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An Examination of Career Decision-Making in the Context of Female Offenders  
A thesis submitted in partial fulfillment of the requirements for the degree of Master of  
Science at Virginia Commonwealth University

by

Allison L. Stone

BA, College of William and Mary, 2000

Director: Victoria A. Shivy, Ph.D., Associate Professor, Psychology

Virginia Commonwealth University

Richmond, Virginia

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## Abstract

### AN EXAMINATION OF CAREER DECISION-MAKING IN THE CONTEXT OF FEMALE OFFENDERS

By Allison L. Stone, BA

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

Virginia Commonwealth University, 2006

Director: Victoria A. Shivy, Ph.D., Associate Professor, Psychology

Female offenders often have had increased financial difficulties post-release because of lower levels of educational achievement and less job experience. Career programming may prove useful to female offenders by providing guidance with career decisions and strengthening career decision-making skills. The aims of this study were to investigate career decision-making skills and self-efficacy in the context of vocational programming for a group of female offenders. A pretest-posttest quasi-experimental design was used to examine scale scores for a group who participated in programming and a control group at the same correctional facility. A series of *t* tests revealed no significant differences between the control and intervention groups. An examination of the subscale means indicated that female offenders may advocate more passive decision-making styles and lower career decision-making self-efficacy than the original norm samples for these instruments.

## Introduction

A 2001 report by the *Bureau of Justice Statistics* indicates that the lifetime prevalence rate of incarceration in the United States is rising. The current rate is 6.6 percent, or one of every 15 individuals, which is an increase from the five percent incarceration rate recorded in 1996 (BJS, 2001). The 2001 statistics also indicate that 2.7 percent of U. S. adults, almost half the lifetime incarceration rate, had spent time in prisons as opposed to local jails or to community corrections. The rise in national incarceration rates may result largely from an increase in first incarcerations; however, these data also suggest that the rate of recidivism for released offenders remains above 60 percent (BJS, 2001).

In addition to a general increase in incarcerations, a 1999 report by the *Bureau of Justice Statistics* presents some alarming facts concerning the growing population of female offenders in the correctional system. A snapshot of correctional systems at the local, state, and federal levels showed that approximately 950,000 women were involved in a correctional system, with 15 percent of that population actually incarcerated. In recent years, the number of felony convictions for females has grown by 42 percent, in comparison with a 17 percent growth rate for males. Although the majority of the increase was because of an increase in property crime convictions, substantial increases also were seen for violent crime and drug crime convictions (BJS, 1999).

The drastic rise in numbers presents serious challenges for American society. In addition to the cultural and ethical concerns presented by a rise in incarceration rates, practical concerns of offender housing, protection, and rehabilitation all have become



critical. The past decade has seen corrections officials and mental health professionals working to undo the overcrowding situation caused by, some speculate, tougher sentencing laws and two decades of a “nothing works” philosophy toward offender rehabilitation (Martinson, 1974; Lipton, Martinson, & Wilks, 1975; Lipton, 1995). In doing so, administrators and educators must take into consideration the variety of needs of offenders, as well as the many barriers to their rehabilitation.

The increase in arrests, felony convictions, and incarcerations for female offenders also presents a set of unique challenges to the corrections system at large. For many decades the prevailing attitude toward female inmates has been one of neglect. Prior to that time period, women were housed in the same institutions as men or, if younger and with less severe criminal histories, sent to reformatory schools to correct their behavior. Educational programs for men were not replicated for women because of a prevailing attitude that women would not need the same tools after release. In addition, many treatment programs for men were not provided for women; the reason frequently given was that female populations were too low for treatment to be cost-effective (Chesney-Lind, 2003). It is now hypothesized that the growth of the female offender population is due in part to the gross neglect of the correctional system, and treatment programs of all types are needed more than ever (Schram, 2003).

When considering how to affect change in the lives of offenders, criminal justice researchers have focused on two types of variables: static and dynamic variables. These researchers use the term “static variables” to refer to aspects of the offender that cannot change, such as age, race, or family history variables. Dynamic variables refer to

qualities of the offender's life that are open to change. These variables may include characteristics such as education level and marital status, or may refer to specific behaviors, such as recent drug use or violent behavior. In recent years, research in correctional programming and offender recidivism has revealed that, although some static variables are important in recidivism, dynamic aspects of an offender's lifestyle and personality often are stronger predictors of recidivism (Gendreau, Goggin, & Paparozzi, 1996). Age is by far the strongest of the static predictors. Researchers find that younger offenders are much more likely to recidivate than older offenders (Gendreau, Little, & Goggin, 1996). Differences on other static variables, such as sex and ethnicity, often vary among studies. The *Bureau of Justice Statistics*, summarizing both federal and state offender databases, reported only age and type of offense as having significant correlations with recidivism rates (BJS, 2001).

As more research has emerged emphasizing the importance of dynamic factors in predicting recidivism, researchers in criminal justice and psychology have worked to determine which dynamic factors are of greatest importance. One important factor identified in many studies is an offender's level of educational achievement (Gendreau et al., 1996; Lipton, 1995). The *Bureau of Justice Statistics* has reported that only 56 percent of state prison female inmates had a high school diploma, a General Education Diploma (GED), or a degree requiring more formal education. In addition, De Li, Priu, and MacKenzie (2000) found that ex-offenders who participated in adult education post-release were significantly less likely to commit additional drug and property crimes than ex-offenders who did not attempt to improve their education.

Another dynamic factor that is important in preventing recidivism is obtaining and maintaining a job. Researchers have shown strong correlations between unemployment and recidivism, especially in cases concerning drug and property crimes (Sampson & Laub, 1993; Horney, Osgood, & Marshall, 1995). The relationship between recidivism and unemployment is so well-researched that most treatment programs, no matter what the focus of treatment may be, touch on work-related issues.

Obtaining a job likely is more difficult for offenders than it is for adults who have not been incarcerated (Bouffard, MacKenzie, & Hickman, 2000). Depending on the nature of the offense for which they were convicted and or incarcerated, employers may have biases or moral objections against hiring released offenders. Most offenders also have difficulty establishing themselves in a secure home after their release from prison; thus, the lack of telephone service, professional clothing, and other necessities can hinder their finding good jobs. Even when these obstacles are overcome, however, offenders have more serious barriers to meaningful employment. As noted previously, many offenders do not have enough formal education to compete successfully for many jobs on the market. Approximately 60 percent of offenders have completed a high school diploma or GED; however, achievement at this level is not satisfactory for many jobs that could provide a reasonable income and benefits. Many offenders also have either limited job experience as a result of their criminal backgrounds, or have many short job experiences interrupted by arrests, sudden resignations, and firings because of interpersonal problems at the workplace (Bradley, 1985; Railey & Peterson, 2000). Such job histories limit offenders because in either case, potential employers can neither obtain

good references nor have faith in the offender as a good employee (Twentyman, Jensen, & Kloss, 1978; Speas, 1979; Spencer, 1980; Calabrese & Hawkins, 1988).

Jobs also may be difficult to obtain because of internal barriers to gaining meaningful employment. Some offenders may have difficulty determining what type of job would be interesting, or may even have difficulty seeing work as a life event in which they could find satisfaction. Some offenders may feel that they have too many family and social pressures to be able to explore and find a good job. Other offenders may feel that their life experiences have prevented them from getting the education and training that they need, and may think of these barriers as irreversible (Feldman & Marinelli, 1975; Deming & Gulliver, 1981; Bradley, 1985; Railey & Peterson, 2000). Internal barriers such as these are a specific subtype of dynamic variables called attitudinal or psychological variables, and often are studied by psychologists and other researchers using self-report measures.

Although the above barriers to meaningful and gainful employment may apply to most offenders exiting prison, female offenders face increased difficulties above and beyond those experienced by males. Female offenders often have histories of physical and sexual abuse from both childhood and adulthood that contribute to a lack of self-confidence, a mentality of helplessness, and serious mental and emotional disorders, all of which hinder job applications and maintenance. The 1999 *Bureau of Justice Statistics* report also indicated that incarcerated women are the mothers of approximately 1.3 million children. Although the number of children for male inmates is higher, it should be noted that much larger proportions of women were living with their children and

engaging in caretaking duties prior to incarceration (BJS, 1999). These women must assume not only financial care for their children upon release, but also will be responsible for seeing to their children's daily care and emotional needs. Furthermore, current welfare laws in the United States restrict welfare eligibility for people who are convicted of a felony drug offense. Most female inmates were already in straitened financial circumstances prior to incarceration. In the 1999 *BJS* report, only 40 percent reported full-time employment prior to their arrests, and 30 percent reported receiving welfare assistance immediately before their incarcerations (compared to eight percent of the male inmate population). The restrictions on eligibility are far more harmful for females, then, who already may have been reliant on welfare as a source of income (BJS, 1999; Kubiak, Siefert, & Boyd, 2004).

As the current philosophy in corrections is to use incarceration as a time for rehabilitation, administrators have attempted to address some of the problems experienced by offenders looking for work (Cullen & Gendreau, 2000). Some researchers, however, have expressed concern that some of these efforts also may contribute to recidivism because of a lack of thoughtful job planning and job placement in the system (Bouffard et al., 2000). Most importantly, many jobs taken by ex-offenders often are stressful, and may not correspond with offenders' interests. The jobs for which vocational programming prepares offenders often involve physical labor, long hours, and low pay. Many of the jobs are sex-stereotyped positions: work programs for female offenders often place the women in fast-food industry jobs, janitorial work, or landscaping (Railey & Peterson, 2000). These jobs often either pay minimum wage or

may offer a higher salary, but they do not typically offer benefits. Such jobs also are highly dependent on seasonal work and economic forces, and can be difficult to find at times. With little else to look forward to, the stress in such jobs and limited rewards available may drive many ex-offenders back to substance abuse and crime (Deming & Gulliver, 1981; Bouffard et al., 2000; Railey & Peterson, 2000).

The issue at hand, then, is not about finding a job for offenders- any job; rather, it is about finding a job that will promote stability and positive change in an ex-offender's lifestyle. In addition to addressing practical needs, such as actual on-the-job training, vocational programming in corrections also should address the financial and psychological importance of work, encourage offenders to look for jobs that are more satisfying and interesting, and help offenders to think about long-term goals and what steps might be needed to achieve such goals. Offenders should be encouraged to think about the concept of a career instead of a job, and career development counseling and training, as proposed as discussed by Vernick and Reardon (2001) should become a major focus of pre-release programming.

Vocational programming for women, however, may require some extra elements in order to meet their specific needs. Programming for female inmates also must address lifestyle factors and help women to balance their work needs and their family needs. In addition, programming for female inmates should be designed to empower women by improving self-esteem and self-efficacy, and by reinforcing their ability to be independent (Schram, 2003).

Vocational psychology, one branch of study within the field of counseling psychology, is devoted to exploring career interests and career-related psychological constructs, as well as to helping people explore and develop their own interests. Much of the research in vocational psychology has been on late adolescence or college-age populations, and has not focused on subsets of the general population who may have multiple special needs while searching for a career. Vocational psychology has the potential, however, to be highly useful in corrections (Vernick & Reardon, 2001). Combined with the work and vocational education programs already in place, career development programs could help offenders to identify their interests, and to seek jobs within correctional industries that might have personal appeal, as well as train them for a future career. Career development programming also could provide more in-depth training in applying for jobs and maintaining jobs through socially appropriate and conscientious behavior in the workplace, and could focus more on the importance of work in maintaining a desirable lifestyle. As career development programming is more focused on individual differences and more comprehensive in its coverage and goals, job skills, application training, interpersonal skills, and life skills are all within its boundaries (Phillips, Strohmer, Berthaume, & O'Leary, 1983).

One career counseling construct that may be of particular interest in working with offenders is career decision-making. The idea of career decision-making refers not only to the actual decisions that are made, but also to the process of deciding and what emotional, practical, and psychological factors people allow to influence their decisions (Super, 1953; Crites, 1961; Osipow, 1983; Taylor & Betz, 1983). Many vocational

psychologists believe that the ability to make sound career decisions results from a developmental process that begins in early adolescence and continues throughout the life span (Super, 1953). Some criminologists have suggested that offenders experience a disruption in developmental processes that normally occur in adolescence because of the deviant behavior in which future offenders often engage (Bonte & Gendreau, 1990). Career decision-making likely is one of these interrupted processes. With no sound education on which to base job talents and preferences, limited early work experiences, and an environment which likely is not supportive of the traditional work force, offenders may not have the developed abilities to think of careers in a mature way, or to consider work as a necessary and potentially satisfying part of life. In addition to the difficulties experienced by offenders in general, female offenders may be particularly susceptible to decision-making difficulties because of their own stereotyped views of women and the role women play in directing their own lives (Schram, 2003). In short, offenders' vocational preparation and experience may be unsatisfactory in a number of ways, and the lack of decision-making abilities prevents them from changing their work situations readily. Vocational programming, then, must focus on career decision-making as a necessary component of an offender's vocational training.

