A CONSTRUCT VALIDATION OF SELF-DETERMINATION INSTRUMENT: USING ADULT SUBSTANCE ABUSE CONSUMERS IN RESIDENTIAL SETTING

by

UJU P. EKE

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Approved by:

Adv Shlomo Sawilowsky 1/24/96
Adviser Date

Alan Hoffer

Jo Anne Holbert

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DEDICATION

I dedicate this dissertation to: my wife: Adaure Uju-Eke who provided support and love I needed; to my late father: Eke Ogidi Amadi and my mother: Sussana Mgbakwo Amadi (both in Nigeria), whose constant prayers and blessings guided me through; my daughters: Chinyere Uju-Eke and Oluchi Uju-Eke, who in their very young ages, learned the real meaning of patience by giving up much of their Saturday cartoon programs so that I can work on this dissertation. Above all, I thank Almighty God for guiding me through out this period.

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Introduction

Background History of Motivation Theories

Social cognitive theory distinguishes between two broad classes of motivation: those that are biologically based which includes physiological conditions arising from external aversive events and those that are cognitively based. In cognitively-generated motivation, people motivate themselves and guide their actions anticipatorily through the exercise of fore thought. They anticipate likely outcomes of prospective actions, they set goals for them selves, and they plan courses of actions to realize valued futures (Bandura, 1989).

Deci and Ryan (1985) traced the development of motivation theories. Within psychoanalytic psychology, motivation theory began with Freud's (1914, 1915) drive theory of sex and aggression whereas, within empirical psychology, motivation theory began with Hull's (1943) drive theory of sex, hunger, thirst, and avoidance of pain or by some derivative thereof. Freudians organized their research around the role of drives, particularly the sexual drive, and Hullian researchers studied the role of drives in animal learning. With continued research, it became clear that drive theories were not adequate for dealing with many of the observed complexities of human behavior such as the personality traits that are observed in human behavior. A very intelligent individual for example might have the personality traits that go with academic intelligence and at the same time have the traits that are associated with goal setting but lack the traits that are associated with good planning. According to Deci and Ryan, drive theories are not adequate to explain these behaviors.

In order to sustain motivations based on drive, it must be reinforced. White's (1959) theory of effectance argues that effactance will complement drive and at the same time account for a variety of other behaviors such as play, exploration, and purpose.

Effectance motivation deals with the fact that human beings are motivated to be effective in dealing with their environments.

This feeling of effectance that follows from competent interactions with the environment is a reward for this class of behaviors and can sustain behaviors independent of reinforcement. White's theory deals with the fact that organism are innately motivated to be effective in dealing with their environment. This motivational force that does not require reinforcement was generally referred to as independent ego energy or intrinsic motivation.

Deci and Ryan (1985) quoted Shapiro (1981), who argued that drives account for tendencies to act, but drives do not provide adequate theory of action. Shapiro developed the concept of self-direction, entailing conscious processes such as imaging future outcomes, to account for a wide range of activities that we observe. The advantage for self-direction is that it gives individuals flexibility to allow one's attitude to direct actions and to the achieve one's aims or goals.

As more and more researchers began to loose confidence in the drive theories, they began to search for other phenomena that explained human motivation and behavior. Notable among them were Heider (1958) and deCharms (1968). Heider introduced the perceived locus of causality construct. The construct distinguishes between personal causality, where intentionality mediates one's outcomes, and impersonal causality, where the outcomes one receives are not intentional. deCharms (1968) was credited with the concept of internal perceived locus of causality and external perceived locus of causality. In internal perceived locus of causality, one's interest and desire come from within and in external perceived locus of causality, they come from external.

These non-drive behavioral theorists no longer hold the dichotomous view of human beings as either mechanistic (being passive) or organismic (active). To them, all human beings are organismic in their behavior. Deci and Ryan (1985) argued that theories to explain self-regulation activities such as making choices or setting goals ought to be considered in studying human motivation. Field, Hoffman, and Sawilowsky (1993),

developed a model that could be used to assess self-regulating activity such as setting goals. They called this construct a self-determination model.

Definition of Self-Determination

Field and Hoffman (1992), defined self-determination as one's ability to identify and set goals for oneself and to take initiative to achieve those goals by using the skills based on the foundation of knowing and valuing oneself. Self-determination affects every intention, decision and action of the individual. The interaction of knowing and valuing oneself sets the stage for self-determination. This interaction also lays the foundation for planning, action, and experiencing outcome and learn. These steps, according to the authors, incorporate both self-esteem and internal locus of control.

According to Field and Hoffman (1993), self-determination is a critical life skill which either may be promoted or discouraged, by environmental variables (e.g. , opportunities for choice-making, attitudes of others, supports in the environment) and by the knowledge, beliefs and skills of the individual (e.g. , awareness of one's strengths and weakness, valuing the self, planning, and communication skills). The authors argued that efforts must then be made to build the environmental opportunities that supports self-determination and strengthen skills that further self-determination. The involvement of the consumers in the planning and implementation of treatment programs will constitute such environmental opportunities that promote self-determination.

Ward (1988) believes that self-determination includes the concept of assertiveness, creativity, pride, self-advocacy and self-actualization. Self-Actualization means going beyond meeting biological needs and learning to get along socially, to a striving toward independence and autonomy. To be self-actualized is to accept oneself for what that person is and others for what they are. Self-actualized people are spontaneous, natural, and concerned with ethical and human values. People who are self-actualized dislike falseness

and often have a mission or cause in life. For these people, life is meaningful. Among other qualities are creativity, originality, and positive attitude toward important tasks (Ragland and Saxon, 1985). Self-determination is also considered as a composite of "attitudes and abilities" required to act as the primary agent in one's life and to make choices regarding one's actions free from undue external influence and interference.

Statement of the Problem

Government has changed most of the guidelines in substance abuse treatment institutions. Among them individuals receiving treatment for substance abuse should no longer be referred to as patients, rather as "consumers" and the government has granted consumers the right to participate or refuse treatment as prescribed by the counselors or therapists. These restrictions or regulations were put in place without consideration of the mental states of these consumers. Since these consumers' reasoning have been interrupted with use of alcohol and drugs, it becomes very crucial to develop an instrument to determine who is capable of making value judgments in terms of their choice of treatment.

Presently, there is no instrument capable of measuring the personality traits that are associated with individuals who are capable of setting goals and making choices and there is no instrument that could assess such traits among consumers in residential settings. Given that the instrument this study intends to validate is designed for use with individuals with a disability, and since substance abuse is classified as a personality disorder in substance abuse studies, it is therefore reasonable that this Self-Determination Student Scale (SDSS) when validated, could help alleviate most of the tensions that counselors and therapists are experiencing as a result of these new regulations.

Purpose of the Study

The purpose of this study is to examine the construct validity of the Self-Determination Student Scale (SDSS), an instrument developed by Hoffman, Field, and Sawilowsky (1993) to measure self-determination (as defined above).

Research Question

The research question deals with whether the self-determination student scale, developed by Hoffman, Field, and Sawilowsky (1993) is a valid instrument to assess self-determination among adults in a substance abuse charity residential treatment setting? In other words, does the instrument measure the general construct (elements) it purports to measure? If the instrument measures self-determination, can we be assured that it does not measure some other personality traits or behavioral characteristics?

Research Hypothesis

Hypothesis 1:

The first hypothesis states that consumers who are self-determined will have high scores on the self-determination scale and they will display the characteristics that are consistent with individuals who possess the self-determination trait. [People who do well on the test (X), will do well on the activity (Y)]. In null hypotheses form, the hypotheses will assert that there is no relationship between test performance and activity performance (Landy, 1986). This means that individuals who score high on the instrument will do "well" in making choices and setting goals.

Hypothesis 2:

The second hypotheses is that there will be strong positive correlation among items in the same subscale and the total score on that subscale; and a low correlation among items that belong to different subscales.

Hypothesis 3:

Lastly, the total score on each subscale should be highly correlated with the total score on the instrument. The total score on the scale will be positively correlated with the total score on the theoretically related scale and inversely or less correlated with the other scale that is not theoretically related to the self-determination scale. The operational definition of the level of self-determination is the summed score on the instrument.

Justification for the Study

Self-determination is an emerging construct; currently, there is no reliable and valid instruments to measure self-determination. Reviews in the Mental Measurement Yearbook, Directory of Unpublished Experimental Mental Measurement, Applied Psychology and Measurement, and Education Guidance, support this claim. Secondly, construct validation of an instrument is necessary because it provides information that will contribute to the theory while ensuring that the instrument is really suited for the proposed purpose.

The instrument was originally developed to measure self-determination among school children with and without disabilities but as Wilson (1993) observed, behavior often is inconsistent across situations and is influenced not only by personality traits but also by the particular context within which the behavior occurs. Therefore, it is conceivable that an

individual's self-determination may differ from one situation to another and that behavior may vary accordingly.

Benson and Clark (1982) stated that validation of a new instrument is an ongoing activity, they therefore suggested that several studies across different populations and across different times are needed to ensure that the new instrument is valid for all individuals with whom it is to be used. Validation is a continual process, one for which an end point is rarely achieved but is only successfully approximated. Based on the above arguments, it is appropriate to try to validated this instrument using persons who have abused substance or consumers as preferred by federal government in residential setting because these consumers represent different population.

Results from this validation study will provide information regarding the usefulness of this instrument and will shed more light to the theory. When this instrument is validated, it will provide practical information to professionals that are usually confronted with consumers' demand for a say in the type of treatment that is administered to them. In most instances, the therapist or counselors dealing with persons who have abused substance of the nature that is being investigated in this study, are precluded from developing their own tests because they do not know the steps necessary to proceed systematically to test development and validation; in situations where they may know, they may be constrained by their budget (Benson and Clark, 1982).

Widiger (1993) following Cronbach and Meehl (1955) approach to validation, stated that the validation of an instrument of assessment is also the validation of the construct that is being assessed. They emphasized that construct validity is the validation of a theory. They argued that the relevance of any particular component or phase : face validity, content validity, concurrent validity, criterion validity, convergent and discriminant validity; of any construct validation depends on the respective personality (disorder). Heppner et. al., (1991) suggested that construct validation is the most important type of validation study for research purposes.

Morgan-Harrison(1994) attempted to validate this instrument using high school students but the results were inconclusive. This instrument will be validated using "consumer" at the substance abuse treatment center because health care providers have become increasingly concerned with accountability as a result, the paucity of adequate instrument for documenting treatment effectiveness surfaces as a major problem.

Limitations of the Study

This study will be based on self-reporting of the patients and there has been documented evidence of the unreliability of self-reporting inventories. Kagan (1988) reported some of the problems associated with pencil and paper instruments. The author argued that most of today's instruments are derived from weak theories; the instruments may be indifferent to the origins of the adult characteristics, whether biological temperament or childhood experiences. Most importantly, the validity of the instrument relies only on the answers to questionnaires. The author cited several studies that found no correlation or minimal correlation between an index of a concept based on overt behavior, cognitive functioning, symptoms or physiology, on the one hand , and one based on answers in an interview or on a questionnaire. This means that the meaning of a construct may not mean the same when measured from different context, that is, the meaning self-determination, for example, may be different when measured from observable characteristics of a person than when measured from the self-reporting inventory.

