

THE DIFFERENTIAL CHARACTERISTICS BETWEEN TRANSFORMATIONAL CHANGE
EXPERIENCES AND VOLITIONAL CHANGE IN RECOVERING SUBSTANCE
DEPENDENT INDIVIDUALS

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ABSTRACT

Transformational change and volitional change are two ways by which individuals experience sustained behavior change. Transformational change is defined in this study as being of a sudden, instantaneous type which forever changes the individual that experienced it. Volitional change is a process in which people cycle stages of change through many times best described by the transtheoretical model. Transformational change and volitional change experiences were examined in individuals involved in Alcoholics Anonymous and Narcotics Anonymous using the Quantum Change Retrospective Interview (QUERI), and the GATTOR to examine spiritual activities in A.A. Other questionnaires were used to examine personality traits (NEO-PI), alcoholics anonymous involvement (AAI), psychopathology (SCL-90), impulsivity (UPPS), drug and alcohol history, and treatment history. Results showed no significant differences between groups on factors such as level of psychopathology, differences in substance abuse history, involvement in spiritual activities, Alcoholics Anonymous, drug use and drinking consequences or last use measured in months. Results also showed a trend in the direction of transformational changers report of a higher degree of openness. Significant results were found in that volitional changers had higher scores in the domain of lack of premeditation. The results showed transformational changers as possessing more effective coping behaviors as well. The results were discussed in terms of the possibility of transformational change

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DEDICATION

I would like to dedicate this thesis to my mom. She has always believed in me. I would also like to dedicate this to Dr. Rich Ogle. I could not have done it without him.

INTRODUCTION

There are many avenues by which an individual may accomplish sustained behavior change. The change can be a slow process or it can be quick, unexpected or uninvited. These two types of change are often referred to respectively as volitional change, described most cogently by the transtheoretical model (Prochaska & DiClemente, 1984) and what has been termed transformational or quantum change (Miller & C'de Baca, 1994; White, 2004; Loder, 1989; Forchimes, 2004; James, 1902). These two types of change are very different in that one is sudden and unexpected whereas the other is stepwise and willfully entered into. What follows is a discussion of each type of change.

Transformational change

Transformational change is the complete rebirth of an individuals' life in terms of their personality, the decisions they make in life, and how they experience the world. This type of change has often been described as a religious conversion, but does not have to be religious in nature. Psychologists as early as William James (1902) documented this type of change in the context of conversion. James stated that to say that a man is "converted" means, in these terms, that religious ideas, previously peripheral in his consciousness, now take a central place, and that religious aims form the habitual center of his energy (James, 1902). He refers to a self-surrender type of conversion in which the transformation is unconscious and involuntary. The person who experiences this type of change may feel the sense of a higher power during the time of conversion. This sense of a higher power often co-occurs with the conversion, but is not always present during the conversion experience (James, 1902). Individuals in this state often lose all thoughts and feelings of worry and doubt while also experiencing feelings of ultimate peace with

oneself and the world around them. Perceptively, the individual awakens to unknown truths and the awareness of the mysteries of life is heightened (James, 1902). Initially, during the transformational experience, the individuals' whole being is destroyed which involves a collapse of the former self (White, 2004). A new, more enlightened person is the result of this experience.

Expanding upon this definition and description, James (1963) identified three precursor elements which precede the conversion experience: 1) calamity (individual is impaired in a vital area of life), 2) admission of defeat (person acknowledges that all human attempts to solve the problem have not worked.) and, 3) appeal for divine help (result is a conversion experience).

More recently, others have expanded upon the concept of transformational change. White (2004) described transformational change as a "life-defining experience demarcating before (old self) and after (new self), and leave in their psychological wake an essentially new person." He described transformational changes as experiences which constitute the most dramatic but least understood mechanism of human change, making it difficult for psychotherapists to recognize, understand and respond to such experiences. In sum, from this perspective, transformational change has three core elements: 1) a germinating personal crisis, 2) a breakdown and breakthrough experience, 3) a radically and positively altered identity and life course (White, 2004). Transformational change experiences have five distinct characteristics as well. The experience is described as being sudden, unplanned and unanticipated, and vivid. The subject is more a recipient of the experience than an initiator of it, and the changes elicited by the transformational experience are positive and enduring (White, 2004).

Another perspective on transformational change was posited by Miller and C' de Baca (1994) who coined the phrase quantum change to explain this process. Quantum change is an

instantaneous type of change not unlike the one James chronicled in 1902. Quantum change is defined as a vivid, surprising, benevolent, and enduring personal transformation. It is vivid in that the experience is an identifiable, distinctive, and memorable experience in which the transformation occurred. Quantum changes are predominantly inner transformations, which often occur in the absence of any salient external event. The third key element is benevolence which can be disconcerting, but there also tends to be an overwhelming sense of loving kindness. Quantum changes are lasting and permanent transformations, that is, “a one-way door through which there is no going back.” (Miller & C’de Baca, 1994). The difference between quantum change and James’ description of conversion experiences is that although religious conversion experiences have some of the attributes of quantum change, conversion experiences often do not last. Quantum changes are not usually described in religious terms and usually do not lead to a committed involvement in organized religion. Quantum changes often involve significant and seemingly permanent transformations of personality. Transformations can be widespread, altering how the person behaves, feels, and experiences meaning in their lives. This transformation may occur simultaneously with a significant external event, but in no way is it a normal and ordinary consequence of the event.