A critical related construct is that of career decision-making self-efficacy, first discussed by Taylor and Betz in 1983. Career decision-making self-efficacy unites the vocational decision-making with the construct of self-efficacy, first proposed by Albert Bandura (1977). Bandura described self-efficacy as the set of beliefs an individual holds about his or her ability to perform specific skills. Taylor and Betz (1983) extended the



original definition into vocational psychology when they proposed that career decision-making entails not only a person's decision-making style and options, but also her perceived ability to make appropriate decisions. In other words, an individual may be capable of making a thoughtful and appropriate decision, but may not view herself as able to make good decisions. As stated before, many female offenders have low self-esteem because of a variety of life experiences, which often may translate into low self-efficacy for self-care behaviors (Schram, 2003). Career decision-making self-efficacy is crucial to programs with offenders, who have a history of making bad decisions and who may believe that they are not capable of positive change.

This project examines offenders' career decision-making and career decision-making self-efficacy in the context of a group-based, time-limited career intervention for female offenders. The program is administered as part of a detention/diversion program, so that program participants are exposed to job experiences and corrective interpersonal experiences at the same time that they receive career counseling. In accordance with recent meta-analytic research findings in career programming, participants are given written exercises about careers, given individualized assessments and feedback, encouraged to share job experiences and feelings about work with other program participants, and given training in how to apply for jobs and how to communicate at work (Brown & Ryan-Krane, 2000). The program is run over a 13-week period, and meetings occur on a weekly basis; it is led by an advanced graduate student and a team of volunteer psychology students.

Given the aims of career programming in general, and career interventions for female offenders in particular, career decision-making abilities and self-efficacy are a central focus for the INTUIT program. Regardless of other outcome measures, increases in career-decision-making abilities and self-efficacy will help female offenders to make more thoughtful and satisfactory work decisions upon release. Following a chosen career path likely will produce higher job satisfaction, higher job status, and an increased income, which all then become deterrents to future criminal activity.

In this study, three decision-making measures were administered both to participants and to a control group of female offenders in the same facility. The measures were given at the start of the program, as well as at the program's conclusion. Annual analyses of the resulting data have yielded some interesting results in terms of the offenders' development. This study aims to look at the effect of vocational programming on career decision-making and career decision-making self-efficacy through two administrations of the program (a one-year period of time).

## Literature Review

### *The Condition and Needs of Female Offenders*

Female offenders are an ever-present group in the population, but are just beginning to receive attention from the media, the public, and criminal justice researchers. Reasons for this longstanding neglect abound, according to Chesney-Lind (2003). Many criminal justice researchers and policymakers have argued that the female offender population is too small to warrant the expenditures that research and treatment would require.

The neglect of this population in treatment and public policy is reflected in a general lack of interest in the research literature of both criminal justice and psychology. In recent years, however, several researchers have begun to draw attention to the results of this neglect by highlighting statistics about female offenders in comparison to male offenders. Chesney-Lind (2003) pointed out that in the past 20 years, the number of incarcerated women in the United States has increased from 12,000 to approximately 90,000. In addition, she noted that the United States has incarcerated ten times the number of women incarcerated in all of Western Europe.

The Bureau of Justice Statistics provided a comprehensive overview of the national condition of female offenders in its 1999 report (BJS, 1999). In the 1999 report, female offenders accounted for 22 percent of all arrestees and 16 percent of the total correctional population in the United States (951,900 women incarcerated, on probation, or on parole). Violent female offenders accounted for 14 percent of the total violent

offender population, with 75 percent of the group having committed simple assault. The highest proportion of arrested women was arrested for committing property crimes.

Female arrests accounted for 29 percent of all property arrests in 1998. Females who had committed property crimes also constituted the highest percentage of the population in all types of correctional facilities, though very high proportions of drug offenders also could be found in local jails and state prisons (BJS, 1999).

In the 1999 report, approximately equal numbers of African-American and Caucasian females were in the correctional system, although a larger proportion of African-American females were incarcerated in comparison with the proportion of incarcerated Caucasian females. Approximately 15 percent of women in the correctional system were Hispanic. The average age of female offenders was 33 years, though some variability was seen when institutional status was taken into account. Approximately 60 percent of incarcerated women had completed at least their high school education, although the percentage of high school graduates again varied by institutional status (local jail, state prison, or federal prison). Approximately 70 percent of incarcerated women had minor children, and reported having 2.11 children on average (BJS, 1999).

In terms of economic circumstances for the female offender population, only 40 percent of incarcerated women reported that they had been working full-time prior to arrest, in comparison with 60 percent of incarcerated men. In contrast, 30 percent of incarcerated women were receiving welfare prior to their arrest, as opposed to eight percent of male inmates (BJS, 1999). These statistics hint at some of the difficulties experienced by female offenders, especially given that federal legislation restricts

convicted felons from receiving state and federal financial assistance (Kubiak et al., 2004).

The follow-up report examining recidivism among female offenders also suggested that the longer women remained in the correctional system, the greater the cost both for incarcerated women and for the public (BJS, 1999). Prior arrest history was a major predictor of recidivism. Whereas women with only one arrest displayed a low recidivism rate (21 percent) within a three-year follow-up period, the recidivism rate increased steadily with the number of prior arrests up to an 80 percent recidivism rate for women with 11 or more prior arrests. Some researchers have suggested that this statistic underscores the need for early and effective interventions with this population (BJS, 1999).

Several authors have examined the populations and conditions at individual facilities, which is useful for providing a more detailed look at the unique qualities and needs of the female offender population. Alemagno (2001) surveyed a group of incarcerated female volunteers from an urban area in Ohio. She found that 72 percent of the sample was African-American, and 78 percent of the sample was under the age of 40. Fifty-six percent of the survey respondents had a high school degree or GED, a percentage that commonly is reported in reports for incarcerated women (BJS, 1999). Over 99 percent of the women sampled were mothers. Surprisingly, within this single jail facility, the women incarcerated had committed a variety of crimes ranging from drug-related offenses to assault and murder. Only 25 percent of the women reported that this was their first incarceration. In spite of the fact that the majority (85 percent) of

women had been arrested on drug or alcohol-related charges, only 50 percent indicated that they needed drug treatment. Almost 44 percent had been in some form of drug treatment in the past year, and one-third of the sample had used mental health services in the past year. The women also self-reported a large number and variety of needs upon release, including needs for stable housing (84.1 percent), education or job training (62 percent), and mental health services (61.5 percent).

Kim (2003) examined the 1999 statistics from the Bureau of Justice Statistics and applied them to qualitative discussions held with women in an urban jail in the Midwest. She pointed out that the nature and qualities of crimes committed by females may reflect difficult economic and interpersonal circumstances, and result in long-term negative effects. One example was that most violent crimes committed by females tend to be against an intimate or relative. These assault cases often stem from long-term abuse on the offender herself. In addition, upon release from incarceration, the offender was more likely to be alienated from her family and friends, thereby losing both the emotional and financial support needed to reestablish herself. The high proportion of women incarcerated in jails was a problem as well, as more women were without steady work and work-related benefits such as health insurance. Kim (2003) also interviewed many women who stated that they found reintegration into society difficult because of the loss of freedom and decision-making ability they experienced while incarcerated. These losses, combined with pre-existing low levels of self-esteem, abuse histories, longstanding poverty, and multiple health concerns, made it very difficult for the women to find steady income and stable housing. Kim (2003) concluded by representing the

need for correctional facilities to work with health care agencies and social services in order to prevent recidivism of female offenders.

Messina, Burdon, and Prendergast (2003) reviewed intake data for both male and female inmates who were placed in 15 prison-based therapeutic communities in California. Demographic differences between men and women were numerous. Women were slightly older than men on average, and had completed fewer years of education. Men had a 53 percent employment rate prior to incarceration, as compared with 33 percent of the women; in contrast, the percentage of women relying on friends, family, partners, and welfare for financial assistance was twice as high as the percentage of men. The average legal income for women prior to incarceration was \$6000 lower than that of men. Twenty-five percent of women reported abuse as a child, compared to 14 percent of men. The same percentage of women reported abuse as an adult. Messina et al. (2003) noted that these rates are low compared with typical self-reports of abuse from incarcerated women. Women were three times less likely than men to have graduated from high school or obtained a GED. Messina et al. (2003) argued that the more traumatic histories, the greater financial struggles, and the increased psychological problems reported by the female inmate population warrant a closer look at research and specialized treatment.

The literature on female offenders, though small, has demonstrated amply the need for specialized interventions for the population. The difficulties female offenders have in maintaining regular employment, stable housing, and positive social support are prime problems cited in all of the aforementioned articles. As many of these women

have not completed enough years of education to hold a stable and well-paying job, they have difficulty maintaining stable housing and caring for their children adequately.

Psychological problems, substance abuse, and environmental problems all contribute both to the commission of crimes and to the struggle to survive after being incarcerated (Schram, 2003). Programs are available that address substance abuse and mental health in jails and prisons. Probation offices and clinics provide options for treatment after release. Establishing and maintaining an adequate job and a stable home, however, are activities that involve many skills with which offenders have no training or experience. The next section addresses the need for vocational interventions and vocational theories that may be useful in helping serve this area of female offenders' needs.

#### *A Need for Vocational Psychology in Offender Treatment*

In 2001, Vernick and Reardon published a review of vocational interventions in corrections and expressed the need for interventions focusing on career development in addition to the vocational training and life skills interventions already in place at many facilities. They pointed out that although statistics indicate that many facilities have vocational programming of some sort, very little is published on such interventions, and many corrections officials treat vocational programming as a minor issue in comparison to programming for drug abuse, violence, and anger management. Vernick and Reardon (2001) argued that this attitude towards vocational interventions is inappropriate, and cited research indicating that ex-offenders who are employed are less likely to recidivate. In addition, they noted that although vocational intervention research in corrections is sparse and weak, many of the published programs had produced positive results,



including lowered recidivism rates, higher rates of post-release employment, and self-reported positive changes in offenders' work attitudes (Vernick & Reardon, 2001). The authors concluded their article by urging both psychologists and corrections officials to place vocational programming for offenders as a high priority in prison-based treatment, and to include elements of personal career development in programming in order to help offenders find satisfying jobs upon release

*Career decision-making: A central variable in vocational interventions for offenders*

Vernick and Reardon (2001) urged that career development be a primary concern in prison-based vocational treatment. They did not specify further, however, as to which developmental concerns might be particularly important for an offender population.

Career decision-making is important in treating offender populations for several reasons.

Offenders comprise a population for whom good decision-making skills decidedly are lacking. Often, their incarcerations are the result of a series of bad decisions in a variety of areas, including choice of friends and choice of career. Bonta and Gendreau (1990) have postulated that punitive measures in criminal justice only serve to introduce offenders to other people with similar backgrounds, goals, addictions, and moralities, thus creating a "school of crime" in detention centers and offender-based treatment.

Although vocational psychology has not addressed this issue in detail, an explanation from the field may be found in Super's (1953) theory. Super (1953), as stated above, thought that career maturity must develop in order for individuals to make effective career related decisions. In addition, he postulated that the career maturity process starts to develop in adolescence for most people. For offenders, criminal behavior often begins

in adolescence; therefore, much of the time that most adolescents spend in career development may mirror time spent by future offenders in truancy and delinquent behavior. As future offenders follow this path, they both develop skills in criminal behavior, and narrow other career possibilities through educational limits, limitations associated with a criminal record, and a lack of career maturity and interest.

When addressing the career-related needs of offenders, then, career decision-making may be even more critical than it is in career interventions for the general population. Many offenders may have a limited understanding of themselves, their interests, what careers may match their interests, and how such careers are obtained. In addition, many female offenders also are used to having others make decisions for them, and may be unsure of their abilities, both to maintain a job and to make satisfactory career decisions alone (Schram, 2003). As a result, career decision-making self-efficacy also must be addressed so that ex-offenders can feel comfortable with the choices that they make and learn to be confident and self-reliant in pursuing career opportunities.