Kagan (1988) stated that it is widely if not universally accepted that the statements a person makes about his or her own behavior and personality traits are a function of the individual perceptions of the desirability and acceptance of such behaviors and traits. Again, to substantiate this argument, the author cited studies in which middle-class preadolescent academically competent students who were rated by their teachers as having a high self-concept with respect to academic skill , rated themselves significantly lower in a

self-reporting academic ability inventory than working- class students who had been rated by their teachers as having a poor self-concept of academic skill. Irrespective of gender differences, race, or ethnicity in self-reporting responses, Hogan and Nicholas (1988) reported other problems such as social desirability of responses. These problems exist among "normal" individuals.

Ballard (1992) echoed the same concern that there is a possibility that self-reporting measures might be contaminated by social desirability bias. The social desirability describes culturally approved behaviors with a low probability of occurrence. Finally, the wording of test items may not be familiar with the target group.

One other limitation to this study is that the individuals have a personality disorder caused by substance abuse. These individuals might not give accurate responses to the items as they reflect on their personality trait. There are huge body of evidence that persons who abuse substance do not have a homogeneous personality trait and therefore might give conflicting responses to the questions on the questionnaire. These consumers have been referred to this center through a variety of sources: court referral, doctor/physician referral, referral by their relatives, and personal referral and their responses might be associated with source of referral rather than what the instrument is actually trying to measure.

The remainder of this study is organized as follows: Chapter 2 will present review of literature, Chapter 3 will deal with the research methodology, the results will be presented in Chapter 4, and Chapter 5 will conclude this study.

Chapter 2

Review of Literature

Review of Theoretically Related Literature

Creswell (1994) suggested that in studies dealing with new areas, the researcher should try as much as possible to look at the closest related literature. In quantitative research that involves observable independent and dependent variables, he suggested the following: do literature review on the independent variables; do literature review on the dependent variable; and do literature review on study that combined the dependent and independent variables.

Since this study does not involve a clear observable independent and dependent variables, the literature review in this study will deal with the literature on theoretically related constructs and some personality validation studies. Literature dealing with self-determination as defined by Field, Hoffman, and Sawilowsky (1993) or the construct validation of an instrument measuring these personality traits are at best non existing but their self-determination continuum or behavioral regulation bears some resemblance to other continuums in the literature (e.g., Wehmeyer (1992, 1994), Deci and Ryan's (1985) self-determination theory, Rotter's (1966) internal and external locus of control, Bandura's (1977) self-efficacy theory, Block's (1987) Empowerment theory, and Strumpter (1975) autonomous and social achievement values.

Wehmeyer (1992, 1994) referred to self-determination as attitudes and abilities necessary to act as a primary causal agent in one's life and to make choices and decisions regarding one's quality of life, free from undue external influence or interference. Causal agency implies that it is the individual not others, who make things happen in his or her life or situation. An agent refers to a person or thing through which power is exerted or an end is achieved. Causal agency, therefore, implies that a given action was purposeful or

performed to achieve an end, not just that the individual's presence was simply contiguous with action.

Attitudes associated with the self-determination can be categorized as those perceptions and beliefs about oneself and about one's role as a causal agent. Perceptions incorporated in the first category include self-concepts, self-awareness, self-esteem, and self-confidence. Perceptions about one's role as a causal agent include perceptions of control, self-efficacy, and outcome expectations. Bandura (1977) referred to these perceptions as "elements of psychological Empowerment" and they are essential for individuals to become the causal agent in their lives.

Wehmeyer's self-determination construct came out of research done with children with disabilities. The study found that involving children with disabilities in goal setting instead of the teacher setting the goal for them enhanced the children as evidenced by the improvement in their reported self-efficacy scores. The opportunities to make choices, express preferences, experience control over outcomes, take risks and assume responsibility for personal actions are highly prized by most people. The exhibition of such behavior was found to reflect favorably upon individual's perceived independence, dignity, and self-worth, and is highly valued , protected and encouraged by society.

Wehmeyer (1992) indicated that B.F. Skinner (1973) discussed self-determination or, in operant terminology, self-control. Self-control is defined as a process through which an individual becomes the principal agent in guiding, directing, and regulating those features of his or her own behavior that might eventually lead to desired outcome. Self-regulation is a complex response system that enables individual to examine their environments and their repertoires of response for coping with those environments, to make decision about how to act, to evaluate the desirability of the outcomes of the action, and to revise their plans as necessary . It is said that when an individuals controls his or her self, that individual chooses a cause of action, thinks on the solution to a problem or strives toward an increase in self-knowledge.

Deci and Ryan (1985) defined self-determination as the individual's capacity to choose and to have those choices rather than reinforcement contingencies, drives, or any other forces of pressure, be the determinants of one's actions (their sense of choice and personal initiative). They argued that their theory of self-determination is motivational rather than cognitive because it addresses the energization and the direction of human behavior. When self-determined, one acts out of choice rather than obligations or coercion, and those choices are based on awareness of one's organismic needs and goals, which involves full sense of wanting and personal endorsement. This definition of self-determination portrays individuals as active organisms striving for effective interactions with the environment in a context of autonomy (experience of freedom in one's behaviors).

Individuals are said to have a need to feel competent, self-initiating, and self-regulating in their everyday behavior. The satisfaction of this need, according to the authors, enhances motivation, whereas the thwarting of this need impairs motivation According to this theory, people do not always want control of outcomes, what they want is the choice about whether to be in control. Within this definition, there is embedded the concept of intrinsic and extrinsic motivation for one's action. Intrinsically motivated behaviors represent the prototype of self-determination and self-determination has three specified needs: competence, autonomy, and affiliation.

The Deci and Ryan (1985) theory of self-determination proposed the existence of four types of motivation they vary along the continuum. These are: intrinsic motivation, self-determined extrinsic motivation, non-self-determined extrinsic motivation, and amotivation. These motivational levels can be either supported or hindered by environmental forces in which the individual lives. The authors classified individuals into three orientation groups: autonomous, control, and amotivated. Each individual is matched with three motivational systems: intrinsic, extrinsic, and amotivation (impersonal or helplessness).

Autonomous individuals view events as informational. They are characterized by what Deci and Ryan called "choiceful accommodation". A strong autonomy oriented individuals, seeks out opportunities, initiate more in the situations he or she is in. Autonomy, i.e., a sense of perceived control over one's environment, is a basic human need which, if unfulfilled, can affect an individual's physical and psychological well being.

Control orientation oriented individuals do not experience any real sense of choice and their functioning is, to a large extent determined by external controls or internal controlling imperatives such as should, have to, ought to , and must. They tend to take every suggestion as a must do obligation. The control oriented people view events as pressure toward an outcome.

Amotivation (Impersonal) oriented individuals feel that they are incompetent to deal with life challenges. The individuals being unable to master the forces that determine their desired outcomes, develop a sense of personal helplessness and a sense that the individual can not cope with the forces in their environment. This might lead people to behave without intentions, follow precedents because they have not learned to be purposive often, they may be driven by non conscious forces, which could lead them to engage in addictive behaviors and feel helpless with relation to them.

This theory has been empirically tested in many domains, such as in the work organization (Deci, Connell, and Ryan, 1989), in education (Deci and Ryan 1985, 1994, Vallerand et.al., 1992), in sports (Deci and Ryan, 1985), in product advertisement (Zuckerman et. al., 1988), in studying elderly person's psychological adjustment; using person-environment fit model (O'Connor and Vallerand, 1994), and in studying couple happiness (Blais et. al., 1990). Williams & Luthans (1992) studied the impact of choice of rewards and feedback on task performance based on the self-determination theory. Lawler and Armstead (1991) studied the relationship between Type A behavior and sources of extrinsic versus intrinsic motivation, again based on Deci and Ryan self-determination theory. Type A behavior is a group of behaviors expressive of time urgency,

competitiveness, and hostility. Type A individuals are highly motivated to achieve success but they are not satisfied with the success that they have achieved. They seem to focus on extrinsic motivational factors such as deadlines; they seek out situations characterized by clear evaluative standards. Although Type A individuals are highly motivated in their posit of goals, they tend to be high in tension, pressure, and negative emotions. Type A individuals are classified as "joyless strivers."

Field studies within the theoretical tradition of interpersonal context were also surveyed by the authors. These studies concluded that promoting self-determination requires that the significant others in a target person's context (e.g., parents, managers, teachers, and counselors) take that person's frame of reference. They must understand and acknowledge the person's needs, feelings, and attitudes with respect to the issue or situation at hand. When this is the case, the target person will be more trusting of the context and believe that it will be responsive to his or her initiations or goals (Deci, Connell, and Ryan 1989, p.581). In all of these studies, the result showed that individuals do better when their self-determination is not hindered. Therefore, any environment that promotes self-determination tend to achieve the expected result or goals.

Weick and Pope (1988), from Social Work perspective, defined self-determination as the client's right to make their own decisions, their right to actively participate in the helping process, their right to lead a life of their own choosing, their right to self-help, and the need for people to achieve their own goals. Each concept in this definition conveys a belief in the capacity and right of the individual to affect the course of their lives.

Their theory originates from idea of using individual's inner resources and wisdom. Clients participation is viewed as a way of developing the mind, given that individuals have wills and purposes of their own and are not fitted to play a passive part in their recovery. The authors further argued that the value of inner wisdom in the need to stimulate client's capacity to solve their own problems while assistance will be rendered to the individual to achieve the fullest possible development of his or her personality. The importance of having

confidence in the client's ability to solve problems or set goals and the inner capacity to meet life's frustrations helps in the recovery process. The power of letting people achieve their own goals is more powerful than the old philosophy of helping people help themselves.

Much of the controversy surrounding self-determination in this context has been how it can be applied to clients who can not make good choices. Therefore, a limitation should be imposed and the first kind of limitation to be imposed should be that clients must demonstrate that they can make good choices (assuming that they are aware of decision making process and proof of satisfactory skills). Choice therefore must be equated with approved behavior which include safe-guiding the rights of others, the capacity for positive and constructive decision-making, and the unwritten community standards. Because freedom of speech does not guarantee the absence of slander, self-determination in this context does not guarantee that behaviors will meet social norms of acceptability.

Their concept of self-determination takes some of its meaning from the rational model of human behavior. In this model, people make decisions by identifying a problem, examine options, weighting consequences, and deciding on a cause of action that represents the most satisfying or least painful result. This linear model of decision making greatly distorts everyday experience, even though it does not influence human behavior. The influence of this behavior is felt in what the authors referred to as "reconstructed rationalization", wherein people defend their choices after they are made.

