes Lane  
 Piscataway, NJ 08854 USA  
 tel: +1-732-235-4877  
 fax: +1-732-235-4430  
 email: lehrer@umdnj.edu

## PERMISSION TO USE THE CAREER DECISION

### SELF-EFFICACY SCALE (CDSE)

From	<a href="mailto:&lt;jbogard@uark.edu&gt;">&lt;jbogard@uark.edu&gt;</a>
Sent	Friday, March 4, 2005 8:08 pm
To	<a href="mailto:betz.3@osu.edu">betz.3@osu.edu</a>
Cc	
Bcc	
Subject	CDMSE

Dr. Betz --

With the final assembly of my thesis, my committee and I are requesting clarification on the information that can be used in the final format in regards to the CDMSE. I currently plan to reference the CDMSE in the appendix. What is the preferred reference to the CDMSE for this purpose?

- 1) A brief description of the instrument, examples of the confidence statements and information referring the reader where to obtain a copy of the instrument; OR
- 2) Is it permissible to place a copy of the format of the actual instrument used in the study?

Your consideration of this request is greatly appreciated.


Thank you.

Jennifer Featherston

~~~~~

Jennifer Featherston  
 Rehabilitation Education and Research Program  
 University of Arkansas - Fayetteville  
 Department of Rehabilitation,  
 Human Resources, and Communication Disorders100 Graduate Education  
 Building  
 Fayetteville, Arkansas 72701  
 (479)200-7680

~~~~~

From	 <a href="mailto:betz.3@osu.edu">Nancy Betz &lt;betz.3@osu.edu&gt;</a>
Sent	Saturday, March 5, 2005 11:47 am
To	<a href="mailto:jbogard@uark.edu">jbogard@uark.edu</a>
Cc	
Bcc	
Subject	RE: CDMSE
Attachments	<a href="#">HamMulBetzFinal.doc</a> 171K

Whatever you prefer is fine -- just remember that it is now the CDSE (career decision self-efficacy scale) - I attach a recent paper making that change official. It is in press J Career Assessment.  
nancy

## APPENDIX D

### Self-Efficacy Scale

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This questionnaire is a series of statements about you personal attitudes and traits. Each statement represents a commonly held belief. Read each statement and decide to what extent it describes you. There are no right or wrong answers. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement by marking the letter that best describes you attitude or feeling. Please be very truthful and describe yourself as you really are, not as you would like to be.

A = Disagree strongly

B = Disagree moderately

C = Neither agree nor disagree

D = Agree moderately

E = Agree strongly

- \_\_\_\_\_ 1. I like to grow houseplants.
- \_\_\_\_\_ 2. When I make plans, I am certain I can make them work.
- \_\_\_\_\_ 3. One of my problems is that I cannot get down to work when I should.
- \_\_\_\_\_ 4. If I can't do a job the first time, I keep trying until I can.
- \_\_\_\_\_ 5. Heredity plays the major role in determining one's personality.
- \_\_\_\_\_ 6. It is difficult for me to make new friends.
- \_\_\_\_\_ 7. When I set important goals for myself I rarely achieve them.
- \_\_\_\_\_ 8. I give up on things before I complete them.
- \_\_\_\_\_ 9. I like to cook.
- \_\_\_\_\_ 10. If I see someone I would like to meet, I go to the person instead of waiting for him or her to come to me.

- \_\_\_\_\_ 11. I avoid facing difficulties.
- \_\_\_\_\_ 12. If something looks too difficult, I will not even bother to try it.
- \_\_\_\_\_ 13. There is some good in everybody.
- \_\_\_\_\_ 14. If I meet someone interesting who is very hard to make friends with, I'll soon stop trying to make friends with that person.
- \_\_\_\_\_ 15. When I have something unpleasant to do, I stick to it until I finish it.
- \_\_\_\_\_ 16. When I decide to do something, I go right to work on it.
- \_\_\_\_\_ 17. I like science.
- \_\_\_\_\_ 18. When trying to learn something new, I soon give up if I am not initially successful.
- \_\_\_\_\_ 19. When I'm trying to become friends with someone who seems uninterested at first, I don't give up very easily.
- \_\_\_\_\_ 20. When unexpected problems occur, I don't handle them well.
- \_\_\_\_\_ 21. If I were an artist, I would like to draw children.
- \_\_\_\_\_ 22. I avoid trying to learn new things when they look difficult to me.
- \_\_\_\_\_ 23. Failure just makes me try harder.
- \_\_\_\_\_ 24. I do not handle myself well in social gatherings.
- \_\_\_\_\_ 25. I very much like to ride horses.
- \_\_\_\_\_ 26. I feel insecure about my ability to do things.
- \_\_\_\_\_ 27. I am a self-reliant person
- \_\_\_\_\_ 28. I have acquired my friends through my personal abilities at making friends.
- \_\_\_\_\_ 29. I give up easily.
- \_\_\_\_\_ 30. I do not seem capable of dealing with most problems that come up in my life.