#### *Vocational Psychology: Theories and Primary Constructs*

Although counseling psychologists traditionally have had only limited involvement with offender populations, their level of expertise in career theory and intervention is unmatched. Psychologists began addressing career variables at the beginning of the twentieth century and, since that time, have developed a number of theories addressing how and why people look for work. Of particular importance to counseling psychology is the idea of a “good fit” between a person’s interests and abilities and the requirements and environment of a given occupation. Parsons (1909)

first proposed the idea of the “person-environment fit” in his work, *Choosing a Vocation*. The idea of such a fit has provided a foundation for career inventories, such as the Strong Interest Inventory, and has been elaborated on in many later theories.

### *Career Development Theories*

*The Issue of Person-Environment Fit: Holland.* Some of the most well-known theories, such as Holland’s (1959, 1996) theory, address work typology and propose ways to classify and measure the fit between a person’s interests and his or her chosen profession. Holland’s (1959, 1996) theory divides occupational tasks and interests into six areas: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Holland (1959, 1996) also postulated that human interests and facets of a person’s personality fit into the same six categories. Realistic tasks/interests are those that involve working with machines rather than people and physical labor as opposed to high mental labor. Electrician, plumber, construction worker, and truck driver are all examples of primarily Realistic jobs. Investigative tasks/interests also often involve working with machines more than other people, but require high levels of academic achievement and usually involve working with data as opposed to tangible objects. Researcher and computer programmer are examples of primarily Investigative careers. Artistic tasks/interests are those that involve a combination of physical and mental skills used in creative and expressive ways, and also usually require more work with tools and machines than people. Musician, playwright, and sculptor are all examples of Artistic professions. Social tasks/interests involve working with people more than machines, usually with a goal of helping others. Some examples of Social professions are teacher,

psychologist, and social worker. Enterprising tasks/interests also involve working with people more than machines, but differ from Social tasks in that the goal is usually to produce capital from working with others. Store clerks, realtors, and lawyers are primarily Enterprising occupations. Finally, Conventional tasks/interests usually involve a mix of working with machinery and working with people, and often are sex-stereotyped. Accountants and secretaries are examples of Conventional occupations.

Although Holland (1959, 1996) did not ascribe to the idea that every person has an “ideal” occupation, he thought that by matching facets of personality and individual interests to careers as organized by their most salient characteristics, individuals could achieve higher levels of satisfaction with their chosen careers. Since its initial publication, Holland’s (1959, 1996) theory has been addressed and validated in many areas of research, and currently is used in several career counseling inventories and many career interventions.

*A Developmental Perspective: Super.* Other theories address the development of career-related thoughts and interests, such as Super’s (1953) examination of career development over the lifespan. Super’s (1953) theory, which focuses on the developmental processes behind career interests, choices, and changes, has had a heavy impact in career psychology. He proposed that people’s career interests, career stereotypes, and career decision-making abilities develop with age and life experience. As with other developmentally oriented theories, Super (1953) proposed that career development occurs in a series of stages during the life-span, and develops as individuals’ mental and emotional capabilities and decision-making skills change. Specifically, Super

(1953) stated that individuals simultaneously individuate from others at the same time that they identify with people in their lives and, consequently, those people's decisions (Super, Savickas, & Super, 1996).

Super (1953) conceived of five stages in career development. His first stage, growth, generally is assumed to occur in childhood and early adolescence, as an individual develops preferences for certain tasks, begins developing unique skills that could be useful in a workplace, and learns about careers in general from teachers, parents, and other adults in his or her environment. Exploration is Super's (1953) second stage, and generally lasts from adolescence through early adulthood (currently considered to be mid-twenties). In the exploration stage, an individual considers career options in a more detailed and thoughtful manner than before, and ultimately chooses a career to pursue based on his or her individual interests, as well as other influences in his or her environment. In Super's (1953) third stage, establishment, an individual settles into a chosen career and begins the process of becoming a full-fledged professional in that career. Establishment tasks may start with additional education or apprenticeships, but are markedly different from exploration tasks in that the individual is learning very specific information about a chosen career that will help him or her progress. The fourth stage in Super's (1953) theory is called maintenance, and generally corresponds with middle adulthood; in this stage, a professional engages in tasks that will help to maintain the status, job, and salary level he or she already has attained. Some professionals at this stage may choose to pursue establishment tasks in order to advance to top levels in their careers as well. Super's (1953) last stage is called disengagement, and corresponds with

older adulthood. In this stage, professionals gradually decrease their involvement with work tasks and eventually transition into partial or full retirement from their careers (Super, Savickas, & Super, 1996).

As individuals age and mature intellectually, they engage in six primary career-related tasks. Crystallization involves the formation of distinct personal interests, as well as using one's own interests in order to think about career possibilities. Specification concerns narrowing multiple career possibilities into a primary area or specific career, as well as undertaking any necessary education or training to qualify for the identified career. Implementation comes at the point at which an individual is ready to complete final training and enter his or her intended career. Stabilization, the fourth task, includes establishing oneself in a career, which may involve changing jobs but not the overall career path. Consolidation, which usually occurs in the thirties and forties, involves advancing in one's chosen career. Tasks during this time may include additional training, but any education is undertaken with the idea that it will help further the individual in his or her current career. Finally, disengagement is the last stage in Super's (1953) career development theory, in which an individual slows work and replaces work with individual interests and preparations for retirement (Osipow, 1983; Super et al., 1996). As in other traditional developmental theories, Super (1953) conceived of optimal ages at which certain developmental stages and activities are achieved. In addition, he also stated that certain processes must develop before others are possible. For example, he believed that an individual must engage in career exploration to some extent before making any career decisions.

A unique aspect of Super's theory was his hypothesis about how people view the variety of career choices available. Super (1953) proposed that as people age, they begin to narrow choices for careers based on their interests and abilities. The narrowing process being in mid- to late adolescence, and may continue through the college years for many young adults. Super (1953) thought that the way in which people narrow or expand career choices was related to career satisfaction. He hypothesized that a normal developmental pattern of career choice would lead to greater satisfaction in the eventual career decision than a pattern in which a decision is reached too quickly (known as foreclosure) or a pattern in which an individual is unable to narrow his or her options (Super et al., 1996).

Super's et al.'s (1996) concept of career foreclosure has proved particularly useful in examining issues such as job stability, college careers, and job satisfaction. As foreclosure generally is considered to have a negative impact on career development, many researchers have become interested in identifying foreclosure early in the career maturation process, and studying its antecedents and effects (Blustein, Ellis, & Devenis, 1989).

In examining the ways in which people choose and implement careers, Holland (1959, 1996) and Super (1953) have provided two theories that explain what types of decisions individuals are able to make, and what developmental processes they must experience and complete successfully in order to make good decisions. More recently, researchers in vocational psychology have expanded these theories and adapted theories from social psychology in order to explore the actual process of career decision-making.

### *Career Decision-Making*

In career interventions, career decision-making and career decision-making self-efficacy are two variables in which change often is related to successful outcomes (Betz, 1996). Career decision-making refers both to the content of a person's career decisions and to his or her decision-making style. Out of the many variables available for research in career psychology, career decision-making is one of the most important for many reasons. Obviously, career decision-making is the process by which an individual's actual education and career alternatives are chosen. In addition, however, career decision-making processes and abilities affect many other life factors, such as health, socioeconomic status, and stress, which can in turn affect career satisfaction. Career decision-making also is affected by many variables, including both static variables such as sex and race, and dynamic and personal variables such as self-efficacy, educational attainment, and mood. Ironically, career decision-making does not always achieve importance in career interventions because many people concern themselves with related variables, such as educational needs, self-esteem, or finding a good fit between career typology and personality (Taylor and Betz, 1983).

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

A related variable of central importance, both to career psychology and to offenders specifically, is the concept of career decision-making self-efficacy. Career decision-making self-efficacy refers not to the content or type of decisions made, but rather to an individual's confidence in his or her ability to make an appropriate decision. The concept of self-efficacy was developed by Albert Bandura (1977) and has been



generalized across many specific processes and behaviors. In 1983, Taylor and Betz published an article detailing how self-efficacy applied to career psychology. They proposed that individuals attain success in career exploration and in careers according to their beliefs in their abilities to succeed, rather than in the strength of any actual skills they may possess or decisions they may have made. As in Bandura's (1977) original theory, Taylor and Betz (1983) claimed that self-efficacy developed from behavioral, cognitive, and emotional sources of information about career decisions. They also proposed that career decision-making self-efficacy affected multiple areas of career-seeking behaviors, including the ability to pursue interests and the level of perseverance with which career interests are pursued.

#### *Vocational Programming with Female Offenders*

As the overall body of research on female offenders is rather small, it stands to reason that the research on treatment of female offenders is very sparse. Vocational interventions, as a single aspect of treatment, often are neglected in comparison to substance abuse and mental health treatment; thus, they are seen rarely in the literature (Sharp, 2003). Several authors in the past decade, however, have begun to explore the effectiveness of vocational interventions on female offenders. Though most of these interventions do not address career planning using the theories described above, they constitute some of the most advanced treatment in this area to date. The evaluations on these programs are outlined below, as they highlight both the benefits of vocational treatment with female offenders and point to problems in the current system and its lack of focus on career concepts.

Brewster and Sharp (2002) examined recidivism rates of offenders who had participated either in educational or vocational-technical programming while in the Oklahoma correctional system. The authors defined recidivism as the rate of reconviction rather than re-arrest. They also used survival time, or number of months spent in post-release before reconviction, as a dependent variable. Both male and female offenders were included in their analysis. Offenders either had participated in educational programming (specifically, GED programming) or participated in a vocational-technical program teaching actual work skills. Of the two program types, 9.5 percent of the GED participants were female (548 women), and ten percent of the vocational-technical program participants were female (1,128 women). Analyses for both types of programming indicated that females had significantly longer survival times than men. Considering that recidivism rates generally are not different for males and females (BJS, 1999), this finding demonstrated one benefit of programming for females. Further, separate analyses of the programs showed that GED program completers of both sexes had longer survival times than GED non-completers of both sexes. For the vocational-technical intervention, however, outcomes were very different. Completers of these programs, whether male or female, had significantly shorter survival times than non-completers of these programs.

Brewster and Sharp (2002) noted the particular importance of GED programming for the women in their sample. Given that women have more limited educational backgrounds upon entering prison, they speculated that GED programming may help them to attain higher-paying and more stable jobs post-release. The researchers also

addressed the finding that completion of vocational-technical programming shortened survival time. Although noting that self-selection into such programs may have affected results, they also commented on the type of training being offered. Brewster and Sharp (2002) noted that the teaching of specific job skills did not necessarily guarantee offenders a job post-release, and did not help with job searches, applications, interviews and other important workplace social skills. They concluded by calling for these issues to be included in future programming.

Brewster (2003) conducted a study looking at the philosophy of rehabilitative justice and its effects on the recidivism of female inmates. He took a sample of 1,233 female inmates in the Oklahoma correctional system who did not have a high school diploma. Enrollment and performance in GED programming was monitored. After release from prison, the women were followed from a period of 36 to 60 months (the length of time depended on the release date). The same process was repeated for a group of 2,811 incarcerated women who had participated in vocational-technical programming. The primary dependent variable was the number of months post-release, though crime type data was collected for those women who were reconvicted of a crime. Brewster (2003) noted that in the first regression model, completing GED programming significantly increased survival time post-release, though only 12.7 percent of the GED sample completed programming. In the second regression model, though only four percent of the sample completed vocational-technical programming, program completion was found to decrease survival time significantly. Brewster (2003) noted the replication of the results found by Brewster and Sharp (2002) and called both for further research

and for changes to be made to programming in order to reduce the number of program dropouts.

Railey and Peterson (2000) hypothesized that dysfunctional career thoughts and the inability to identify or act on vocational interests are factors that contribute to recidivism. To test their hypothesis, the authors separated 92 female offenders into first-time, repeat offender, and probationer categories based on their records. The researchers' intent was to see if vocational identity and career-related thoughts changed as the offenders became more involved with the criminal justice system. Although the authors did not report the results of any analyses of demographic data, they reported that the three groups were similar with the exception of type of crime committed. A much higher percentage of first-time incarceration offenders had committed a violent offence (68 percent in comparison with approximately 30 percent in the other groups). All the offenders were administered the Self-Directed Search and the Career Thoughts Inventory once. Efforts were made to standardize the administrations as much as possible, although probationers likely completed the tests in a calmer environment. The offenders were not compensated for their participation. A multivariate ANOVA was performed and showed a significant overall effect for the Career Thoughts Inventory. Follow-up univariate tests showed that the groups differed significantly on Commitment Anxiety (one of the CTI scales), but not on Decision Making Confusion or External Conflict. The repeat offender group reported significantly lower scores on Commitment Anxiety than either of the other two groups.