Hermann (1990), documented court cases in which the right of involuntarily civilly committed patients to refuse psychotropic or anti psychotic medication has been recognized by courts and legislatures. This legal documentation supports the social work concept of self-determination. Advocates for the civilly committed patients have argued that patients should be presumed competent and should have the right to refuse treatment under circumstances in which they pose no threat to others and self. The author defined self-determination as the right of civilly committed patients to refuse treatment because the

doctrine of informed consent requires not only that the person be given all relevant information required to reach a decision regarding treatment , but also that the person does in fact give consent.

Rotter's (1966) locus of control relates to one's belief about what has caused reinforcement to occur. The locus of control can either be internal or external. Those individuals whose locus of control is classified as internal tend to believe that the reinforcements they or others received are based largely on their actions, while those individuals whose locus of control is classified as external, tend to believe that reinforcements are based more on luck, chance, or powerful others than their own behavior. Meyers and Wong (1988) added some other psychological characteristics associated with internals. Their study documented other studies that showed that internals experience fewer depressive and neurotic symptoms, lower levels of trait anxiety, higher levels of self-esteem, and that internals are probably no less extroverted.

Rotter (1966) developed the Internal-External (I-E) scale to measure locus of control. This theory resembles the Field-Hoffman-Sawilowsky self-determination theory in that it reflects the individual's free activity rather than the stimulus-response relationship. This theory distinguishes between a belief in external locus of control and internal locus of controlling. There are speculations that Rotter's locus of control may also assess belief in personal responsibility and freedom of will. In his APA Award Address, Rotter (1989) listed over four thousand studies based on his original locus of control construct.

Nowicki and Hopper (1974) for example, assessed locus of control orientation with alcoholic population and related this orientation to their degree of cognitive dysfunction. The authors hypothesized that "alcoholics", because of their drinking behavior, would be more external than a comparable group of normal people. The authors used subjects who were residing in a treatment center. Each subject completed the adult Nowicki-Strickland Internal-External scale and other comparable scales.

The result of their 2x2 (Sex x Treatment modality) analysis of variance indicated that female "patients" had significantly more external scores ($p < 0.01$) than any of the other three groups, who in turn did not differ significantly from one another or from a normal control group. This result, according to the authors, suggest that female patients may be a relatively more disturbed group compared with male alcoholics (p.735)

Bandura (1977) introduced the construct of self-efficacy to account for psychological changes that occur as the result of various modes of treatment. According to the self-efficacy theory, expectations of self-efficacy determine what activities people engage in, how much effort they will expend, and how long they will persevere in the face of adversity. Bandura differentiated between self-efficacy expectations and out come expectancies. Self-efficacy expectations are convictions that one can successfully perform the behavior required to produce a given outcome, whereas outcome expectancies are beliefs that a given behavior will lead to that outcome.

Bandura (1977) theorized that self-efficacy expectancies vary on three dimensions that have implications for performance: magnitude (the relative difficulty of a task compared to others in a hierarchy), strength (the relative extinguishablility of expectations by disconforming experiences), and generality (the relative degree of specificity or perverseness of expected mastery).

Self-Empowerment theory is another theory that relates to the individual. This theory was developed by Block (1987) and postulates the need for individuals within an organization to have a sense of autonomy and the need for them to be able to express their autonomy to others. According to this theory, individuals must come to recognize that the best source of authority comes from within themselves and that they need to (1) be concerned with services to others and less concerned about receiving external rewards; (2) have the courage to take action and do what they think is right; (3) express to others their ideas and feelings; (4) be willing to take risks and admit their mistakes to others; (5) be willing to listen to others and engage in discussions that promote growth through

knowledge; and (6) relate to others in open, honest and non-manipulative manner. This personal power, according to Empowerment theory, is similar to Maslow's theory of self-actualization; which is characterized by an acceptance of self and others. Ragland and Saxon (1985) argued that self-actualization means going beyond meeting biological needs but also includes learning to get along socially, to strive toward independence and autonomy; this is an important quality of self-actualization. The person who is self-actualized is said to be fully functioning

Strumpfer(1975) defined autonomous achievement motivation as an internalized personal standards of excellence set by oneself, while social or control achievement motivation involves responses to standards set by others. The author argued that both of these personality traits may be strong in a given individual, both may be weak, or one may be strong while the other is weak. In one hand , information about the individual's performance is available, and in another hand, norms for socially approved performance.

In all of the above surveyed literature review, the general finding is that individuals do better when the action comes from with the individual. These literature review shows a very strong support for self-determination. The denial of the "self" within an individual reduces motivation.

Implication for consumers who are receiving treatment for substance abuse

Often times when an individual seeks medical or psychological treatment, that individual is always expected to adhere to the recommendations of the physician or counselor as to how the individual is treated. The input or suggestions by the medical or psychological recipient is always and almost not sought. Substance dependency has been classified as a behavioral disorder and as a result, persons receiving treatment for this disorder have to adhere to the structure and norms established by the therapeutic community. The American therapeutic community for addicts has a heretical staff and

residents structure with participation of the residents in decision-making based on the level of their personal growth in the treatment program. The need for tailoring treatments to individual consumer has become apparent to all who recognize the complexity of substance-abuse related problems.

Lewis (1994) stated that standardization appears to be on the way out and that the society is heading toward a society in which treatment is designed to fit the individual. This move toward consumer participation or choice is gaining ground in all areas were the individuals were meant to be passive. An expanded body of research is now pointing toward allowing each consumer to choose from among a variety of options . Thus there is a movement toward treatments that are both effective and more individualized.

The treatment of individuals with substance abuse disorder must be based upon the needs of each consumer. Self-determination may involve advocating for personal preferences in the goals and objectives of both the consumer and the counselors, or being allowed to take risks and learn from experience. Deci and Ryan (1985) pointed out that allowing choice and self-determination is not to be equated with the removal of constraints or structure.

Wehmeyer (1992) argued that, although self-determination may manifest itself in choices which may conflict with what is perceived as optimal by caregivers, this does not extend to situations where personal preference takes priority over, for example, the potential for life threatening outcomes. An autonomous individual is not free from external influences. Consumers who can demonstrated their that they have abilities and limitations and who can communicate preferences need to focus these accomplishments toward making choices which could lead to achieving life goals.

Review of Literature in Construct Validation

In 1954, the American Psychological Association formed the "Technical Recommendations for Psychological Tests and Diagnostic Techniques." This committee of which Lee J. Cronbach and Paul E. Meehl were members and chair, respectively, proposed a four-category taxonomy of validity models. The taxonomy consisted of predictive, concurrent, content, and construct validity. The predictive and concurrent models were combined into a category known as "criterion-related validity strategies." Thus it is common to hear reference made to three types of validity (Landy, 1986).

Content validity refers to the use of an instrument to determine how well an individual performs at one point in time for a given content domain. The criterion-related validity is used to predict future performance and the construct validity is to infer some amount of a hypothetical trait. Landy (1986) argued that all questions about test validity ultimately concern construct validity. The various types of validity identified by the American Psychological Association (APA) Committee on Test Standards are special cases of construct validity that, when taken together, allow the researcher to interpret the meaning of test scores.

Hogan and Nicholson (1988) reviewed the discussions on construct validation as presented by Cronbach and Meehl (1955), Loevinger (1950), Compbell and Fiske (1959), Gough (1965), and Buss and Clark (1983a). Validity in general is defined as the degree to which a test measures what it is supposed to measure. A construct is a non-observable trait which explains behavior. In Embret's (1983) formulation of construct validity, a construct is defined as some postulated attribute of people, assumed to be reflected in test performance. In fact, constructs are invented to explain behavior; there may be no proofs that such behavior exists.

According to Cronbach and Meehl(1955), construct validity is involved whenever a test is to be interpreted as a measure of some attribute or quality which is not operationally

defined. Gough (1965) redefined validity to include the number and range of valid inferences a researcher can make about a particular individual on the basis of a test score. No matter whose interpretation of what construct validity is, Hogan and Nicholson (1988) noted that not all measures will be able to pass all of the validity hurdles just described. The authors further alleged that the primary problem with measurement-based personality research is the tendency for researchers to fail to ask what scores on the test mean or what inferences can be made on the basis of the test scores. In their opinion, this results in the researcher being more concerned with a test's name rather than the construct that the test is designed to measure, and therefore the researcher fails to pursue more validation procedure (p. 625).

In addition to the discussion of the meaning of construct validation from different view points, Hogan and Nicholson (1988) discussed four common criticism of personality tests and the practitioners defense of personality tests. These concern social desirability correlations with physiological measures, the interpretation of the self-report data, and the view that the relationships between personality descriptions only reflect the semantic links between trait words. The authors cited the study done by Edwards (1953) using the Minnesota Multiphasic Personality Inventory (MMPI) in which the items correlated about 0.80 with a social desirability scale.

The conclusion was that people respond to the desirability of items rather than their content. The lack of stable covariates between personality measures and measures of corresponding physiological processes also contaminate item endorsement. They argued for example, that scores on anxiety scales should correlate with physiological based measures of anxiety. Because reliable covariations of this type are relatively rare, they question the validity of "self-report" scales. It was important for the authors to show that the role of theory for interpreting covariations among the indicators of a construct is not limited to the relationship between physiological and self-report measures but for certain theoretical models, the indicators of a latent entity may have negative, positive, or zero correlations

with one another. For example, marital satisfaction and length of marriage are positive indicators of marital stability even though marital satisfaction was found to be negatively correlated with length of marriage. The key to this paradox is appears to be whether the measured variables are considered to be cause-indicators or effect indicators.

The third point concerned the term "self-reports". The authors pointed out that naive test users often take item endorsement at face value and treat them as if they were a second-best way to observe behavior. They argued that responses to items on questionnaires are not self-reports but they are self-presentations that are identical to those that characterize answers to questions during a job interview. Assuming that a prospective job seeker is asked to rate their response to items dealing with their philosophy of management, attitudes toward different races and gender. How would one interpret the answers to these questions? Are the answers factual summaries of past behavior or are they efforts to project a particular image that will be acceptable to the examiner?

Hogan and Nicholson (1988) concluded that these item endorsements are not self-reports and they should not be conceptualized that way. Finally, observers are unable, in principle, to rate the personality characteristics of actors and that ratings reflect the manner in which personality terms are organized in the ratters memory rather than characteristics of the actor's behavior. This view is what is now known as the "semantic distortion hypothesis."

In Frederiksen (1986), Messeick (1975) defined construct validation as the process of marshaling evidence in the form of a theoretically relevant empirical relations to support the inference that (a test score) has a particular meaning. Benson and Clark (1982) noted that construct validity is the most difficult and perhaps the most important form to obtain. It is needed when test scores are used to infer the presence of some underlying hypothetical trait or construct. The general procedure used to assess construct validity of a new scale (instrument) is to define the trait operationally and set up hypothesis or hypotheses about how individuals who possess varying degrees of the trait will behave. In the context of this

study, patients who are self-determined will have high scores on the instrument and those who are less self-determined will score low on the instrument.