## APPENDIX E

### Multi-dimensional Scale of Perceived Social Support (MSPSS)

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement by circling the appropriate number using the following scale.

- 1 = Very strongly disagree
- 2 = Strongly disagree
- 3 = Mildly disagree
- 4 = Neutral
- 5 = Mildly agree
- 6 = Strongly agree
- 7 = Very strongly agree

- |  |                                 |
|--|---------------------------------|
| 1. There is a special person who is around when I am in need.        | 1    2    3    4    5    6    7 |
| 2. There is a special person with whom I can share joys and sorrows. | 1    2    3    4    5    6    7 |
| 3. My family really tries to help me.                                | 1    2    3    4    5    6    7 |
| 4. I get the emotional help and support I need from my family.       | 1    2    3    4    5    6    7 |
| 5. I have a special person who is a real source of comfort for me.   | 1    2    3    4    5    6    7 |
| 6. My friends really try to help me.                                 | 1    2    3    4    5    6    7 |
| 7. I can count on my friends when things go wrong.                   | 1    2    3    4    5    6    7 |
| 8. I can talk about my problems with my family.                      | 1    2    3    4    5    6    7 |

9. I have friends with whom I can share my joys and sorrows.

1    2    3    4    5    6    7

10. There is a special person in my life who cares about my feelings.

1    2    3    4    5    6    7

11. My family is willing to help me make decisions.

1    2    3    4    5    6    7

12. I can talk about my problems with my friends.

1    2    3    4    5    6    7

## APPENDIX F

### Trimodal Anxiety Inventory (TAI)

Please circle the number that indicates how you feel for each item.

0 = Never

8 = Extremely often

For example, if you feel happy often, but not all the time, put:

I feel happy

0      1      2      3      4      5      ⑥      7      8

1. My throat gets dry.

0      1      2      3      4      5      6      7      8

2. I have difficulty in swallowing.

0      1      2      3      4      5      6      7      8

3. I try to avoid starting conversations.

0      1      2      3      4      5      6      7      8

4. My heart pounds.

0      1      2      3      4      5      6      7      8

5. I picture some future misfortune.

0      1      2      3      4      5      6      7      8



6. I avoid talking to people in authority (my boss, policemen)

0       1       2       3       4       5       6       7       8

7. My limbs tremble.

0       1       2       3       4       5       6       7       8

8. I can't get some thought out of my mind.

0       1       2       3       4       5       6       7       8

9. I avoid going into a room by myself where people are already gathered and talking.

0       1       2       3       4       5       6       7       8

10. My stomach hurts.

0       1       2       3       4       5       6       7       8

11. I dwell on mistakes I have made.

0       1       2       3       4       5       6       7       8

12. I avoid new or unfamiliar situations.

0       1       2       3       4       5       6       7       8

13. My neck feels tight.

0       1       2       3       4       5       6       7       8

14. I feel dizzy.

0       1       2       3       4       5       6       7       8

15. I think about possible misfortunes to my loved ones.

0        1        2        3        4        5        6        7        8

16. I cannot concentrate at a task or job without irrelevant thoughts intruding.

0        1        2        3        4        5        6        7        8

17. I pass by school friends, or people I know but have not seen me for a long time,  
unless they speak to me first.

0        1        2        3        4        5        6        7        8

18. I breathe rapidly.

0        1        2        3        4        5        6        7        8

19. I keep busy to avoid uncomfortable thoughts.

0        1        2        3        4        5        6        7        8

20. I can't catch my breath.

0        1        2        3        4        5        6        7        8

21. I can't get some pictures or images out of my mind.

0        1        2        3        4        5        6        7        8

22. I try to avoid social gatherings.

0        1        2        3        4        5        6        7        8

23. My arms or legs feel stiff.

0       1       2       3       4       5       6       7       8

24. I imagine myself appearing foolish with a person whose opinion of me is important.

0       1       2       3       4       5       6       7       8

25. I find myself staying home rather than involving myself in activities outside.

0       1       2       3       4       5       6       7       8

26. I prefer to avoid making specific plans for self-improvement.

0       1       2       3       4       5       6       7       8

27. I am concerned that others might not think well of me.

0       1       2       3       4       5       6       7       8

28. I try to avoid challenging jobs.

0       1       2       3       4       5       6       7       8

29. My muscles twitch or jump.

0       1       2       3       4       5       6       7       8

30. I experience a tingling sensation somewhere in my body.

0       1       2       3       4       5       6       7       8

31. My arms or legs feel weak.

0       1       2       3       4       5       6       7       8

32. I have to be careful not to let my real feelings show.

0      1      2      3      4      5      6      7      8

33. I experience muscular aches and pains.

0      1      2      3      4      5      6      7      8

34. I feel numbness in my face, limbs, or tongue.

0      1      2      3      4      5      6      7      8

35. I experience chest pains.

0      1      2      3      4      5      6      7      8

36. I have an uneasy feeling.

0      1      2      3      4      5      6      7      8

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