Railey and Peterson (2000) identified weaknesses in the study, such as the small sample size. They identified prior episodes of recidivism and social support of criminality as factors contributing to the repeat offenders' lower anxiety scores. In addition, Railey and Peterson (2000) focused on how the higher levels of anxiety experienced by first-time offenders and probationers could be used to change maladaptive work behaviors. The authors emphasized the need for early career intervention in the correctional system as a means of preventing recidivism. Another approach to the results, not addressed by Railey and Peterson (2000), may be that offenders with multiple incarcerations are less anxious about career commitment because they are already committed to a criminal profession. The results are inconclusive, however, because of the very small sample size.

#### *A Need for Stronger Research*

Though the programs reviewed to date have presented some promising results and suggested some areas for future exploration, the research has been sparse and unreliable for several reasons (Antonowicz & Ross, 1994; Bouffard et al., 2000; Brown & Ryan-Krane, 2000). Sample sizes were either small or disparate in comparison groups, and likely skewed outcomes. In addition, many researchers did not discuss the multiple programs to which offenders were exposed, nor did they take possible dual-intervention effects into account in their findings. Finally, none of the studies reviewed addressed offenders' career needs from both practical and psychological standpoints. Some programs in the literature focused on finding offenders any job regardless of interest, whereas others focused on career goals and psychosocial variables without considering

career progressions or potential barriers for the offenders in treatment. As offenders often face both personal and social barriers to gaining profitable, desirable, and legal employment, future vocational programming must address all of these areas in order to affect personal and professional change for ex-offenders in the work force.

### *Effectiveness of Vocational Programming in Corrections*

Many of these programs may be considered successes to the extent that they keep offenders busy and reduce the amount of disruption and violence that can occur in prison. They also help to teach offenders responsibility by allowing them to receive raises, to pay for their own goods, and to maintain a certain standard of behavior. Some of the programs, such as job application training and diversion programs, also help to place an offender in a job upon leaving prison, an effort that can help to delay or prevent recidivism.

Over time, however, it may be more difficult to consider these types of programming as having long-term success. Although many programs show positive results, typically the positive effects are seen in a variable known as “time to re-arrest,” in which the amount of time between an offender’s release and his or her next arrest is measured. Such results may be a part of reducing recidivism and improving outcomes for ex-offenders; however, the idea that an extended “time to rearrest” is the best outcome to be hoped for reinforces the problems of the current vocational training system.

*Traditional post-release jobs are inadequate for offender needs*

Several qualities of vocational and educational programming are particularly at fault. A primary problem is that in corrections-based vocational programming, offenders are generally taught or exposed to jobs that provide a low income and a low status in society (Bradley, 1985). For females, jobs include mostly low-paying and low-status sex-stereotyped positions such as secretary, librarian, or janitor (Schram, 2003). A lack of education and reinforcement for physical labor may lead both prison officials and offenders to believe that such jobs are as much as can be expected for an offender population. Bradley (1985), in his description and evaluation of one career program for offenders, found that most offenders initially identified interests and skills compatible with the low income and low status jobs that they expected to obtain.

These jobs may accomplish short-term goals such as ensuring jobs get completed within the prison and establishing offenders in a paid position upon leaving prison. However, offenders who have spent years making more money in their criminal careers may find it difficult to transition to a job where the pay is perceived to be inadequate for their needs. Under these circumstances, it is hardly surprising that many offenders might return to their criminal careers. A similar situation exists in educational programming in that GED completion is encouraged, but only a few facilities assist offenders in continuing their education beyond the high school level. Correspondence courses are permitted, but few facilities provide on-site post-secondary education.

#### *Lack of career choices*

Another problem in corrections-based vocational programming is that offenders typically have little or no choice in the type of training that they receive. Offenders often

are limited by the jobs available in the facility or in the community. These jobs, as stated before, are usually low-income and low status jobs that may not support the offender upon release. In some cases, an offender may have training or desire training for a job that she is not permitted to perform. In other cases, the available options may not be appealing, and the offender may not be motivated enough to learn new skills or maintain a satisfactory level of performance at work. Many offenders may not realize fully the variety of opportunities that are available, and may not feel encouraged to think about a higher paying job of satisfactory social status. This system directly contradicts a core tenet of vocational counseling: a good fit between a person's personality and her work environment leads to desirable outcomes in a person's career (Parsons, 1909; Holland, 1996). The lack of choice for offenders is particularly unfortunate. As individuals who have not received as much social skills training or job training, distaste for their assigned jobs and the delayed gratification inherent in a career path will make it much more difficult to maintain a job and avoid criminal activity.

*Vocational programming: A "school of crime?"*

Recent research using more sophisticated methods of data collection and analysis has shown that not all programming is beneficial. Depending on the needs and traits of the offender, some programming may have detrimental effects (Bouffard et al., 2000). Several criminologists have referred to prison itself as a "school of crime," in which offenders make additional criminal contacts and learn new ways to use drugs and commit offenses (Bonta & Gendreau, 1990). Although this idea has not been addressed in the mainstream psychological literature, the idea may be similar to career development as



proposed by Super (1953). Super (1953) proposed that the process of deciding on a career, learning about basic job skills, and learning specific job skills is a developmental process that each person experiences from early childhood through late adulthood.

Adolescence, according to his theory, is a primary time in which many basic job skills are developed, such as applying and interviewing for jobs, deciding on basic areas of interest, and learning social skills in the workplace. For offenders, the normal developmental career decision-making process likely is skewed, both because of time spent out of school, where many of these lessons occur, and because of time spent with criminal associates instead. The “school of crime,” then, may not apply only to prisons, but to any situation in which an offender is spending time with criminal associates and learning their techniques and behaviors. Many prison-based vocational programs fail to take the important factor of criminal associates into account. As a result, offenders may be placed into programs in which they can strengthen their criminal connections, skills, and attitudes by association with co-workers.

*Lack of focus on skills related to job maintenance*

Finally, most programs currently used in correctional centers pay little, if any, attention to psychosocial factors that could affect both the transition into a community and an offender’s ability to maintain a job (Brewster & Sharp, 2002). Interpersonal factors may be addressed somewhat when educating offenders on how to handle a job interview or workplace conflict. Intrapersonal factors, however, such as self-efficacy to maintain a job and other aspects of personality, remain largely ignored. Without attention to such factors, offenders may be released into the community with a set of job

skills, but without the self-confidence that will enable them to apply for jobs, or to keep applying for jobs after an initial rejection. Offenders also may feel helpless about how to handle other factors in their lives, such as pressure from family and friends, adequate child care, and transportation to and from work. The substantial physical, financial, and psychological barriers to beginning a new job may prove too much for an ex-offender, resulting in a return to old patterns. Although some correctional programming has attempted to address these factors, most studies have been faulty in methodology, resulting in little solid information that can be derived from the literature (Calabrese & Hawkins, 1988).

Improving the research literature on vocational programming for female offenders will require a variety of changes, both in programming structure and content and in research methodology. The following section discusses an alternate method to exploring programming outcomes that may provide more insight than the basic recidivism rates currently collected.

*Career decision-making measures: An alternative method of exploring outcomes*

There are two different types of outcomes that may be used to judge the efficacy of programming in corrections. Behavioral outcomes are valued in the criminal justice field, and include measures such as rearrests, reconvictions, reincarcerations, length of time at a post-release job, and continuing drug use after release. Such outcomes are particularly interesting because they meet the goals most often pursued in criminal justice research, which focus on reducing the number of crimes committed and the number of recidivists in the legal system (Antonowicz & Ross, 1994; Bouffard et al., 2000).

Psychological outcomes include measures of internal change for an individual, derived from questionnaires and statements made by program participants, as well as by other means. Although psychological outcomes do not enjoy as much favor in the criminal justice field, they are valued by psychologists in corrections as being indicators of more permanent changes in offenders' thoughts and feelings that could lead to lifestyle changes, thereby meeting both the goals of both the criminal justice system and psychological treatment (Bouffard et al., 2000; Brown & Ryan-Krane, 2000; Cullen & Gendreau, 2000).

Recidivism rates frequently are seen as a gold standard of outcomes because of their behavioral nature; however, they are open to many flaws as well (Cullen & Gendreau, 2000). Inadequate record-keeping or inappropriate methods of measuring recidivism can skew counts, and such rates also have an inherent logical flaw in that an ex-offender must be caught at continued criminal behavior in order to be counted as a recidivist. Many offenders may return to criminal behavior and, if not supervised closely, may recidivate without being caught for some time. Such data frequently are included in program evaluations as indicators of success or failure of treatment. As program evaluations can place the existence and content of a program at stake, however, the variance in measuring and recording recidivism outcomes is worrisome given their treatment as the outcome "gold standard." Psychological measurements may be as useful, if not more useful in assessing evaluation outcomes (Railey and Peterson, 2000). They may be used at a variety of points before, during, and after an intervention, thereby capturing both the nature and process of any changes that occur. They also help to

provide a more complete record of post-intervention changes in participants. By assessing psychological changes and motivations for change, such assessments also may serve as predictors for future problems and guides for additional programming (Fretz, 1981; Brown & Ryan-Krane, 2000). Detailed below are the career-decision-making concepts detailed earlier in this document and descriptions of the assessments that can capture internal change in these constructs.

*Decision-making style.* Decision-making style refers to the process by which people usually make decisions, including the extent to which they may consult others, the speed with which a decision is made, the amount of research performed about available options, and the extent to which potential consequences are considered. Although decision-making styles have been researched within several branches of psychology, the ideas of Janis and Mann (1977) have been particularly useful in developing measures in career psychology. Janis and Mann (1977) postulated that people make decisions in one of five possible styles. “Unconflicted adherence” is unquestioning alliance to a current decision. “Unconflicted change” is unquestioning change to a new decision. “Defensive avoidance” occurs when a person avoids making a decision because he or she is nervous about potential outcomes. “Hypervigilance” is a style in which a person makes quick, uninformed decisions in reaction to anxiety about potential outcomes. Finally, “vigilance” is a style in which a person makes a decision after a calm, thorough, and organized process of researching choices and consequences. Janis and Mann’s (1977) theory has been extended into career psychology through the writings of Osipow (1983), and also has led to the development of a career decision-making questionnaire, the

Melbourne Decision-Making Questionnaire, which is one of the scales used in the present study (Mann, Burnett, Radford, and Ford, 1997).

*Career Decision-Making Self-Efficacy.* Another approach to decision-making motives and methods emerged from the concept of self-efficacy as proposed by Bandura (1977). Self-efficacy represents an individual's belief that he or she is capable of an action, regardless of whether or not he or she truly has the necessary skills. Bandura (1977) believed that a person's high or low self-efficacy regarding specific skills and decisions could influence the choices made more than the actual knowledge and skills possessed. In 1983, Taylor and Betz extended the concept of self-efficacy in career decision-making, and postulated that people make career choices based on what they believe their capabilities to be, rather than what they actually are capable of doing. Taylor and Betz (1983) pointed out that high self-efficacy could lead a person to make career choices regardless of training and experience, whereas low self-efficacy could prevent an individual from following their interests because of a perceived inability to master the necessary skills. In 1983, Taylor and Betz developed a scale to measure career decision-making self-efficacy, aptly named the Career Decision-Making Self-Efficacy Scale (CDMSE). This scale was used in the present study.

*The Tendency to Foreclose.* Foreclosure is another central concept in the study of career decision-making. Proposed by Blustein et al. (1989) as a part of his work in commitment to career choices, foreclosure refers to the process of making a premature decision and failing to consider additional options when information and interests change. Blustein et al. (1989) proposed that foreclosure often may occur in adolescence in the

earliest part of Super's (1996) exploration stage in career development, and may occur for a variety of reasons, including parental attachment and obedience, reliance on others for decisions, low career-related self-efficacy, or personal values. As a result of his research, Blustein, Ellis, and Devenis (1989) included a Tendency to Foreclose scale (TTFS) within their scale measuring the commitment to career choices. The TTFS is the third scale included in the present study.