In trying to establish the construct validity of a construct, problems could arise. Fiske (1973) demonstrated the problems that could arise when the same construct (e.g. self-determination) is measured by different instruments. The author demonstrated how different correlation coefficients could be obtained even if the different instruments measuring the same construct are administered to the same subjects. In his example, Fiske(1973) used the Murray needs construct to illustrate this point. When different instruments were developed Johnson and Guthrie(1968), Edwards et.al. (1972), and Edward (1959) based on the twelve needs and the different instruments purported to be measuring the needs were administered to the same subjects, the correlations obtained were significantly different.

Apart from the problems that might occur when different instruments measure the same construct, other researchers argue that Cronbach and Meehl's (1955) construct validity formulation is no longer adequate for today's information processing society. Embretson (1983) argued that psychological theory has changed substantially since Cronbach and Meehl formulated the construct validation concept.

The goal of psychological theorizing has changed from explaining antecedent/consequent relationship to explaining performance from the systems and subsystems of underlying processes. These new changes are described as paradigm shift. The author further argues that if Cronbach and Meehl's (1955) construct validation process is equivalent to theory construction, then the paradigm shift should influence construct validation research. That is, the basic issues and appropriate methods for determining the constructs that account for variance in test performance are different in the information processing paradigm. The author proposed two different issues that were most addressed by construct validation research: *construct representation* and *Nomethetic span.*

In Embretson's (1983) current development, the term construct refers to a theoretical variable that may or may not be source of individual differences. Construct representation research is concerned with task variability rather than subject variability. Nomethetic span refers to the net-work of relationship of a test to other measures. Nomethetic is supported by strength, frequency, and pattern of significant relationship with other measure such as traits, criterion measures and so on and so forth. The author presented methods for determining construct representation and nomethetic span.

The review on construct validation has revealed the steps to validating an instrument and the problems that are encountered in interpreting scores. Such problems include the fact that the scores might not reflect the attribute of the individual that will actually be observed and the scores could be contaminated. However, the literature review has alerted that construct validation is another way of testing the hypothesis regarding a theory.

Construct validation, quite unlike other empirical studies where the independent variable is observable, must be based on the underling theory of the construct. The general consensus is that once the new construct can converge or discriminate with other instruments or subscales of the same construct, we have some element of validity in the instrument.

In summary, many researchers indicated that the investigation of a test's construct validity is not essentially different from the general scientific procedures for developing and confirming theories. That is, construct validation is equivalent to theory construction.

Chapter 3

Methodology

Subjects

The individuals that participated in this study came from the Salvation Army substance abuse treatment center in Detroit, Michigan. This is a three month rotation substance abuse treatment center. These individuals are men and women residents at this center and are receiving treatment for addiction from alcohol and/or drug use.

Procedure

The study was conducted in accordance with the rules of the human and animal investigation committee of Wayne State University, and the APA/AERA/NCME standards for ethical conduct of research. In keeping with ethical standards, an authorization letter was requested from the university to administer this instrument to these consumers. (a copy of this authorization is in the appendix). The individuals who participated in this study also signed an informed consent letter before the test was administered to them. The objective of taking the assessment was clearly communicated to the subjects. Participation was voluntary, individual information is still confidential as promised and only group results were used in all analysis.

The definition of self-determination was clearly given to the individuals so that they will have a good knowledge of what the test is all about. The test was administered between July and August , 1995. The individuals were given as much time as they needed to complete the items. Some of the individuals completed the tests during their counseling sessions while some completed them in their respective dormitories. This helped to eliminate any form of pressure or deadline. Deci and Ryan(1985) empirical study based on

their self-determination theory, found that the imposition of deadline reduces intrinsic motivation, and intrinsic motivation is the key to self-determination theory.

Research Design

This study involves naturally occurring phenomenon in human beings, therefore it was non-experimental. In non-experimental studies, the researcher can not manipulate the independent variables, not only because the independent variables are difficult to manipulate, in most cases, it is unethical to manipulate the independent variables. In naturally occurring phenomenon, the appropriate research design will be a survey research design because there is no control or experimental group needed nor can the researcher assign individuals to groups. As it was the case in this study, it will be unethical and impractical to assign individuals as either self-determined or non-self-determined.

The survey design is also very appropriate because its economy, the rapid turnaround in data collection, and the ability to identify attributes of a population from a small group of individuals as reported by Creswell (1994). The data was collected at one point in time and the instrument was administered in an interview format of face-to-face with the individuals. Every consumer (individual) that consented to participate in this study received the same treatment, that is, they were administered the same self-reporting instruments. The demographic variables were collected simultaneously on the same instrument.

This design helped examine the research question in a valid, systematic , and objective manner by reducing as many rival hypothesis/explanations as possible and yet isolating the variables of interest to the research question. The isolation of the constructs of interest to the research question and the removal of other constructs that might contaminate, confound, bias, or distort the constructs of interest is taken into consideration

in choosing this design. This research design helps to provide answers to the research question while minimizing bias (error, error variance, or noise).

Data Gathering Instruments

(1) Self-Determination Student Skill (SDSS)

The main data gathering instrument was the Self-Determination Student Skills,(Hoffman, Field, and Sawilowsky, 1993). This instrument was developed originally to assess the extent to which students with personality disorders exhibit self-determination in their environment. The original scale is a 94-item scale. The scale was slightly modified by this researcher removing the items that related to school and school environment. The resultant scale had 84 items. The scale was modified in consultation with one of the principal developers of the scale (Dr. Sawilowsky). This modified version retained all the psychometric properties of the original version and at the same time was suitable for use with adults outside the school environment.

The SDSS is dichotomous in nature. Following Gough's (1965) terminology, the primary task of the SDSS scale is to locate individuals along the continuum of self-determined to not self-determined behavior, and to forecast the likelihood that any person will transgress whatever dividing line his or her own culture between these two poles of the continuum.

The phrase "his or her own culture" is used intentionally because the theoretical basis of the self-determination concept requires that its validity be demonstrated in other "cultures" than the one in which the scale was developed. This instrument is multidimensional and as such, the instrument can accommodate individuals with substance abuse disorders. In reviewing the literature dealing with construct validation, it became obvious that most personality instruments are multidimensional and can be administered to

diverse and heterogeneous groups without loss of what the instrument is purported to measure. Hoffman, Field, and Sawilowsky (1993), carefully developed this instrument through a systematic "Test-Blueprint" process. According to the authors, prospective behaviors were gleaned from comprehensive variety of sources, including inputs from professional psychometricians, colleagues in the field, and related literature review.

During the pilot stage, Field, Hoffman, and Sawilowsky (1995) reported the psychometric properties of the instrument. The computed reliability and internal consistency were very good. The stability is also established using the strictly parallel form with a correlation of 0. 82. Heppner et. al.(1991) and Benson and Clark (1982), suggested as a rule of thumb that if the correlation lies between 0.80 to 0.90, ($0.80 \leq r \leq 0.90$), then the stability of the test is well established.

(2) Spiegel Personality Inventory

The self-determination construct as presented by Field, Hoffman, and Sawilowsky (1993) is a new construct. There is no known construct that is parallel or directly opposite to this scale. Searching for an instrument that is either opposite or parallel proved abortive. Therefore, in consultation with the principal developers of the scale (Hoffman and Sawilowsky), the Spiegel muthidimentional personality inventory was selected.
Spiegel (1978) developed the Spiegel Personality Inventory (SPI). This inventory has 200 items. The inventory has a total of forty-seven subscales scales. Thirty-five scales cover eight content areas: sensory, environmental, value, impulse, thinking, self, affect, and social factors.

Twelve special purpose scales cover: deviance, hopelessness, moodiness, emotional disturbance, sex aversion and anxiety, masculinity-femininity, power striving, alcoholic tendencies, sensory, professional women, and deterioration feeling. Within the eight content areas, specific scales measure Future Planning, External Control, Assertiveness,

and Dependency. The relevant scales such as Assertiveness, Dependency, Future Planning, and External Control subscales were selected to be used in conjunction with the SDSS. The reliability of each subscale are as follows: Future Planning (0.90), External Control (0.89), Assertiveness (0.88), and Dependency (0.93)well as the entire inventory were adequate.

(3) Interpersonal Dependency Inventory (IDI)

This inventory was developed by Hirschfield et.al., (1977) to measure interpersonal dependency. The IDI is a 48-item self-report measure of interpersonal dependency, defined as 'a complex thoughts, beliefs, feelings and behaviors which revolve around the need to associate closely with, interact with, and rely upon valued other people'.

The theoretical base for the IDI, according to the authors, is a blend of psychoanalytic, social learning, and attachment theories emphasizing the importance of excess dependency to a range of emotional and behavioral disorders. The inventory has three subscales: Emotional Reliance on Others(18 items, e.g., "I believe people could do a lot more for me if they wanted to"), Lack of self-confidence (16 items, e.g., "I have a lot of trouble making decisions by myself"), and Assertion of Autonomy (14 items, e.g., I don't need much from people"). Reliabilities for the three subscales based on these factors are 0.87, 0.78, and 0.72, respectively. In the present study, the individuals responded to each item on a 1 (not characteristic of me) to 4 (very characteristic of me) scale. High scores thus indicated greater dependence on the first two subscales and greater independence on the third subscale.

Instrument Reliability.

Reliability is used in everyday speech to describe persons or things. A reliable machine performs as expected each time it is used. Reliability is also used to describe a

particular quality of the numbers obtained by measuring the characteristics of persons or things. In this usage, just as in the everyday usage, reliability is defined as the consistency of the measuring instrument over time. It reflects the confidence given to the observed scores as being a reflection of what a person really knows, believes, or is able to do (Benson and Clark, 1982). The reliability coefficient can range from zero to one (negative values are considered as zero).

In construct validation studies, a necessary but not sufficient condition of validity is reliability. If responses are to be regarded as a valid construct indicators, the scales must be capable of yielding consistent scores. In principle, reliability is a function of scale length. Tests of discriminant validity also becomes more powerful when the construct operationalization is a reliable one. Because errors of measurement tend to make correlation coefficients smaller than if measures are error free, unreliability may both underestimate convergent validity and over estimate discriminant validity by attenuating all association.

The appropriate internal consistency that will be computed is coefficient alpha (α); otherwise known as the Cronbach (α).The observed coefficient alpha (α) will be interpreted as follows: α percent of the variance in the score was measuring the subjects actual personality trait and 1-α percent was due to chance or random error. The generally accepted α -level is 0.80 or greater (some books recommend $0.70 \leq \alpha \leq 0.90$). The SPSSX computer software can compute this index, the formula for the computation of this index is therefore suppressed.

Analysis

The preliminary part of the data analysis began with the computation of descriptive statistics such as mean, median, range, and standard deviation from the scores on the instruments. Then the correlation coefficients were computed and the

analysis of variance was performed to find the effects of the demographic variables on the test scores. An analysis of variance (ANOVA) is analogous to the regression analysis. The choice of ANOVA or multiple regression and correlation is the function of the research hypothesis. A series of hierarchical ANOVA were performed. This hierarchical procedure is most attractive because it identified the variable(s) that tend to influence self-determination. The scores were analyzed for differences attributable to gender, race or educational level. There was no significant result observed from these variables.

Analysis of covariance was also performed using education and age as covariates. Analysis of covariance is a statistical technique that combines regression analysis and analysis of variance. It is helpful in nonrandomized studies such as this one in drawing more accurate conclusions. According to Stevens (1986), the ideal is to choose as covariates variables which are significantly correlated with the dependent variable and which has low correlation among themselves (page 290). The covariates were entered first before the analysis of variance so that the effect of age and educational level is removed before they confound the analysis. The principal component analysis was also done and 29 items emerged. Data were analyzed using the Statistical Package for the Social Sciences (SPSS window 6.1 version). All tests were performed at the alpha level of 0.05.

Methods for Establishing Construct Validity

Benson and Clark (1983) suggested three general methods for testing the validation hypothesis: known group procedure, data reduction procedure using factor analysis or the principal component analysis, and the Multitrait-Multimethod procedure.

Known group procedure

The known group procedure requires that a known group that already possess the trait be obtained; for example, that there be a known group of individuals who have been previously identified as having the self-determination trait. The intent is to verify that the scale does measure what it intended to measure and the known group acts as a criterion for verification. If the scale is valid, those "known" to be receptive should achieve high scores; those nonreceptives should obtain low scores. Since self-determination construct is a relatively new emerging construct, there are no known groups and therefore, this method will not be considered.

Data Reduction Procedure

The second procedure, the factor analysis, requires that the researcher hypothesize the number and nature of factors underlying a scale. The term factor refers to a theoretic variable derived from analyzing the inter- correlations of test items (Benson and Clark, 1983, p. 799). To establish validity, separate factors relating to each of the content areas or process levels will emerge. If this occurs, the test constructor can be confident that the scale is actually measuring the intended trait.

Unfortunately, there are shortcomings with factor analytic procedures. According to Benson and Clark (1983), one factor analytic study never suffices (generally a series is conducted). Secondly, factor analysis requires a very large sample size and generally, a rule of thumb is to use 5-10 people for every test item. Benson and Clark concluded that factor analytic validation presents a formidable challenge and probably can not be undertaken unless samples of sufficient size are available.

Paradise and Kottler (1979) argued that factor analytic work focuses upon measurable attributes or combination of these attributes rather than the individuals on

whom the data were drawn. The authors indicated that in therapy, the primary emphasis for assessment and evaluation would appear to be ideographic rather than nomothetic, i.e., the concern is with changes as it occurs intra-individually rather than inter-individually. The authors concluded that the use of the traditional factor analytic procedures appears to be a miss-placed emphasis (p.139). Tinsley and Tinsley (1987) illustrated in detail when the use of factor analysis approach is appropriate and the relationship that the factor analysis approach has with other families of multivariate covariance analysis.

Factor analytic procedure uses the determinant of the correlation matrix. A determinant is a unique number associated with a square matrix (only square matrices have determinants). In order to get a square matrix, the number of indicators or items must equal the number of factors or constructs. Pedhazur and Schmelkin (1991) recommended that data metrics containing linear dependencies should not be analyzed. Attempts to factor analyze such matrices will be met with either failures or spurious results). For the case of a correlation matrix, the determinant may vary between 0 and 1. When it is zero, there is at least one linear dependency in the matrix. What this means is that one or more columns in the data matrix can be derived by transforming other columns. An example of a data matrix containing a linear dependency is one consisting of two or more subtest scores as well as a total score, derived by, say, adding the subtest score. The information provided by the total score is completely redundant with that provided by subtest scores. When the determinant of a correlation matrix is one, all the other correlations in the matrix are equal to zero (p. 595).

Stevens (1986) simply put it that in factor analysis a mathematical model is set up, and the factors can only be estimated. the author suggested components analysis as an alternative. In components analysis, the original variable or items are transformed into a new set of linear combinations (principal components). This method seeks to reduce the number of items or variables. In trying to establish validity, the simple correlations among the items are summarized and the pattern of correlation shows if the items are measuring

what they purport to measure. For any given number of items, there will be n(n-1)/2 simple correlations to inspect. With 92 items, there will be 4182 simple correlations!. Principal Components (PC) determines a smaller number of constructs which might account for the main sources of variation. Secondly, if a scale is an N-item item scale, we are not measuring N different constructs; hence it makes sense to find some item reduction scheme that will indicate how the items cluster together.

In a single group such as the group that were involved in this study, the PC partitions the total variance (i.e., the sum of the variances for the original items) by first finding their linear combination which accounts for the maximum variance. Through the use of the PC, a set of correlated items is transformed into a set of uncorrelated items. The hope is that a smaller number of items will account for most of the variance in the original items. The components or the "new" items must account for at least 75 % of the variance. Steven (1986) also recommended that if the sample size is small (usually around 100) the researcher should apply Bartletts spherical test. This tests the null hypothesis that the original items were not correlated. If the hypothesis is not rejected, then there is no reason to do PC since the original items are already uncorrelated.

The author listed three major criteria that must be met before a decision on how many items to be retained is made: (1) The Kaiser (1960) criteria: retain only those items whose eigenvalues are greater than one. Kaiser (1960) also recommended Varimax rotation for increasing interpretability of components by rotation.

(2) Cattel criteria: use scree test: retain all eigen-value or items in the sharp (almost vertical) descent before the first one on the line where they start to level off.

(3) Retain as many items as will account for at least 70% of total variance. A major draw back on this approach is that it also requires large item-subject ratio. A suggested minimum ratio is five individuals per item, but not less than 100 individuals for any analysis (Stevens, page 345). For any analysis done on 30 or 40 items and N is around 100 should be treated with considerable caution, since the results are unlikely to replicate. Using the

PC analysis, 29 items emerged but as has already been enumerated, this should be considered with caution.

The Multitrait-Multimethod (MTMM) procedure

The Multitrait-Multimethod (MTMM) procedure is highly recommended for test developers who do not have accessibility to a large sample size. Campbell and Fiske (1959) proposed this method for the purpose of studying convergent and discriminant validity of measures. The MTMM matrix is a matrix of correlations among two or more scales that measure the same trait or related trait. As an illustration, academic ability may be measured by mathematical ability and analytical ability. Two scales that measure both mathematical and analytical abilities may be constructed. The scores on these scales may be correlated with the scores on the scale that measure academic ability. If the academic ability scale truly measures what it purported to measure, it will correlate very highly with the two scales that measure mathematical and analytical ability but will poorly correlate with another scale that measures sports ability.

The Multitrait-Multimethod procedure also works by measuring the same trait by different methods. For example, self-determination could be measured with two or more methods: self-determination as rated by significant others, self-determination by observation, or self-determination through a scale measuring self-determination. The MTMM procedure allows for determination of the extent to which tests purported to measure the same trait with different methods or formats are correlated. These correlations are compared with those obtained between tests thought to measure different traits with similar format. If the correlations between the related constructs are larger than the correlations between the unrelated constructs, this is taken as evidence that the tests are valid for measuring the construct. Campbell and Fiske (1959) said simply that generally, the convergent validity coefficients would be greater than discriminant validity coefficients.

This method as pointed out by Anastasi (1988), requires a systematic experimental design for the dual approach of convergent and discriminant validation.

The advantage of this procedure over factor analysis is that it requires fewer subjects. In MTMM procedure, multiple indicators (either items or subscales) for each measure are used but in factor analysis, items or subscales may be thrown out if they do not meet the suggested value (0.30 or more). In using the MTMM procedure, Vandenberg (1991) showed that random error from uniqueness due to weak trait and method effects can be separated, thus the correction for measurement error is consistent with "traditional conceptualizations of classical measurement theory." The MTMM approach proceeds without testing whether a priori structure represents the data. The factor analysis approach permits a rigorous test of a priori factor structure posited to underlie items of each trait.

The results obtained using the IDI scale and the selected subscales from the SPI scale did not clearly support the Campbell & Fiske (1959) claim. A more promising result could be a correlation whereby self-determination is measured by different methods using different but similar instruments. Using the Self-Determination Knowledge Scale (SDKS) and the Teacher Perception of Self-Determination (TPSD), Morgan-Harrison (1994) used this method but found very mild correlation coefficients.

According to Shavelson (1975), initial construct validation studies should examine the empirical evidence in support of the with-in construct portion of the monological network. The with-in construct portion is the observable properties or quantities of the construct. The author recommended that if the empirical evidence is congruent with the construct definition, test scores are given construct interpretations. If the data is incongruent with the definition, the definition, the instrument, or both require revision. If the revision fail to produce empirical evidence congruent with the definition, it may be that certain aspects of the construct can not be measured with existing techniques (p.68). Fiske (1973) concluded that the empirical validation of a personality construct is possible, in

principle, provided the investigator employs a measuring procedure which has explicitly linked the constructs and its conceptual context.

Chapter 4

Results

The results from this study are presented in this chapter without comments. The descriptive statistics of the demographic variables are presented in tables 1-7. The psychometric properties of the Self-Determination Student Scale (SDSS) and its subscales are in Table 8. Tables 9-12 contain the zero-order (Pearson Product Moment) correlations. In tables 13-14, the analyses of variance are presented.

Frequency Tables for Demographic Variables

Table 1. Frequency Distribution of Educational Attainment.

Education	Frequency	Percent	Valid Percent	Cum Percent
No High School	26	25.2	27.4	27.4
High School	54	52.4	56.8	84.2
College	15	14.6	15.8	100.0
Missing	8	7.8		
Total	103	100.0	100.0	

Table 2. Frequency Distribution of Race.

Race	Frequency	Percent	Valid Percent	Cum Percent
Whites	14	13.6	14.0	14.0
Blacks	82	79.6	82.0	96.0
Others	4	3.9	4.0	100.0
Missing	3	2.9		
Total	103	100.0	100.0	

Table 3. Frequency Distribution of Gender.

Gender	Frequency	Percent	Valid Percent	Cum Percent
Males	82	79.6	81.2	81.2
Females	19	18.4	18.8	100.0
Missing	2	1.9		
Total	103	100.0	100.0	

Table 4 Descriptive Statistics of Age of Individuals that were receiving treatment for substance abuse.

Mean	Std. Dev.	Median	Mode	Minimum	Maximum
36.417	8.362	36.00	32.00	19.00	63.00

Table 5 Cross-Tabulation of Race by Gender

	Whites	Blacks	Others	Row Total
Males	10	68	3	81
	12.3	84.0	3.7	81.0
	71.4	82.9	75.0	
	10	68.0	3.0	
Females	4	14	1	19
	21.1	73.7	5.3	19.0
	28.6	17.1	25.0	
	4.0	14.0	1.0	
Column	14	82	4	100
Total	14.0	82.0	4.0	100.0

Number of missing observations: 3

Table 6 Cross-Tabulation of Education by Gender

	No High School	High School	College Education	Row Total
Males	20	44	13	77
	26.0	57.1	16.9	81.1
	76.9	81.5	86.7	
	21.1	46.3	13.7	
Females	6	10	2	18
	33.3	55.6	11.1	18.9
	23.1	18.5	13.3	
	6.3	10.5	2.1	
Column Total	26	54	15	95
	27.4	56.8	15.8	100

Number of missing observations: 8

Table 7 Cross-Tabulation of Education by Race

	No High School	High School Graduate	College Education	Row Total
Whites	5	4	4	13
	38.5	30.8	30.8	13.8
	19.2	7.5	26.7	
	5.3	4.3	4.3	
Blacks	21	45	11	77
	27.3	58.4	14.3	81.9
	80.8	84.9	73.3	
	22.3	47.9	11.7	
Others		4		4
		100.0		4.3
		7.5		
		4.3		
Column Total	26	53	15	94
	27.7	56.4	16.0	100.0

Number of missing observations: 9.