In conclusion, current incarceration and recidivism rates show a clear need for increased help to female offenders in a variety of areas. Career change is critical for this population, as stable jobs and career paths will not only promote more life satisfaction, but will also help ex-offenders support themselves financially. Currently, however, many offenders face both internal and external difficulties in finding jobs upon their release from prison. Such difficulties include a lack of knowledge about attaining jobs, inexperience with career planning, and a lack of career decision-making self-efficacy. Female offenders face the additional difficulties of having lower educational attainment, shorter work histories, and, traditionally, more problems with self-esteem and self-efficacy in a variety of areas. Although vocational programming exists in prisons to help with some of these needs, such programming often restricts the offenders to low-paying, low-status jobs, sex-stereotyped jobs and does not encourage offenders to consider their own interests when thinking about potential jobs (Schram, 2003).

Career psychologists have many theories and tools available to help this population. The theories of career decision-making and career decision-making self-efficacy, when paired with person-environment fit theories long used in career

counseling, can help female offenders to identify their needs and interests, consider potential jobs that match these interests, and research career possibilities in a thorough manner. In addition, the process of career programming can help offenders learn basic skills in applying for and retaining jobs, and helps them to gain a positive sense of self-efficacy. The current study focuses on a group of female offenders who received programming with these aims.

## Method

### *Participants*

Eighty female offenders participated in a career development intervention during the 2002-2003 academic year. Forty women participated in a fall program and forty women participated in a spring program. The offenders in programming all were convicted of non-violent felony offenses and had been sentenced to prison time. They resided at a community corrections facility known as a detention/diversion center. The structure of the center was set so that the first part of an offender's stay was spent in a highly structured military environment in which cooperative behavior, obedience, and hard work were encouraged and rewarded. The latter part of the detention/diversion program was devoted to life skills training and off-site work experiences, designed to promote a positive transition from the detention/diversion center. Offenders usually participated in the detention program for 20 weeks, and the diversion program lasted approximately 13 weeks. Not all offenders are mandated to attend both programs. Some of the detainees and divertees have come to the detention/diversion center from a jail or state prison, and so have considerably longer incarceration times than the 33 weeks counted above. Offenders were asked how long they had been incarcerated but the data was not coded because many of the women left the item blank or could not provide a clear answer due to frequent and small sentences. Offenders usually transition from the center to society, rather than returning to another form of incarceration. Transgressions at the center are punished with warnings, isolation, extended releases dates, and possible return to a state institution. Both participants in the career program and detainees who



served as a control group were chosen by an on-site instructor from the Department of Correctional Education; although participant selection was intended to be random, some inmates in the population were restricted from participating by being either too new in the facility, or too close to release. Aside from participation in the program, none of the participants received any other incentive to participate.

### *Materials*

*Commitment to Career Choices.* Super's (1996) theory of career development has led to much research and several career measures, including the Commitment to Career Choices scale, and in particular the Tendency to Foreclose subscale. In 1989, Blustein et al. devised the Commitment to Career Choices Scale (CCCS) to identify individuals' levels of adherence to their career choices and to measure changes in commitment levels resulting from career programming. The CCCS is comprised of two sub-scales, the Vocational Exploration and Commitment Scale (VECS) and the Tendency to Foreclose Scale (TTFS). The TTFS is a nine-item scale measuring the extent to which an individual has foreclosed on a career path without engaging in more usual patterns of exploration and choice.

Blustein et al. (1989) tested the TTFS on a sample of 203 undergraduate students, and obtained acceptable levels of reliability for the TTFS as part of the larger measure and as an independent scale. In addition, Blustein et al. (1989) also established construct validity for the TTFS by comparing it with similar career interests and having the questions reviewed by a panel of career psychologists.

Several additional studies have used part or all of the TTFS. Blustein, Pauling, DeMania, and Faye (1994) used the TTFS to examine the relationship between progress in career decision-making and exploratory factors. They administered a battery of instruments for career decision-making and exploration to a group of undergraduates who had already chosen a major in college. Blustein et al. (1994) found that students who indicated higher levels of career exploration and commitment on the TTFS also experienced more career-related thoughts and activities as measured by the other career scales.

Devenis (1995) used the TTFS to explore the relationship between vocational maturity, as measured by the Career Exploration Survey, and the tendency to foreclose. She administered the scales to 100 undergraduates and found an inverse relationship between vocational maturity and the tendency to foreclose. Lopez (1997) administered the TTFS to a sample of 481 high school students in an attempt to validate the measure for a younger sample. He gathered data on the students' grade point averages, career interests, and parental educational levels as well. Lopez (1997) found that the TTFS scales were adequately reliable for use with a high school population. He also identified a significant and positive relationship between TTFS scores and increased specificity in career interests, and a significant and negative relationship between the TTFS and grade point averages. Stead and Watson (1992) validated the TTFS with South African university students. They administered the TTFS to 190 undergraduates and found similar reliability scores and construct validity scores, although they noted that not all

items on the CCCS fit into the VECS and TTFS as originally designed by Blustein et al. (1989).

For the present study, only the TTFS subscale was administered to the career intervention participants. The TTFS has adequate reliability and validity as a stand-alone scale (Blustein et al., 1989) and has been found useful in establishing relationships with less adaptive educational and career-related behaviors (Lopez, 1997). As the career intervention sample is composed primarily of women with no more than a high school education and little work experience, the TTFS also is more useful in measuring their career attitudes than the VECS, which focuses on college-level vocational behavior.

*Decision-Making Style.* In 1982, Mann developed the Flinders Decision-Making Questionnaire (FDMQ) to assess individuals' decision-making styles and pilot tested his instrument on a sample of college students (Mann, Burnett, Radford, & Ford, 1997). Although its reliability and validity were adequate, the FDMQ measured for only three of Janis and Mann's (1977) proposed outcomes. In 1997, Mann et al. published a revised version of the scale, which was renamed the Melbourne Decision-Making Questionnaire (MDMQ). The MDMQ is a 22-item instrument that identifies four decision-making styles: vigilance, hypervigilance, buck-passing, and procrastination (both forms of defensive avoidance). Mann et al. (1997) tested the MDMQ with college student samples from New Zealand, the United States, Australia, Hong Kong, Taiwan, and Japan. They found adequate validity and reliability for English, Japanese, and Chinese versions of the scale.

In 1998, Mann, Radford, Burnett, Ford, Bond, Leung, Nakamura, Vaughan, and Yang performed a second study to examine cross-cultural differences in decision-making styles. Mann et al. (1998) hypothesized that students from Western cultures, which tend to be more individualistic, would demonstrate more independent styles of decision-making and greater confidence in their abilities than students from Eastern cultures. Samples of college students were tested in the United States, New Zealand, Australia, Hong Kong, Taiwan, and Japan. The researchers found that although adherence to a vigilant style did not differ among the cultures, students from Eastern cultures adhered significantly more to avoidant styles of decision-making. The authors proposed that differences were due to an increased tendency in Asian cultures to include others' wishes in important decisions. More recently, Hammer and Ferrari (2002) used the MDMQ to measure differences in procrastination between blue-collar and white-collar employees. They found that white-collar workers self-reported significantly more procrastination in their decision-making styles.

Although several other decision-making scales are available in the literature, the MDMQ has several advantages that promoted its use with female offenders. The MDMQ items are written simply and clearly, using vocabulary at a middle-school reading level. The MDMQ also refers more to general decision-making skills rather than career-specific skills, which fits better with the participants' few work experiences. Its more general nature permits a better overview of the participants' overall decision-making styles, which may help when talking to participants about maintaining relationships, stress, and lifestyles. Finally, the measure has been validated with a variety of populations,

including samples of different ethnicities and age groups. Although its validation is far from universal, the establishment of its use with different groups is valuable in its use with the female offenders in this study, who comprise a wide range of ages and several ethnic backgrounds (Mann et al., 1997; Mann et al., 1998; Hammer & Ferrari, 2002).

*Career Decision-Making Self-Efficacy.* In 1983, Betz and Taylor developed the Career Decision-Making Self-Efficacy Scale (CDMSE), which was designed to measure the extent to which a person believes that he or she is capable of making good career decisions and successfully executing career-related behaviors. The CDMSE was composed of 50 ten-point rating scale items measuring an individual's perceptions of his or her abilities in five areas: occupational information-seeking, goal selection, planning, problem-solving, and self-appraisal. They tested the CDMSE on an undergraduate sample and obtained adequate reliability and construct validity for the scale.

The original CDMSE has been used by many researchers, although its use has been restricted largely to college-age populations (Luzzo, 1993; Luzzo, 1996; Taylor and Popma, 1990). Robbins (1985) established construct validity for the CDMSE by administering a variety of career-related questionnaires to an undergraduate population. He found that the CDMSE was moderately correlated with scales representing other career constructs, such as vocational identity and career decidedness. He also identified moderate correlations with personality variables that could affect self-efficacy, such as self-esteem and anxiety.

In 1996, Betz, Klein, and Taylor devised and evaluated a short form of the CDMSE. The short version retained the five-factor structure, but reduced the number of

items for each subscale from ten to five. Betz et al. (1996) administered the Career Decision-Making Self-Efficacy Scale- Short Form (CDMSE-SF), the Career Indecision Scale, and the My Vocational Situation inventory to an undergraduate sample. They found adequate reliability for the total scale and for each of the five subscales. Betz et al. (1996) identified significantly higher means for males, and established separate norms for both genders. The authors also demonstrated validity for the CDMSE-SF by finding moderate positive correlations with the MVS and moderate negative correlations with the Career Indecision Scale. Based on their findings, Betz et al. (1996) recommended the CDMSE-SF as a reliable and valid alternative to its longer predecessor.

The CDMSE-SF also has been validated with Australian and South African student samples, establishing validity with a variety of ethnic groups. (Eaton, Watson, Foxcroft, & Patton, 2004; Creed, Patton, & Watson, 2002). In 2002, Nilsson, Schmidt, and Meek compared the CDMSE to the CDMSE-SF via meta-analyses and found similar and adequate reliability for both scales and both sets of subscales.

The CDMSE-SF also has replaced the CDMSE in research other than validation studies. Chung (2002) examined gender and ethnic differences in career decision-making self-efficacy and career commitment in an undergraduate population. He found a moderate correlation between the CDMSE-SF and the Career Commitment Scale. In addition, he reported that African-Americans scored higher than Caucasians on both scales. Kornspan and Etzel (2001) administered the CDMSE-SF and career maturity scales to a sample of undergraduate student athletes. They found that locus of control and career decision-making self-efficacy significantly predicted scores on measures of

career maturity. Mau (2000) used the CDMSE-SF to compare differences between American and Taiwanese students in career decision-making styles and self-efficacy. She identified significant differences between the two samples in both decision-making style and self-efficacy. In addition, Mau (2000) demonstrated that the cultural differences resulted in differing models for the relationship between the two variables. Finally, Betz and Vuyten (1997) examined the relationships among career decision-making self-efficacy, career exploration, and decidedness. They found that scores on the CDMSE-SF were the best predictors of scores on a career indecision scale.

The CDMSE-SF was used for the female offender population in this study, as the literature has demonstrated its validity, reliability, and practical use for both research and interventions. The measure also has the advantages of being easy to understand and relatively short. In addition, although it has been used primarily with college populations, its questions do not pertain exclusively to decisions based on a college education. The CDMSE-SF also has been validated with some specialized groups, particularly battered women, who may bear some psychological resemblance to the female offender population (Brown, Reedy, Fountain, Johnson, & Dichiser, 2000).

For this population, the ten-point scale normally used for the CDMSE-SF was shortened to a five-point scale, with direction remaining the same (e.g., five points would indicate the most confidence in a particular ability). The reason for changing the scale was to simplify the scale for ease of use with the population and to make it similar to the other scales given to the participant and control samples.

### *Validation Concerns*

The lack of research with these scales in offender populations is a cause for concern in the current study. The omission in the research is not surprising, however, given the lack of attention in career counseling to the offender population (Railey & Peterson, 2000). The scales mentioned above, as the best scales representing their separate constructs, are most fit for use with female offenders at this time. The MDMQ, TTFS, and CDMSE-SF are all well-established scales with regular use in research with college populations, and therefore may be of use in the current study by demonstrating in what ways offenders' scores differ from the norms established by college populations. The comparison is particularly interesting given that many female offenders participating in the career intervention are relatively close in age to college students, but have deviated from normal career development as described by Super (1953). In addition to the comparison between populations, another goal of the current research is to establish norms for a female offender population on all three scales, and to demonstrate adequate reliability and validity for future use with offender populations.