Psychometric Results

Table 8 Descriptive and Reliabilities Statistics of the Self-Determination Student Scale and Its Subscales.

Scale / Subscale	Mean Score	Std.Dev.	Range of Score	Minimum Score	Maximum Score	Reliability Coefficient
SDSS	58.16	11.43	53.00	26.00	79.00	0.8781
KNOW	12.49	2.62	11.00	7.00	18.00	0.5478
VALUE	9.55	2.36	11.00	3.00	14.00	0.4778
PLAN	11.58	2.62	12.00	4.00	16.00	0.5913
EXP	9.01	2.53	12.00	2.00	14.00	0.5651
ACT	12.67	3.10	14.00	3.00	17.00	0.6195

SDSS = The Self-determination Student Scale

KNOW = the Know Yourself subscale

VALUE = Value Yourself subscale

PLAN = Plan subscale

EXP = the Experience Outcome and Learn subscale

ACT = Act subscale

Correlational Results

Table 9 Zero-Order (Pearson) Correlation of Self-Determination Student Scale (SDSS) with the subscales.

	ACT	EXP	KNOW	PLAN	VALUE	SDSS
ACT	1.00					
EXP	0.6458	1.00				
KNOW	0.6470	0.6458	1.00			
PLAN	0.6114	0.6015	0.6189	1.00		
VALUE	0.4778	0.6036	0.6147	0.5570	1.00	
SDSS	0.8267	0.8479	0.8369	0.8323	0.7617	1.00

All correlation coefficients are significant at 5% level.

Table 10 Zero-Order (Pearson) Correlation of The Interpersonal Dependency Inventory (IDI) and the SDSS.

	IDI	IDIAUT	IDILACK	IDIREL	SDSS
IDI	1.00				
IDIAUT	0.6787*	1.00			
IDILACK	0.8756*	0.4919*	1.00		
IDIREL	0.8203*	0.2449	0.6236*	1.00	
SDSS	-0.3902*	-0.3398*	-0.4502*	-0.2019	1.00

* Significant at 5% level.

IDI = Interpersonal Dependency Inventory

IDIAUT = Assertion of Autonomy subscale

IDILACK = Lack of Self - Confidence subscale

IDIREL = Emotional Reliance on others subscale

Table 11 Zero-Order (Pearson) Correlation of Selected Subscales of the Spiegel Personality Inventory (SPI) and the SDSS

	SPI	SPIASS	SPIDE	SPIEX	SPIFUP	SPIHO	SDSS
SPI	1.00						
SPIASS	0.5908*	1.00					
SPIDE	0.7613*	0.3858*	1.00				
SPIEX	0.6338*	0.2448	0.2279	1.00			
SPIFUP	0.7480*	0.1761	0.5514*	0.3123*	1.00		
SPIHO	0.5062*	0.1572	0.2977*	0.1982	0.2594*	1.00	
SDSS	0.3793*	0.0672	0.3323*	0.2378	0.3298*	0.2716*	1.00

* significant at 5% level.

SPI = Spiegel Personality Inventory

SPIASS = Self Assertiveness (Independent) subscale

SPIDE = Dependency subscale

SPIEX = External Control subscale

SPIFUP = Future Plan subscale

SPIHO = Hopelessness subscale

Table 12 Discriminant and Convergent correlation matrix

	SDSS	SPIFUPLA	IDILACK
SDSS	1.00		
SPIFUPLA	0.3298[c]	1.00	
IDILACK	-0.4502[d]	-0.3089	1.00

All correlation coefficients are significant at 5% level.

[c] Indicates convergent Validity

[d] Indicates Discriminant Validity

Analysis of Variance Results

Table 13 Analysis of Variance (ANOVA): Self-Determination Student Scale (SDSS) by Race and Gender, with Education as covariate.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig of F
Covariates	878.629	1	878.629	7.366	0.008*
Education	878.629	1	878.629	7.366	0.008*
Main Effects	0.906	3	0.302	0.003	1.00
Race	0.311	2	0.156	0.001	0.999
Gender	0.316	1	0.316	0.003	0.959
Interaction	76.723	2	38.361	0.322	0.726
Race Gender	76.723	2	38.361	0.322	0.726
Explained	1193.028	6	198.838	1.667	0.139
Residual	10378.089	87	119.288		
Total	**11571.117**	**93**	**124.421**		

* $p < 0.05$

Table 14 Analysis of Variance (ANOVA): SDSS by Race, Gender, Education with age as covariate.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F Value	Significance of F - Value
Covariates	50.150	1	50.150	0.407	0.525
Age	50.150	1	50.150	0.407	0.525
Main Effects	1207.168	5	241.437	1.958	0.094
Race	38.428	2	19.214	0.156	0.856
Gender	150.215	1	150.215	1.218	0.273
Education	1018.543	2	509.272	4.130	0.020
Explained	1257.336	6	209.556	1.699	0.132
Residual	9988.744	81	123.318		
Total	11246.080	87	129.265		

Table 15 Analysis of Variance (ANOVA): SDSS by Race, Gender, Education with age as covariate and 2 - Way Interaction.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F Value	Significance of F- Value
Covariates	43.141	1	43.141	0.333	0.566
Age	43.141	1	43.141	0.333	0.566
Main Effects	1174.616	4	293.654	2.267	0.070
Race	5.857	1	5.857	0.045	0.832
Gender	150.215	1	150.215	1.160	0.285
Education	1018.543	2	509.272	3.932	0.024
Interactions	250.598	5	50.120	0.387	0.856
Race Gender	51.616	1	51.616	0.399	0.530
Race Educ	43.189	2	21.595	0.167	0.847
Gender Educ	215.690	2	107.845	0.833	0.439
Explained	1468.355	10	146.835	1.134	0.349
Residual	9713.645	75	129.515		
Total	11182.000	85	131.553		

Interaction = 2-Way Interactions

Educ = Educational Level

Table 16 Analysis of Variance (ANOVA): SDSS by Race and Gender with age as covariate and 2 - Way Interaction.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F	Sig of F
Covariates	878.629	1	878.629	7.366	0.008
Education	878.629	1	878.629	7.366	0.008
Main Effects	0.906	3	0.302	0.003	1.000
Race	0.311	2	0.156	0.001	0.999
Gender	0.316	1	0.316	0.003	0.999
Interactions	76.723	2	38.361	0.322	0.726
Race Gen.	76.723	2	38.361	0.322	0.726
Explained	1193.028	6	198.838	1.667	0.139
Residual	10378.089	87	119.288		
Total	**11571.117**	**93**	**124.421**		

Table 17 One-Way Analysis of Variance: SDSS by Education .

Source of Variation	Sum of Squares	Mean Squares	Degree of Freedom	F Ratio	F Probability
Between Groups	1065.1528	532.5764	2	4.6637	0.0118
Within Groups	10506.1524	114.1973	92		
Total	11571.3053	123.0990	94		

Multiple Range Tests: Scheffe test with significance level .05
The difference between two means is significant if
MEAN(J)-MEAN(I) >= 7.5564 * RANGE * SQRT(1/N(I) + 1/N(J))
with the following value(s) for RANGE: 3.52
(*) Indicates significant differences which are shown in the lower triangle

		G G G
		r r r
		p p p
		1 2 3
Mean	EDUC	
53.2692	Grp 1	
60.0741	Grp 2	*
62.3333	Grp 3	*

Group 1 = has no high school
Group 2 = has high school
Group 3 = has college

Table 18 One-Way Analysis of Variance: SDSS by Race.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Squares	F Ration	F Probability
Between Groups	59.6307	2	29.8153	0.2240	0.7997
Within Groups	12644.8693	95	133.1039		
Total	12704.500	97			

Multiple Range Tests: Scheffe test with significance level .05
The difference between two means is significant if
MEAN(J)-MEAN(I) >= 8.1579 * RANGE * SQRT(1/N(I) + 1/N(J))
with the following value(s) for RANGE: 3.52
- No two groups are significantly different at the .050 level

Table 19 One-Way Analysis of Variance: SDSS by Gender.

Source of Variation	Sum of Squares	Degree of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	286.7226	1	286.7226	2.2824	0.1340
Within Groups	12436.6438	99	125.6227		
Total	12723.3663	100			

Gender has no effect on the SDSS scores

Chapter 5

Conclusion, Summary, and Recommendation

The purpose of this study was to do a construct validation of a new instrument that purports to measure self-determination as defined by Field, Hoffman, and Sawilowsky (1993). The question that the study attempted to answer was whether the scale was a valid instrument for measuring self-determination. In other words, does the scale measure what it purports to measure ?

A review of the literature was presented in Chapter Two, including the literature of related theories and other construct validation studies. Chapter Three outlined the methodology and chapter Four presented the results of the study. The study was confined to individuals receiving treatment for substance abuse at the Salvation Army substance abuse treatment center in Detroit, Michigan.

In Internal Consistency Coefficient

The analysis of the self-determination Student scale's internal consistency revealed that the items demonstrate a high level of homogeneity. Using the coefficient alpha, the items reported a total coefficient of 0.88. The subscales also reported coefficients ranging from 0.48 to 0.62. These findings are consistent with the coefficients that were reported by Morgan-Harrison (1994) and the coefficients reported in the pilot study in developing this scale by Hoffman, Field, and Sawilowsky (1995).

Correlation Coefficients

In addition to the strong reliability coefficients, the correlations of the SDSS with its subscales are high positive and significant indicating that the scale and its subscales are

measuring the same construct. The SDSS is a new scale and there are no known scales that measure the same construct. Therefore, it was very difficult to find a matching scale to established its discriminant (divergent) or convergent validity. The instruments selected for comparison with the SDSS were selected on the basis of their reliability coefficients and not that the instruments have shown established validity. Secondly, single instruments with established validity that are appropriate for measuring the convergent or divergent construct of the SDSS are non-existing. There, I followed the strategy used by the first researcher (Morgan-Harrison, 1994), who selected instruments for comparison on the basis of their reported reliability coefficients. The instruments selected are multi-dimension in nature and only the subscales that this researcher, in consultation with the advisors, considered to be closely parallel those of the SDSS construct were selected.