#### *Design and Procedure*

This study employed a quasi-experimental pretest-posttest group design. Groups were determined by an on-site instructor from the Department of Correctional Education, and were primarily based on pre-existing groups within the facility, as well as the length of time remaining before release. Members in both groups gave verbal consent to the instructor before programming began, and signed consent forms that were delivered with the pre-test surveys. Both groups were administered pre-test surveys in a group setting. The career intervention group filled out surveys on the first night of the program, and the



control group filled out surveys on a separate night during the same week. Intervention participants then experienced the 13-week program described previously. Control group participants were not invited to any intervention sessions. The intervention and control group participants both participated in other groups during the same time frame, including Alcoholics Anonymous, Narcotics Anonymous, a Life Skills group run on-site, and group counseling. The intervention and control group participants had multiple opportunities to interact outside of intervention sessions. The program leaders retained all materials until the end of the program, however, so that shared information was minimal. The post-test surveys were filled out in the same manner as the pre-test surveys. The intervention participants filled out the materials on the closing night of the program, and control group participants filled out the materials in a group session within the same week.

### *Hypotheses*

As this study is twofold in its aims, several statistical analyses will be used to examine the data. First, *t*-tests and ANOVAs will be performed on all demographic data (including age, marital status, and educational status) in order to identify any significant differences between the treatment and control groups. Secondly, *t*-tests will be performed examining pre-test and post-test data to establish how career decision-making and career decision-making self-efficacy changed as a result of a vocational intervention, and what differences are present between the intervention and control groups.

Several hypotheses have been identified for this study. The first hypothesis is that post-test results on the eight sub-scales measured by this study will differ between the

intervention group and the control group. Scores will be significantly greater for the intervention group than for the control group on the Vigilance scale and the five scales of the CDMSE-SF (Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving), as higher scores indicates an improvement in perception of ability in these career decision-making areas. Scores will be significantly lower for the intervention group than for the control group on the TTFS and the Buck-Passing scale of the MDMQ, as lower scores on these scales indicates less adherence to negative career decision-making attitudes.

The second hypothesis is that scale scores for the intervention group will change significantly and in the expected direction for each sub-scale between the pretest and post-test administrations of the measures. Increases in mean scale score are expected for the intervention group on the Vigilance scale of the MDMQ and the five scales of the CDMSE-SF (Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving). The increases in these mean scores will reflect greater adherence to an active decision-making style and increased self-efficacy in performing career-related decision-making behaviors. Decreases in mean scale score are expected for the Buck-Passing scale of the MDMQ and the TTFS. These decreases in score will indicate that receiving a career-oriented vocational intervention led to less adherence to passive decision-making behaviors and unproductive behaviors such as career foreclosure.

The third hypothesis is that there will be no significant changes in the mean scale scores of the control group between pretest and post-test administrations. As this group is not receiving a career-oriented vocational intervention, there is neither impetus nor

education available to this group that would enable them to think differently about their decision-making styles or their career-related decision-making abilities.

## Results

This study was conducted in order to determine if participation in a career-oriented vocational intervention could change career decision-making skills, career decision-making style, and career decision-making self-efficacy in a group of incarcerated women. The following section delineates the hypotheses formed to examine the aforementioned questions and details the analyses performed.

### *Demographics*

The demographic variables collected for the study sample are listed in Table 1 below by group membership. The mean age for the intervention group was 33.58 years ( $SD = 7.46$ ) and the mean age of the control group was 33.36 years ( $SD = 7.89$ ). An independent samples t-test was performed and no significant differences in age were found.

The women in the sample were predominantly Caucasian and African-American. In the intervention group, 18 women identified themselves as African-American, 19 identified themselves as Caucasian, one woman identified herself as Hispanic or Latina, and one woman identified herself as “other.” The control group contained similar divisions in ethnicity. Twenty-one women reported as African-American and 18 women reported as Caucasian. A chi-square analysis found no significant difference between the two groups as to ethnicity.

Similar divisions also were reported for educational attainment. The women were asked to score their educational attainment at one of the following levels: “some high school,” “high school/GED,” “some college,” and “college graduate.” Twelve members

of the control group and 16 intervention group members reported having completed some of their high school education. The high school or GED graduates numbered 14 for the control group and 11 for the intervention group. Five control group members and seven intervention group members had attended some college courses. Six control group members and two intervention group members reported having completed college. Lastly, two members of the control group and three members of the intervention group reported an “other” educational status. Further questioning revealed that these women had completed a vocational or technical program. A chi-square analysis revealed no significant difference between the two groups as to educational achievement.

The women in both groups also reported on their current marital status. Seventeen women in the control group and 17 women in the intervention group reported that they were single and had never been married. Five control group members and eight intervention group members reported that they were divorced. Six control group members and eight intervention group members reported that they were currently married. Ten control group members and six intervention group members reported that they were separated from their partners. Lastly, one woman in the control group reported that she was widowed. A chi-square analysis was performed on marital status and revealed no significant differences between the two groups.

Each woman was asked to report the number of children she had. The number of children was requested in order that any bias based on having a greater number of dependents could be avoided. The numbers in the two groups were very similar. The intervention group reported a mean of 1.95 children ( $SD = 1.37$ ), and the control group

reported a mean of 2.15 children ( $SD = 1.14$ ). An independent samples  $t$ -test revealed no significant differences in number of children between the two groups.

Lastly, a chi-square analysis was performed in order to determine if the semester in which participants completed their surveys could have affected the results of this study. In the fall semester, there were 19 women in the intervention group and 21 women in the control group. In the spring semester, there were 20 women in the intervention group and 18 women in the control group. The chi-square analysis revealed no significant differences in group membership by semester.

Table 1

*Demographic data for all study participants*

Variable	Intervention Group	Control Group
Mean Age (in years)	33.58	33.36
<b>Race</b>		
African-American	18	21
Caucasian	19	18
Hispanic/Latina	1	0
Other	1	0
<b>Educational Attainment</b>		
Some high school	16	12
High school/GED	11	14
Some college	7	5
College graduate	2	6
Other	3	2
<b>Marital Status</b>		
Single/Never Married	17	17
Divorced	8	5
Currently Married	8	6
Separated	6	10
Widowed	0	1
Mean Number of Children	1.95	2.15

### *Descriptive Statistics*

Tables 2 and 3 present all of the mean scores and standard deviations, both pretest and posttest, for the intervention and control groups. Table 2 presents results for the intervention group, and Table 3 presents results for the control group. The scores presented are scores received on each of the eight scales examined in this study: the Tendency to Foreclose Scale, the Vigilance Scale and the Buck-passing Scale from the MDMQ, and the Occupational Information Scale, the Self Appraisal Scale, the Goal Selection Scale, the Planning Scale, and the Problem Solving Scale from the CDMSE-SF.



Table 2

*Scale means and standard deviations for the intervention group*

Scale	<i>M</i>		<i>SD</i>	
	Pretest	Post-test	Pretest	Post-test
TTFS <sup>a</sup>	33.00	30.06	10.46	8.78
MDMQ – BP <sup>b</sup>	13.82	15.15	2.84	3.01
MDMQ – V <sup>c</sup>	9.17	8.28	1.86	2.01
CDMSE-SF -SA <sup>d</sup>	17.85	18.91	4.31	4.58
CDMSE-SF – OI <sup>e</sup>	18.88	19.68	4.55	5.05
CDMSE-SF – GS <sup>f</sup>	18.88	19.12	4.25	4.31
CDMSE-SF – P <sup>g</sup>	17.38	19.26	4.33	4.42
CDMSE-SF – PS <sup>h</sup>	17.41	18.50	4.27	4.38

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

Table 3

*Scale means and standard deviations for the control group*

Scale	<i>M</i>		<i>SD</i>	
	Pretest	Post-test	Pretest	Post-test
TTFS <sup>a</sup>	32.57	34.57	9.86	8.13
MDMQ – BP <sup>b</sup>	15.21	15.33	2.10	2.39
MDMQ – V <sup>c</sup>	8.97	8.51	2.23	2.32
CDMSE-SF -SA <sup>d</sup>	20.20	20.04	3.83	3.60
CDMSE-SF – OI <sup>e</sup>	20.81	18.88	3.51	5.21
CDMSE-SF – GS <sup>f</sup>	20.00	19.38	3.77	3.70
CDMSE-SF – P <sup>g</sup>	19.73	19.38	3.62	4.02
CDMSE-SF – PS <sup>h</sup>	19.84	19.04	3.01	3.42

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

### *Correlations*

Each of the eight scales in this study measures some facet of career decision-making ability, whether assessing decision-making style, perceived self-efficacy in career decision-making, or the tendency to make an early and possibly uninformed decision. Although the MDMQ, the TTFS, and the CDMSE-SF all have different theoretical origins, the relationship of each to the construct of decision-making skills indicates that the eight scales used in this study likely are related. The interrelatedness of the eight scales has a potential to affect the results of this study, as the likelihood of a Type I error is reduced when the variables are interrelated. The large number of pairwise comparisons planned in this study requires a correction on the alpha level, however, in order to avoid a Type I error (Hurlburt, 1998). In order to determine the nature of the relationship among all eight scales, bivariate correlations on both pretest and post-test scores were conducted. The alpha level was set at .01 to account for the large number of pairwise comparisons being conducted (36 for each of the pretest and post-test correlations). Tables 4 and 5 present the results of the bivariate correlations performed on the pretest and post-test data respectively.

Table 4

*Bivariate correlations among the scales of the TTFS, MDMQ, and CDMSE-SF – Pretest analysis*

<u>Scale</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
1) TTFS <sup>a</sup>	-							
2) MDMQ-BP <sup>b</sup>	-.01	-						
3) MDMQ-V <sup>c</sup>	-.16	-.19	-					
4) CDMSE-SF – SA <sup>d</sup>	-.14	.29	.09	-				
5) CDMSE-SF – OI <sup>e</sup>	.11	.50*	-.24	.57*	-			
6) CDMSE-SF – GS <sup>f</sup>	.11	.47*	-.25	.51*	.83*	-		
7) CDMSE-SF – P <sup>g</sup>	.04	.53*	-.39*	.54*	.84*	.82*	-	
8) CDMSE-SF – PS <sup>h</sup>	-.02	.45*	-.40*	.49*	.78*	.73*	.85*	-

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$

Table 5

*Bivariate correlations among the scales of the TTFS, MDMQ, and CDMSE-SF –*

*Post-test analysis*

<u>Scale</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
1) TTFS <sup>a</sup>	-							
2) MDMQ-BP <sup>b</sup>	-.02	-						
3) MDMQ-V <sup>c</sup>	-.04	-.28	-					
4) CDMSE-SF – SA <sup>d</sup>	-.12	.49*	-.32	-				
5) CDMSE-SF – OI <sup>e</sup>	-.10	.47*	-.34*	.89*	-			
6) CDMSE-SF – GS <sup>f</sup>	-.13	.47*	-.23	.92*	.83*	-		
7) CDMSE-SF – P <sup>g</sup>	-.06	.53*	-.38*	.87*	.87*	.84*	-	
8) CDMSE-SF – PS <sup>h</sup>	-.06	.46*	-.38*	.89*	.79*	.84*	.85*	-

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$

### *Preliminary Analyses*

It should be noted before discussing the preliminary analyses and hypotheses that some differences were observed between the mean scores obtained by this sample and the established norms on the eight subscales used in this study. Scores for the Tendency to Foreclose Scale were somewhat higher than the average score as reported by Blustein et al. (1989), which likely is commensurate with the educational experiences and job histories of the women in the current sample.

On the Buck-Passing scale of the MDMQ, the scores of both the intervention group and the control group seem high when compared to the norms established by Mann et al. (1998). The high scores may reflect a central characteristic of offender populations, however, in that incarcerated offenders often are impulsive and tend not to take personal responsibility for their actions (Walters, 2005). In addition, female offenders often show dependent qualities, possibly resulting from years of abuse, low self-esteem and difficulty establishing financial independence (Schram, 2003). This tendency to rely on others for a variety of needs also could display itself in a strong buck-passing style in comparison with other populations.