Correlational Analysis

The subscale scores were correlated with the total score. The correlations among the SDSS scores and its subscales are presented in Table 9. In Table 10, the correlation matrix of SDSS and IDI with its subscales are presented. Again, the coefficients are significant but the assertion of autonomy (IDIAUT) subscale was expected to have a positive correlation, rather the correlation was negative. The SPI scale (Table 11) and its subscales correlated very mildly with the SDSS except the future plan (SPIFUP) subscale that has a significant and positive correlation. Using the IDI subscale of lack of self confidence (IDILACK) and the SPI subscale of future plan (SPIFUP) to test for how the discriminant and convergent aspect of validity, the SDSS correlated positively with the SPIFUP and negatively with the IDILACK.

The future plan subscale construct parallels the SDSS construct while the lack of confidence subscale construct can be said to be opposite the SDSS construct. The SDSS is able to discriminate between these two scales. In terms of construct validity, the SDSS

converged with the future plan scale and diverged with the lack of self confidence. This result is an indication that the SDSS scale and its subscales are measuring what they purported to measure.

In selecting the subscales from the multi-dimensional scale of the Spiegel Personality Inventory (SPI) and the Interpersonal Dependency Inventory (IDI), it was anticipated that the SDSS will correlate negatively with the total score from the IDI and it did. It was also anticipated that the assertion of autonomy (IDIAUT) will correlate positively but the result was negative. There is no immediate explanation for this disappointment. One possible speculation could be that the authors of the IDI construct arrived at the forty eight items from the original ninety eight items through factor analysis. The factor analysis method has several conditions that must be met before the result from such method is taken seriously. The authors did not say if those conditions were met or no. The factor analysis procedures have been presented above.

The subscales from the SPI were anticipated to have both positive and negative correlation for some scales. The dependency, external control, and hopelessness subscales were expected to show negative correlations while the assertiveness and future planning were expected to show positive correlations. These correlations were observed but they were moderately correlated as shown in Table 11. This inventory was developed in 1978 and again, it was written for normal adults and the reading level required by the subjects in order for the adults to properly read and understand the scale was higher than the reading ability required for the SDSS.

However, the SDSS shows very interesting signs that it will be able to discriminate or converge if scales that are appropriate for measuring the direct opposite and the congruency of the SDSS. The judgment regarding the construct validity of the SDSS using these two inventories should be made with caution. The major findings of this study was that the correlations of the SDSS among its subscales were positive and significant. A correlation of test scores with a criterion measure is called a validity coefficient (Cronbach,

1984, page 136). As a rule of thumb, which was stated above, intercorrelations among the scale and its subscales should be greater or equal to 0.80 ($r \geq 0.80$). The reliability coefficient of the scale was also within the acceptable range (0.88).

Effects of Demographic Variables

A total of 103 individuals participated in this study. Some of the residents refused to participate for fear that this survey might be a means to know their history despite written and oral assurances. A majority of these individuals have a criminal history. This information was revealed during several weeks of my attending the relapse prevention counseling sessions. Among the individuals that participated, 82 are African-Americans (Blacks), fourteen are Whites, four described themselves as others, and three refused to indicate their race.

There were eighty-two males, nineteen females, and again two did not indicate their gender. There were ten White males, four White females, sixty-eight Black males, fourteen Black females, three "other" males, and one "other" female. Twenty males have no high school diploma, forty-four have a high school diploma, and thirteen had a college education. There were six females who have no high school diploma, ten with a high school diploma, and two with a college education. Five of the Whites had no high school diploma, four Whites had a high school diploma, and four had college education.

Twenty one Blacks had no high school diploma, forty-five had a high school diploma, and eleven had a college education. The average age of the individuals was about thirty-six years with a standard deviation of about eight years. The median age was also thirty-six, with the youngest at nineteen years and the oldest at sixty-three years. Most of these individuals have not been properly detoxicated and as such, the effects of the prolonged use of drugs and alcohol is still very noticeable in them.

The analysis of the correlation results presented above could have been affected by the demographic nature of the individuals that participated in this study. To verify this, an analysis of variance was performed. The results indicated showed that the demographic variables: gender, educational level, and race did not affect the score. As mentioned above, the SDSS was written so that individuals with as little as a sixth grade education could read and understand the questions. A schaffe comparison showed no difference between individuals without a high school education versus those with a high school education. There was a difference between those with a college education versus those with a high school education. Again this result is consistent with the objectives of the SDSS . The race or gender of the individuals did not have any effect on the scores. The age and education were also used as covariates to control for the effect of these variables on the scores and these variables were significant ($F = 7.37$, 0.008 significant of F) and the age covariates were also significant. These results indicate that the effects of these variables did not confounds the scores.

Race in particular is very crucial because it has often times been hypothesized that a subject is motivated to present a favorable or unfavorable impression, if the item or measure represents culturally desirable or undesirable traits, the resulting score will be confounded by social desirability. Ballard (1992) noted that there is a possibility that self-reporting measures might be contaminated by social desirability bias. Social desirability describes culturally approved behaviors with a low probability of occurrence.

Generalizability

The generalizability (external validity) of these results should be treated with caution because there were some limitations. The individuals that participated in this study can not be regarded as the true representation of all individuals receiving treatment for substance abuse. Majority of the individuals are urban African-American males. Secondly,

the individuals are not homogeneous in that some came voluntarily while majority were forced to seek help either by significant others or by the legal system. I suspect that those who voluntary came to seek help will be more appropriate for this type of study given the definition of self-determination.

This instrument is the first of its kind. There is need to develop and validate another instrument based on this theory so that such other instrument could be used for adequate proper comparison. More research is also needed to clarify precisely, the attributes of a self-defined person so that such attributes can be recognized upon seeing them. Lastly, the number of residents at this center were not significantly large enough given the epidemic nature of substance abusers. This made it difficult to draw a large enough sample to reach a more definite conclusion. Therefore, there is a need to conduct more validation studies using participants that are more readily available. Anastasi (1988) recommended that tests designed for use with diverse populations should cite appropriate data on population generalizability in their technical manuals.

Future Research

Future construct validation studies of this new scale should be extended to other populations, including with normal adults. There is the need to continue this validation study within the environment where the subjects will be readily available. A more likely environment will be with college and university students. Cronbach (1984, p.133) acknowledged the fact that every test is to some degree impure and unlikely to measure exactly what its name implies.

Conclusion

Based on the results of this study, the following conclusions were made: (1) The correlation among the scale and its subset are acceptable. This shows that the scale and its subset are on the same continuum. (2)The reliability coefficient as measured by the Crunbach alpha is within acceptable range. A reliable scale can exhibit both divergent and discriminant validity. The demographic variables (gender, race, education, and age) did not affect the scale. This means that the items were not biased.

Summary

The results indicate that the instrument is a very promising one. Further studies are necessary to further validate this scale. Although the instrument was developed using students with disabilities as pilot subjects, efforts should be made to conduct further validation studies with subjects that are readily available. The biggest problem that was encountered in this study was getting the individuals to participate. Even if there was a mechanism that will get all the individuals to participate, the entire population is still very small. About three hundred individuals were at the center at the time this data was collected. Given that this scale has many items, three hundred individuals is still not adequate for a more definitive analysis such as the principal component analysis. As reported in the appendix, the principal component analysis produced twenty-nine items which accounted for over 78 % of the variance. The theoretical acceptable percentage is 70% or more.

Validation of a new scale requires much time and funding. Several studies across different times and across different populations are usually needed to ensure that the new scale is valid for all individuals (Benson and Clark, 1982, p.800) . Geisinger (1992) wrote that evidence of construct validity is not found in a single study; rather judgments of construct validity are based upon an accumulation of research results. The author continued

by saying that in obtaining the information needed to establish construct validity, the investigator begins by formulating hypotheses of those who have high scores on the test in contrast to those who have low scores. Taken together, such hypotheses form at least a tentative theory about the nature of the construct that the test is believed to be measuring...so validation is never finished (p.204).

Fiske (1973) concluded that the empirical validation of a construct is possible, in principle, provided the investigator employs a measuring procedure which has been explicitly linked to the constructs and its conceptual context.

Appendix A: SELF-DETERMINATION DETAILS

More details of the self-determination subscales. These details show what make up the subscales of the self-determination scale. These subscales are:

Know

- Dreams
- One having or being aware of his or her weaknesses, strengths, needs, and performance.
- Knowing the options
- Deciding what is important to the individual

Value

- Accepting and valuing oneself
- Admire strength that come from uniqueness
- Recognizes and respect rights and responsibilities
- Taking care of oneself

Plan

- Setting goals
- Plan an action to meet those goals
- Anticipate results
- Be creative

Act

- Taking risks
- Communicating Assertively
- Ability to negotiate
- Dealing with conflicts
- Be persistent in making choices

Experience outcome and learn (EXP)

- Comparing or evaluating outcomes to expected outcomes
- Comparing performance to expected performance
- Realizing Success
- Making Adjustments

Appendix B: FACTOR ANALYSIS RESULTS

Analysis number 1 Replacement of missing values with the mean

	Mean	Std Dev	Cases
SD1	.78218	.41074	101
SD10	.88235	.32219	102
SD11	.86139	.34385	101
SD12	.88235	.32219	102
SD13	.83000	.37193	100
SD14	.68627	.46401	102
SD15	.65625	.46078	96
SD16	.84158	.36334	101
SD17	.43689	.49843	103
SD18	.41584	.49044	101
SD19	.77228	.41730	101
SD2	.93137	.25282	102
SD20	.77228	.41730	101
SD21	.72000	.44458	100
SD22	.40777	.49382	103
SD23	.75728	.43082	103
SD24	.82524	.38162	103
SD25	.91262	.28377	103
SD26	.36000	.47527	100
SD27	.46078	.49846	102
SD28	.42718	.49709	103
SD29	.61165	.48976	103
SD3	.95098	.21591	102
SD30	.78431	.41130	102
SD31	.50980	.49990	102
SD32	.72549	.44627	102
SD33	.63107	.48487	103
SD34	.71569	.45109	102
SD36	.59804	.49029	102
SD37	.69697	.45276	99
SD38	.69000	.45794	100
SD39	.84466	.36400	103
SD4	.84466	.36400	103
SD40	.71569	.45109	102
SD41	.72549	.44627	102
SD42	.60194	.49189	103
SD44	.73529	.44118	102
SD45	.72549	.44627	102
SD46	.81373	.38933	102
SD47	.89796	.29671	98
SD48	.77228	.41730	101
SD49	.72000	.44458	100
SD5	.67327	.46671	101

ANALYSIS NUMBER 2: Final Statistics: Factor Analysis (Principal Components)