The means of both groups on all five subscales of the CDMSE-SF (Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving) are lower than the norms established by Betz et al. (1996). A variety of historical and personality variables may account for the difference in means. The scanty job histories and low educational attainment of many female offenders may cause them to lack self-efficacy in areas related to career success. As with the Buck-Passing scale means, the

passivity and dependencies of this population also may affect the subscales of the CDMSE-SF, as active decision-making skills are needed in order to perform the tasks listed on those scales. The impulsivity of this population also may contribute to poor self-efficacy in terms of ability to consider long-term issues and plan effectively for long-term career-related problem solving (Walters, 2005).

A series of independent samples t-tests were conducted to test the assumption that the intervention group and the control group did not differ significantly in their scores on any of the eight measures used in the study. Table 6 shows the results of this series of analyses. Mean scores were compared for the TTFS, the MDMQ Buck-Passing scale, the MDMQ Vigilance scale, and the CDMSE-SF scales for Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving. Using the aforementioned *p* value of .01 as a significance cutoff, no significant differences were found between the pretest scale means of the two groups.

Table 6

*Independent samples t-tests comparing pretest scores of the intervention and control groups*

Scale	<i>M</i>		<i>t</i>
	Intervention	Control	
TTFS <sup>a</sup>	32.21	32.21	.000
MDMQ – BP <sup>b</sup>	13.78	14.95	-1.92
MDMQ – V <sup>c</sup>	9.28	8.68	1.29
CDMSE-SF -SA <sup>d</sup>	18.78	19.68	-.64
CDMSE-SF – OI <sup>e</sup>	18.76	20.19	-1.57
CDMSE-SF – GS <sup>f</sup>	18.67	19.69	-1.14
CDMSE-SF – P <sup>g</sup>	17.31	19.05	-1.87
CDMSE-SF – PS <sup>h</sup>	17.26	19.14	-2.19

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale.

<sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$



## *Hypotheses*

### *Hypothesis 1.*

The first hypothesis was that the post-test mean scale scores of the intervention group would significantly differ from the post-test mean scale scores of the control group on the eight aforementioned scales. It was predicted that participation in a career-oriented vocational intervention would result in increased career decision-making self-efficacy and endorsement of a more active and open-minded decision-making style. A series of independent samples *t* tests were conducted to examine this hypothesis as it pertained to each scale. Table 7 contains post-test means and *t* values for all eight scales, which are individually discussed below.

*The Tendency to Foreclose scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Tendency to Foreclose scale.

*The MDMQ Buck-Passing scale.* The independent samples *t*-test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Buck-Passing scale. The null hypothesis could not be rejected.

*The MDMQ Vigilance scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Vigilance scale. The null hypothesis could not be rejected.

*The CDMSE-SF Self-Appraisal scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Self-Appraisal scale. The null hypothesis could not be rejected.

*The CDMSE-SF Occupational Information scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Occupational Information scale. The null hypothesis could not be rejected.

*The CDMSE-SF Goal Selection scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Goal Selection scale. The null hypothesis could not be rejected.

*The CDMSE-SF Planning scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Planning scale. The null hypothesis could not be rejected.

*The CDMSE-SF Problem Solving scale.* The independent samples *t* test conducted on the post-test means of the intervention and control groups revealed no significant difference between the groups' posttest scores on the Problem Solving scale. The null hypothesis could not be rejected.

Table 7

*Hypothesis 1: Independent samples t tests comparing post-test scores of the intervention and control groups*

Scale	M		t
	Intervention	Control	
TTFS <sup>a</sup>	30.03	34.62	-2.16
MDMQ – BP <sup>b</sup>	15.14	15.32	-.29
MDMQ – V <sup>c</sup>	8.28	8.51	-.46
CDMSE-SF -SA <sup>d</sup>	19.08	19.96	-.82
CDMSE-SF – OI <sup>e</sup>	19.56	18.85	.55
CDMSE-SF – GS <sup>f</sup>	19.31	19.19	.12
CDMSE-SF – P <sup>g</sup>	19.26	19.26	.01
CDMSE-SF – PS <sup>h</sup>	18.57	19.07	-.49

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$

*Hypothesis 2.*

The second major hypothesis was that scale scores for the intervention group would change significantly and in the expected direction for each scale between pretest and post-test administrations of the measures. It was predicted that participating in a time-limited, career-focused vocational intervention would produce the expected changes on each scale for the intervention group. The directional changes expected for each of the eight scales used in this study are detailed below, along with the actual results. A series of eight paired samples *t* tests was run in order to test this hypothesis. Table 8 presents the results of this analysis.

*The Tendency to Foreclose scale.* The expectation for scores on the Tendency to Foreclose scale was that scores would be higher at the pretest administration than at the post-test administration. A decrease in the scale mean would indicate that the intervention group reported more openness to career options and career exploration at the end of the intervention. Although a decrease in scale mean was observed, it failed to reach statistical significance. Therefore the null hypothesis could not be rejected.

*The MDMQ Buck-Passing scale.* The expectation for score changes on the Buck-Passing scale was that the scale mean would decrease from pretest administration to post-test administration. A decrease in scores would indicate that the intervention group felt less dependent on a passive decision-making style after participating in the vocational intervention. Contrary to expectations, the intervention group's mean Buck-Passing score increased significantly from pretest administration to post-test administration ( $t = -3.19, p < .01$ ), indicating that the intervention group endorsed a passive decision-making

style more strongly at the intervention's end. The null hypothesis could not be rejected for this scale.

*The MDMQ Vigilance scale.* It was predicted that the Vigilance scale mean score would increase for the intervention group between test administrations. An increase in the mean score would indicate that the intervention group endorsed an active decision-making style more strongly after receiving the vocational intervention. Contrary to expectations, a decrease was observed in the mean score from pretest to post-test administration, though it did not attain statistical significance. The null hypothesis could not be rejected for this scale.

*The CDMSE-SF Self-Appraisal scale.* It was predicted that the intervention group's mean score on the Self-Appraisal scale would increase significantly between pretest and post-test administrations. An increase over time in the mean score would indicate that the career intervention had positively affected the career-related self-appraisal of intervention group members. Though an increase in the score mean was observed in accordance with expectations, it failed to reach statistical significance. The null hypothesis could not be rejected for the Self-Appraisal scale.

*The CDMSE-SF Occupational Information scale.* The expectation was that the intervention group's mean score on the Occupational Information scale would increase significantly between the two administration periods, indicating an increase in perceived ability to locate and use occupational information correctly. The increase that occurred failed to reach statistical significance. The null hypothesis could not be rejected.

*The CDMSE-SF Goal Seeking scale.* It was hypothesized that the intervention group's mean score on the Goal Seeking scale would increase significantly from pretest administration to post-test administration, indicating that intervention participants rated their ability to perform career-related goal forming behaviors more highly than before. Though the expected increase in the scale mean was observed, the paired samples *t* test failed to find the difference statistically significant. The null hypothesis could not be rejected for this scale.

*The CDMSE-SF Planning scale.* The intervention group's mean scale score was expected to increase on this scale, indicating an increase in perceived ability to perform career planning behaviors at the intervention's end in comparison to the beginning of the assessment period. Although the expected increase was observed, it failed to attain statistical significance. The null hypothesis could not be rejected for the Planning scale.

*The CDMSE-SF Problem Solving scale.* The mean scale score of the intervention group was hypothesized to increase significantly between pretest and posttest administrations for the Problem Solving scale. An increase in the mean score would indicate that intervention group members felt more confident about their ability to solve career-related problems after receiving the vocational intervention. The paired samples *t* test failed to find a significant difference in the pretest and post-test scores, although a small increase in the mean score was observed. The null hypothesis could not be rejected for this scale.

Table 8

*Hypothesis 2: Paired samples t-tests investigating pretest to post-test mean score changes for the intervention group*

Scale	M		t
	Pretest	Post-test	
TTFS <sup>a</sup>	33.00	30.03	1.43
MDMQ – BP <sup>b</sup>	13.82	15.14	-3.19*
MDMQ – V <sup>c</sup>	9.17	8.28	2.03
CDMSE-SF -SA <sup>d</sup>	17.85	19.08	-1.43
CDMSE-SF – OI <sup>e</sup>	18.88	19.56	-.81
CDMSE-SF – GS <sup>f</sup>	18.88	19.31	-.35
CDMSE-SF – P <sup>g</sup>	17.38	19.26	-2.24
CDMSE-SF – PS <sup>h</sup>	17.41	18.57	-1.41

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale.

<sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$

Although most of the mean scale scores changed according to expectations in the analyses for Hypothesis 2, the difference between pretest and post-test scores was not statistically significant. A statistically significant difference was found for one scale, the MDMQ Buck-Passing scale, but the change in pretest to post-test mean scores was in the opposite direction, indicating that intervention participants increased their endorsement of the passive buck-passing decision-making style after receiving a vocational intervention. Hypothesis 3 will examine the same set of changes in relation to the control group.

### *Hypothesis 3*

The third hypothesis was that any pretest to post-test changes in mean scores on the eight scales used in this study would not be statistically significant for the control group. The control group was not expected to change their appraisals of their decision-making behaviors or career-related behaviors because they had not received any type of intervention in the intervening period that could reasonably cause a large change in these attitudes. As with Hypothesis 2, a series of paired samples *t* tests were used to examine mean score changes for this group. The results, divided by scale, are shown in Table 9 and detailed below.

*The Tendency to Foreclose scale.* The control group's mean score for the TTFS increased slightly from the pretest administration to the post-test administration, indicating an increased tendency to foreclose on a decision. The change in scores, however, was not statistically significant. The null hypothesis was rejected for this scale.

*The MDMQ Buck-Passing scale.* The mean score on the Buck-Passing scale also increased slightly between the two testing periods. The difference, however, was not



statistically significant when submitted to a paired samples  $t$  test. Hypothesis 3 was supported in relation to the Buck-Passing scale and the null hypothesis was rejected.

*The MDMQ Vigilance scale.* The mean score on the Vigilance scale decreased slightly between the two testing periods. The difference, however, was not statistically significant. The null hypothesis was rejected for this scale.

*The CDMSE-SF Self-Appraisal scale.* The control group's mean score on the Self-Appraisal scale decreased slightly from pretest administration to post-test administration. The paired samples  $t$  test performed showed that the difference in the mean scores was not statistically significant. The null hypothesis was rejected for the Self-Appraisal scale.

*The CDMSE-SF Occupational Information scale.* The control group's mean score on the Occupational Information scale decreased slightly from pretest administration to post-test administration. The paired samples  $t$  test performed showed that the difference in the mean scores was not statistically significant. The null hypothesis was rejected for this scale.

*The CDMSE-SF Goal Selection scale.* The mean score of the control group decreased between testing periods on the Goal Selection scale, though the difference was not statistically significant. The null hypothesis was rejected for this scale.

*The CDMSE-SF Planning scale.* The control group's mean score on the Planning scale decreased slightly between testing periods. A paired samples  $t$  test showed that the difference between the pretest mean score and the post-test mean score was not statistically significant. The null hypothesis was rejected.

*The CDMSE-SF Problem Solving scale.* The control group's mean score on the Planning scale decreased slightly between testing periods. A paired samples  $t$  test showed that the difference between the pretest mean score and the post-test mean score was not statistically significant. The null hypothesis was rejected.

The results of the eight paired samples  $t$  tests showed that none of the pretest to post-test differences in control group mean scores achieved statistical significance. Therefore, the primary null hypothesis for Hypothesis 3 was rejected. As mentioned above, Table 9 presents the means and  $t$  values for all eight scales.

Table 9

*Hypothesis 3: Paired samples t-tests investigating differences in pretest and post-test scores for the control group*

Scale	M		t
	Pretest	Post-test	
TTFS <sup>a</sup>	32.57	34.62	-.86
MDMQ – BP <sup>b</sup>	15.21	15.32	-.30
MDMQ – V <sup>c</sup>	8.97	8.51	1.13
CDMSE-SF -SA <sup>d</sup>	20.20	20.04	.31
CDMSE-SF – OI <sup>e</sup>	20.81	18.88	2.34
CDMSE-SF – GS <sup>f</sup>	20.00	19.38	1.02
CDMSE-SF – P <sup>g</sup>	19.73	19.38	.67
CDMSE-SF – PS <sup>h</sup>	19.84	19.04	1.73

<sup>a</sup> The Tendency to Foreclose Scale. <sup>b</sup> The Melbourne Decision-Making Questionnaire Buck Passing scale. <sup>c</sup> The Melbourne Decision-Making Questionnaire Vigilance scale. <sup>d</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Self-Appraisal scale. <sup>e</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Occupational Information scale. <sup>f</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Goal Selection scale. <sup>g</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Planning scale. <sup>h</sup> The Career Decision-Making Self-Efficacy Scale – Short Form Problem Solving scale.