Variable	Communality *	Factor	Eigenvalue	Pct of Var	Cum Pct
SD1	.79299 *	1	10.34763	12.3	12.3
SD10	.78132 *	2	4.65152	5.5	17.9
SD11	.85330 *	3	3.90653	4.7	22.5
SD12	.71564 *	4	2.95379	3.5	26.0
SD13	.73763 *	5	2.81913	3.4	29.4
SD14	.84444 *	6	2.69972	3.2	32.6
SD15	.78051 *	7	2.57986	3.1	35.7
SD16	.82808 *	8	2.47193	2.9	38.6
SD17	.76190 *	9	2.42382	2.9	41.5
SD18	.83695 *	10	2.19417	2.6	44.1
SD19	.82916 *	11	2.14892	2.6	46.7
SD2	.79169 *	12	1.95094	2.3	49.0
SD20	.83255 *	13	1.88095	2.2	51.2
SD21	.76928 *	14	1.84473	2.2	53.4
SD22	.74888 *	15	1.79034	2.1	55.6
SD23	.79638 *	16	1.67782	2.0	57.5
SD24	.78586 *	17	1.63371	1.9	59.5
SD25	.85343 *	18	1.57561	1.9	61.4
SD26	.74930 *	19	1.54492	1.8	63.2
SD27	.75340 *	20	1.49794	1.8	65.0
SD28	.70256 *	21	1.42521	1.7	66.7
SD29	.80723 *	22	1.38751	1.7	68.3
SD3	.82232 *	23	1.33567	1.6	69.9
SD30	.71998 *	24	1.29158	1.5	71.5
SD31	.84048 *	25	1.23934	1.5	72.9
SD32	.79505 *	26	1.15791	1.4	74.3
SD33	.73337 *	27	1.09309	1.3	75.6
SD34	.77316 *	28	1.07278	1.3	76.9
SD36	.75727 *	29	1.01851	1.2	78.1
SD37	.77734 *				
SD38	.77447 *				
SD39	.83304 *				
SD4	.74006 *				
SD40	.75576 *				
SD41	.81776 *				
SD42	.80729 *				
SD44	.73812 *				
SD45	.73159 *				
SD46	.80959 *				
SD47	.76974 *				
SD48	.78224 *				
SD49	.70833 *				
SD5	.77137 *				
SD50	.81517 *				
SD51	.79376 *				
SD52	.73927 *				
SD53	.74140 *				
SD54	.77284 *				
SD55	.71255 *				
SD56	.81294 *				
SD57	.79745 *				

Appendix C: INSTRUMENTS

INTERPERSONAL DEPENDENCY INVENTORY (IDI)

Directions:

Please read each statement and decide whether or not it is characteristic of your attitudes, feelings, or behavior. Then assign a rating to every statement, using the values given below:

4 = very characteristic of me
3 = quite characteristic of me
2 = somewhat characteristic of me
1 = not characteristic of me

_____ 1. I prefer to be by myself.
_____ 2. When I have a decision to make, I always ask for advice.
_____ 3. I do my best work when I know it will be appreciated.
_____ 4. I can't stand being fussed over when I am sick.
_____ 5. I would rather be a follower than a leader.
_____ 6. I believe people could do a lot more for me if they wanted to.
_____ 7. As a child, pleasing my parents was very important to me.
_____ 8. I don't need other people to make me feel good.
_____ 9. Disapproval by someone I care about is very painful for me.
_____ 10. I feel confident of my ability to deal with most of the personal problems I am likely to meet in life.
_____ 11. I'm the only person I want to please.
_____ 12. The idea of losing a close friend is terrifying to me.
_____ 13. I am quick to agree with the opinions expressed by others.
_____ 14. I rely only on myself.
_____ 15. I would be completely lost if I don't have someone special.
_____ 16. I get upset when someone discovers a mistake I've made.
_____ 17. It is hard for me to ask someone for a favor.
_____ 18. I hate it when people offer me sympathy.
_____ 19. I easily get discouraged when I don't get what I need from others.
_____ 20. In an argument, I give in easily.
_____ 21. I don't need much from people.
_____ 22. I must have one person who is very special to me.
_____ 23. When I go to a party, I expect that the other people will like me.
_____ 24. I feel better when I know someone else is in command.

INTERPERSONAL DEPENDENCY INVENTORY (IDI)

_____ 25. When I am sick, I prefer that my friends leave me alone.
_____ 26. I'm never happier than when people say I've done a god job.
_____ 27. It is hard for me to make up my mind about a TV show or movie until I know what other people think.
_____ 28. I am willing to disregard other people's feelings in order to accomplish something that's important to me.
_____ 29. I need to have one person who puts me above all others.
_____ 30. In social situations I tend to be very self-conscious.
_____ 31. I don't need anyone.
_____ 32. I have a lot of trouble making decisions by myself.
_____ 33. I tend to imagine the worst if a loved one doesn't arrive when expected.
_____ 34. Even when things go wrong I can get along without asking for help from friends.
_____ 35. I tend to expect too much from others.
_____ 36. I don't like to buy clothes by myself.
_____ 37. I tend to be a loner.
_____ 38. I feel that I never really get all that I need from people.
_____ 39. When I meet new people, I'm afraid that I won't do the right thing.
_____ 40. Even if most people turned against me, I could still go on if someone I love stood by me.
_____ 41. I would rather stay free of involvements with others than to risk disappointments.
_____ 42. What people think of me doesn't affect how I feel.
_____ 43. I think that most people don't realize how easily they can hurt me.
_____ 44. I am very confident about my own judgment.
_____ 45. I have always had a terrible fear that I will lose the love and support of people I desperately need.
_____ 46. I don't have what it takes to be a good leader.
_____ 47. I would feel helpless if deserted by someone I love.
_____ 48. What other people say doesn't bother me.

DEMOGRAPHICS

1. Your Age: _____

2. Gender: (Male) (Female)

3. Education: (No High School) (High School) (College)

4. Race: (White) (Black) (Hispanic)

SPIEGEL PERSONALITY INVENTORY

Directions:

Please read each statement and decide whether or not the statement describes your attitude, feelings, or behavior. Then mark the number that indicates your feeling of the statement using the numbers given below.

1 = This statement is definitely true.
2 = I think this statement is true, but I am not quite sure.
3 = I think this statement is false, but I am not quite sure.
4 = This statement is definitely false.

_____ 1. I usually assert myself so strongly that I often make people a little angry or annoyed with me.
_____ 2. I don't like to have other people give me advice or suggestions.
_____ 3. I actually don't feel much concern about the future.
_____ 4. I believe that the actions of people are controlled and directed by some supper-human force.
_____ 5. I am sure that things could never get so bad that I would take my on life.
_____ 6. I never back down as long as I am convinced that I am right.
_____ 7. I have a strong need to solve my problems without help from anyone else.
_____ 8. I prefer to think of today and make very few plans for the future.
_____ 9. I feel that I am not responsible at all for some of my personal problems.
_____ 10. I feel that there are no goals in life worth struggling to reach.
_____ 11. It is difficult for me to voice my opinion in a group when the opinion of the other group members is different from me.
_____ 12. I have a strong desire to be completely independent and on my own.
_____ 13. I have thought very little about what I may be doing five years from now.
_____ 14. I believe that my fate has already been decided by a power greater than myself.
_____ 15. I almost always speak up and say what I think even when I know others disagree
with me.
_____ 16. I prefer the sort of job where I am told what to do rather than give orders myself.
_____ 17. I very muck dislike to make plans for more than one week in advance.
_____ 18. I think I would be much better off today if I had had parents who provided me with a better background.
_____ 19. I see nothing in the future for me.
_____ 20. As a rule I would not hesitate to do something other people feel is wrong as long as I feel that my goal or purpose in doing it is a good one.
_____ 21. I would rather have a job in which the work is planned for me by someone else than a job in which I have to figure everything out for myself.
_____ 22. I often get a desperate feeling that life is passing too fast.
_____ 23. I think my environment has made what I am today.

APPENDIX D: CONSENT LETTER

June 12, 1995

Dear Friend:

I am a doctoral student from Wayne State University attempting to validate a scale that measures Self-Determination. Self-Determination involves the presence of attitudes or skills required for indicating preferences, making responsible decisions, setting goals, and initiating the action required for goal attainment. These skills are very helpful in adult life.

I am requesting your participation by responding to these surveys: (1) Self-Determination Scale, (2) Spiegel Personality Inventory, and (3) Interpersonal Dependency Inventory. There are no right or wrong answers. The whole questionnaires will take about thirty minutes (30 minutes) to complete. There is no risk involved nor any proven benefits. To show my appreciation for participating in this questionnaire, each individual who responded to all the questionnaires will receive two dollars **($2).** All information provided through these questionnaires will be confidential.

To guarantee individual confidentiality, all responses are anonymous. I will use only group responses. A summary of group results will be available upon request. Participation is voluntary and you may withdraw your consent at any time. If you prefer to participate, show by signing and returning this letter to me. However, if you have questions or want additional information, I will be happy to discuss the project with you. You may contact me at (313) 831-3321 or Dr. P. A. Lichtenberg, Chair of Wayne State University Behavioral Investigation Committee at (313) 577-5174.

Sincerely,

Uju P. Eke
Principal Researcher

I consent to participate in the Self-Determination Validation Project.

_____ _____

SIGNATURE DATE

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ABSTRACT

A CONSTRUCT VALIDATION OF SELF-DETERMINATION INSTRUMENT: USING ADULT SUBSTANCE ABUSE CONSUMERS IN RESIDENTIAL SETTING

by

UJU P. EKE

May 1996

Adviser: Shlomo S. Sawilowsky, Ph.D.

Major: Evaluation and Research (Education)

Degree: Doctor of Philosophy

Hoffman, Field, and Sawilowsky (1995) developed an instrument that measures self-determination. The construct validation of this instrument was examined by examining the reliability coefficient, the correlation of the instrument with its subscales, and the correlation of the instrument with other instruments theoretically related to self-determination. The theoretically related instruments were the Interdependency Personality Inventory (Hirschfield et. al., 1977) and the Spiegel Personality Inventory (Spiegel, 1978). Self-Determination is defined here as ones ability to identify and set goals for oneself and to take initiative to achieve those goals by using the skills based on the foundation of knowing and valuing oneself.

Discriminant and Convergent validity of the scale was established using the subscales of the Interdependency Personality Inventory and the Spiegel Personality Inventory. Three validation methods were discussed: the known group method, the Multitrait-Multimethod approach, and the factor analytic approach. The factor analytic

approach of principal component analysis extracted 29 items that accounted for 78% of the variance.

Validation of a new instrument or scale requires much time and funding. Several studies across different populations and across different times are usually needed to ensure that the new instrument is valid for all individuals with whom it is used. Validation is a continual process, one in which an end point is rarely achieved , but is only successfully approximated (Benson and Clark, 1982). It is my recommendation that further validation study be conducted using a larger sample and people with other types of disability or normal people. This study was done using adult substance abuse individuals who were receiving treatment in residential setting. A total of 103 adults participated in the study.

AUTOBIOGRAPHICAL STATEMENT

UJU P. EKE

EDUCATION

1996 Ph.D., Evaluation and Research (Education).
Wayne State University, Detroit, Michigan.

1993 MA, Economics, Wayne State University ,
College of Liberal Arts, Detroit, Michigan.

1987 MS, Economics & Business, Alabama A & M University
College of Business, Normal, Alabama.

1985 BS, (Magna Cum Laude) Economics & Business,
Alabama A&M University, College of Business, Normal, Alabama.

PROFESSIONAL MEMBERSHIP

American Statistical Association.