\* =  $p \leq .01$

## Discussion

The purposes of this study were to explore the use of career decision-making constructs in vocational programming with female offenders and to provide some insight into the nature of the career decision-making processes experienced by that population. Career decision-making is an important but neglected area in vocational programming for offenders. As Haney (2006) has noted, the experience of incarceration may decrease decision-making abilities for many offenders because of its controlling and punitive nature. Most programming focuses on the acquisition of basic job application and interview skills to the neglect of areas such as career interest and career development (Railey & Peterson, 2000; Brewster & Sharp, 2002). Career decision-making constructs may be particularly important for female offenders, who often are characterized by lower levels of educational attainment than the overall female population, less lengthy work histories, and noted difficulties with active decision-making skills and self-efficacy in a variety of areas (Schram, 2003). This study was conducted on female offenders in the context of a time-limited, career-focused vocational intervention. Thirty-nine intervention participants and 39 control group members were administered the Tendency to Foreclose Scale (TTFS; Blustein et al., 1989), the Melbourne Decision-Making Scale (MDMS; Mann et al., 1997), and the Career Decision-Making Self-Efficacy Scale- Short Form (CDMSE-SF; Betz et al, 1996) both prior to and at the end of the career intervention. The intent for surveying the population was to establish quantitative measures of career decision-making skills and self-efficacy. In addition, the researcher

wanted to determine if career decision-making constructs, in addition to being a focus in programming, could be used to assess change in the female offender population.

Hypotheses for the intervention and control groups included several components. The hypotheses were not constructed with the purpose of examining the intervention; rather, the intervention served as a context in which means for the treatment and control groups' potential for change could be examined. First, it was hypothesized that post-test score means on all subscales would differ significantly between the intervention and control groups. The second hypothesis was that the mean scores for the intervention group would change significantly and in the expected direction on each subscale between pretest and post-test administrations. Finally, the third hypothesis was that there would be no significant differences between the mean subscale scores of the control group at pretest and post-test administrations.

The subsequent analyses resulted in few significant findings. Group similarities were established by a series of preliminary *t* tests and ANOVAs run on demographic data, including age, educational attainment, marital status, and number of children. The assumption that the pretest scores were similar for both groups was supported by a series of independent samples *t* tests. For the first hypothesis, a series of independent *t* tests was performed to test the differences on each subscale. The null hypothesis was supported for all of the eight subscales used in the study, indicating that no significant differences existed between the intervention group and the control group in post-test scale scores. The null hypothesis also could not be rejected for the second hypothesis. A series of eight paired samples *t* tests was performed in order to examine pre-post score

differences. Of the eight *t* tests, the only significant difference was an increase from pretest to post-test scores on the Buck-Passing scale of the MDMQ. Finally, the third hypothesis was supported, as no significant differences were found when a series of paired samples *t* tests was conducted on the pretest and post-test control group scores.

### *Significance of the results*

The results of the aforementioned statistical analyses established some baseline data for career decision-making processes and career decision-making self-efficacy in female offenders. In addition, the results indicated that using career decision-making constructs and measures to assess change in this population may be a difficult undertaking because of the small nature of the changes experienced in this population. Although the results do not show any significant changes for the vocational intervention participants, several aspects of this research add valuable information to the body of knowledge in vocational programming, as well as to the body of information about female offenders.

The study is an important contribution in that it is the first known use of these measures with a female offender population, and therefore is establishing baseline means for comparison with future offender populations. Although each measure has been validated both with males and females, and cross-cultural validity has been established for each measure, these strengths do not apply necessarily to the female offender population (Blustein et al., 1994; Stead & Watson, 1992; Betz et al, 1996; Lopez, 1997; Mann et. al, 1997, Mann et al., 1998, Mau, 2000; Hammer & Ferrari, 2002; Creed et al, 2004; Eaton et al., 2004). It is important to remember here that the response scales on the

CDMSE-SF items were shortened, which may affect the validity of the scale. An examination of the means showed that they were comparable to those obtained by Betz et al. (1996), indicating that the CDMSE-SF may be appropriate for use with a female offender population along with the MDMS and the TTFS. Additional research is warranted to make a more informed decision.

The study also has value in the effort made to measure offender change from a different aspect than that of behavioral change as reflected in recidivism measures. Although this study did not produce significant results, the effort to record changes at a variety of levels (emotional, cognitive, and behavioral) is important in establishing whether or not true change has occurred in offender populations (Cullen & Gendreau, 2000). The measures currently popular in criminal justice, recidivism measures, have been criticized widely for being too dependent on the interaction between offenders and corrections or law enforcement staff (Bouffard et al., 2000; Cullen & Gendreau, 2000). This study, in contrast, has provided an example of how other measures can be used to assess changes that may be more important in determining whether or not an offender will transition successfully.

The one significant finding that the intervention group's Buck Passing score on the MDMQ increased between pretest and post-test administrations also has some value for the literature. This finding is not interpreted as a failing of the intervention. Although it was expected that intervention participants would endorse a more active decision-making style at the intervention's end, the endorsement of a more passive decision-making style may be an adaptive technique used by the women to cope with being

incarcerated (Haney, 2006). The highly structured nature of the detention program in which this sample participated did not allow much room for personal expression, and obedience, respect, and teamwork were most highly valued in the offenders in this sample. Therefore, although some change may be experienced after release, many of the women in the sample may have been adapting a more passive decision-making style while incarcerated in order to complete their program successfully. Alternately, the adaptation of a more passive decision-making style may reflect an increase in openness to the feedback and suggestions of others, which could be helpful for the women in this study in improving their career goals and skills in the future.

Finally, an examination of the data revealed that many score changes did occur in the expected direction, but that pre-post differences and intervention and control group differences were not large enough to be statistically significant. The lack of significance in these findings may not reflect a lack of change in the sample, then, so much as it reflects some of the limitations of the study. There are several reasons, to be discussed in the following section, why these differences did not achieve statistical significance.

### *Limitations*

The results found in this study indicate that in this analysis, participation in a time-limited career-focused vocational intervention did not affect female offenders' decision-making styles, tendency to foreclose, or career decision-making self-efficacy. Several details of the analysis, however, must be taken into consideration. The sample size for this study was very small ( $N = 78$ ), which may have made it difficult for small differences between the two groups to achieve statistical significance. Given that the



typical effect size for an intervention of this nature is  $\Delta = .54$ , the sample size of this study would need to be  $n = 128$  in order to ensure that the analysis had sufficient power to detect any significant differences (Cohen & Cohen, 1996; Whiston et al., 1998). Although the program has been in operation for several years, data collection was approved only recently by the IRB at Virginia Commonwealth University, and data had to be limited to a one-year period for this study.

Another limitation to this study was the setting in which it was administered. Incarceration can affect women physically, mentally, and emotionally (Sharp, 2003). As mentioned before, some responses that would not be as adaptive in mainstream society are adaptive and healthy responses in the restrictive atmosphere in which these women reside. Career interventions have been demonstrated to be successful with forced or no-choice participants (Whiston et al., 1998). With a forced population, however, the emotional and cognitive responses to such programs may be tempered by current environment (Sharp, 2003). The program in which the intervention occurred requires strict adherence to a detailed set of rules regarding all aspects of the participants' lives. Contact with family members and friends is limited, daily habits such as eating, sleeping, and maintaining good hygiene are directed by the facility, and there are very few outlets for personal expression. The values of the detention and diversion programs, then, are very different from the values espoused by a career intervention designed to increase self-efficacy and promote career planning. The difference between these sets of values may have affected scores, in that participants did not feel free to express their wishes or felt less confident about their abilities because of the disempowering atmosphere at the

facility. The increase seen in post-test scores on the MDMQ Buck-Passing scale supports the idea that participants may not have felt capable of making decisions in the same way that they would in society. Participants also may have had heightened levels of anxiety because of the militaristic nature of the program, constant noise at the facility, stresses associated with drug withdrawal, and a lack of confidence about the future. Higher anxiety levels also would cause offenders to feel less confident about their ability to make career decisions.

The multiple programs administered in the detention setting from which the sample was taken also may have affected the results of this study. Although many offenders do not receive any treatment while incarcerated, the detention facility in this study offers a variety of psycho-educational programs to its detainees (Cullen & Gendreau, 2000). Programs exist for GED completion, Alcoholics Anonymous and Narcotics Anonymous, productive citizenship and life management concerns, faith-based groups, parenting, and other topics. None of the other programs focus on vocation and career decision-making to the extent of the program discussed in this study. However, some do address basic vocational concerns, such as teaching offenders how to complete job applications and offering interview strategies. Thus it is possible that differences between the control and intervention groups may have been obscured by the multiple sources of information received by both groups (Shadish, Cook, & Campbell, 2002).

In addition, the scales used in this study, although validated with multiple populations, typically have not been used as pre-post measures in the career counseling literature. Therefore, although their utility in establishing baseline measurements for use

in counseling has been demonstrated in the literature, their use for repeated measures, and particularly as measures of change, has yet to be established formally.

The nature of the constructs being measured also may have affected the lack of significant outcomes. The 13-week length of the intervention and the immediate post-test assessment may not have permitted enough time for changes in such a personal and wide-reaching construct as decision-making style. The nature of the construct of self-efficacy, too, may not permit for such quick post-intervention assessment. Bandura (1977), in his original description of self-efficacy, postulated that changes in self-efficacy could come from information derived from behavioral experiences, cognitive changes, or emotional experiences. Although the career intervention provides some opportunities for these experiences via role-plays and exercises as recommended by Brown and Ryan-Krane (2000), it may be that female offenders need positive experiences in the work force after release in order to confirm their increases in career decision-making self-efficacy.

#### *Implications for future research*

The findings of this study could lead to many areas of new research. Future research will need to address the measures used in this study and research the validity and reliability of these instruments with the female offender population. The current study has been conducted with one year's worth of data from the career intervention. It is likely that with four or five years' worth of data, the sample size would be adequate to run a confirmatory factor analysis and a reliability analysis on the mean scores, which would provide a proper validation of each scale for use with the female offender population. An analysis of several years' worth of data also would allow the researcher

to examine pre-post changes in greater detail and thereby to determine whether or not the instruments used in this study are the best instruments for capturing change in the female offender population.

Post-incarceration assessment of the intervention and control groups would be another primary recommendation, as this type of assessment would help to determine long-term program effects. In addition, post-release assessment would help to avoid an environmental bias caused by the psychological and physical experiences of incarceration. Post-release assessment also would allow for a greater amount of time for participants and control group members to consolidate changes in decision-making style and self-efficacy. As stated earlier, experiences may play an important role in changing individual self-efficacy, so the additional time may be beneficial by allowing necessary reinforcing experiences to occur (Bandura, 1977).

Given the nature of the facility and its likely impact on participant responses, future research also could focus on delivery of the same program in other correctional settings (prison, probation and parole offices, local jails, etc.). The authoritarian attitude held by staff at the detention/diversion center likely impeded some participants from feeling that they were able to make important decisions. Conducting the same program at a probation and parole office would allow access to offenders with similar backgrounds but without the suppressive environment.

Finally, given the time limitations, environment, and population under study, several types of assessment may be useful in helping to determine the extent to which career decision-making style and career decision-making self-efficacy are affected by a

career intervention. In addition to the psychosocial measures currently under study, behavioral measures also could be used to assess change. Recidivism data could comprise part of such an assessment, though it should not be the only behavioral measure (Cullen & Gendreau, 2000). Other parts of a behavioral assessment might include pretest and post-test application and interview sessions. Post-release follow-up data detailing actual jobs obtained by participants also could reflect the changes experienced in decision-making style and self-efficacy.

Currently confidentiality concerns prevent both the release of recidivism data to the general public and the ability to track and interview offenders post-release. Considering that both recidivism and follow-up job acquisition data would take at least an additional year to collect, these potential improvements were not within the reach of the current study. The current study, however, does provide a base for future research. In addition to addressing a population that needs more attention in both the criminal justice literature and psychology literature, this study also addresses the use of psychosocial variables in measuring valuable internal changes in the female offender population.

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## Biography

Allison L. Stone has a B.A. in Psychology from the College of William and Mary. She currently is enrolled in the Counseling Psychology Ph.D. program at Virginia Commonwealth University. Her research interests include correctional populations and older adult populations.