As stated above, the components of quantum change are vividness, surprise, benevolence, and permanence. Through some identifiable, often dramatic, and usually quite memorable event, the person is transformed. The person who has undergone an experience like this can usually point to the very moment in which they were transformed. There may be strong sensory experiences that accompany the transformation (Miller & C’de Baca, 1994). Several of the people Miller & C’de Baca interviewed experienced a sense of brightness in everything around them and some remembered feeling cold or chills yet others felt incredible warmth. Most people

who experienced this type of transformation could still recall the date, time and vivid details of their experience. A common experience among quantum changers is a deep sense of peace and release from chronic negative emotions. They felt like a great burden had been lifted (Miller & C'de Baca, 1994). Bill Wilson, the co-founder of Alcoholics Anonymous, reportedly experienced this sense of peace during his transformational change. He stated:

“Slowly the ecstasy subsided. I lay on the bed, but now and for a time I was in another world, a new world of consciousness. All about me and through me there was a wonderful feeling of presence. A great peace stole over me and I thought no matter how wrong things seem to go, they are all right” (Miller & C'de Baca, 1994).

The second component that was present in these transformations was surprise. Quantum changes are not usually remembered as willful or volitional events. Miller states that it is more like waking up one morning to suddenly discover that your skin is a different color. More than 4 out of 5 people that Miller & C'de Baca interviewed said that the experience was nothing they had expected, imagined, or even wanted. The experience came unannounced and as often uninvited.

The third component of quantum change experience is benevolence. The quantum changers interviewed saw the experience as extremely positive and beneficial, if not always pleasant. For some joy and emotional pain were intensified. Many were very grateful for what they had been given and considered it to be a gift (Miller & C'de Baca, 1994).

The fourth component to quantum change is permanence. The people who experienced a transformation felt the sense of having passed through a one-way door. They knew they were changed forever. For the quantum changers, the enduring and presumed stable attributes that characterize people were where quantum change seemed to occur. According to Miller & C'de Baca (1994), “Shifts were reported in dimensions such as values, life goals, temperament, and perceptual style”.

As can be seen, transformational change has been described in numerous ways. Regardless of the minor differences in definition all share the element of rapid spontaneous and relatively permanent change. This type of change is different from the traditional conception of change which will be referred to as volitional change. An explanation of volitional change follows.

Volitional change

James (1902) used the term volitional change to describe the process by which individuals change in a stepwise manner over time. This type of change is usually gradual and consists of building up, piece by piece, a new set of moral, spiritual and behavioral habits (James, 1902). Miller and C'de Baca (1994) addressed traditional change as a Type I change (quantum change is referred to as Type II change) which is characterized by a change that occurs in a stepwise fashion.

A current and empirically validated model of volitional change is represented in the transtheoretical approach to change which emerged from a need for a more integrated and comprehensive approach to psychotherapy (Prochaska & DiClemente, 1981). Generally, this model assumes that there are a number of mechanisms, or processes of change as well as a number of stages of change. A process of change represents types of activity initiated or experienced by an individual over time in modifying thinking, behavior, or affect related to a particular problem. Prochaska and DiClemente (1981) identified ten separate and distinct processes of volitional change. (1) consciousness-raising, (2) self-liberation, (3) social liberation, (4) counter conditioning, (5) stimulus control, (6) self-reevaluation, (7) environmental reevaluation, (8) contingency management, (9) dramatic relief, (10) helping relationships.

Intentional change is not an all-or none phenomenon, but a gradual movement through specific stages. Five stages have been identified: precontemplation, contemplation, preparation, action, and maintenance. A stage of change represents both a period of time and a set of tasks needed for a movement to the next stage and they reflect the temporal and motivational aspects of change (Prochaska & DiClement, 1981). An individual in the precontemplation stage is not aware they have a problem. They must become aware of the problem, make some admission or take ownership of aspects of the problem that are difficult to control, and begin to see some of the negative aspects of the problem in order to move from precontemplation to contemplation. Contemplation is the beginning of the recognition that a problem is imperative for change. Individuals in this stage are characterized as being aware of both reasons to change as well as reasons to maintain the status quo. This dialectic often leads to a sense of ambivalence. As ambivalence resolves, movement into preparation is thought to occur. Preparation indicates a readiness to change in the near future and acquisition of valuable lessons from past change attempts and failures. Action is defined by taking steps to carry out all the planning and preparation the individual has done to make the change. During the action phase it is important for individuals to act from a sense of self-liberation. People need to believe that they have the autonomy to change their lives in key ways. Maintenance is defined by attending to the plan of action implemented in order to make the change in the individuals' life. During maintenance the most important key is the sense that one is becoming more of the person he or she wants to be (Prochaska & DiClemente, 1981). Prochaska et al. (1992) represented the stages of change as a spiral. They begin in precontemplation and progress through the stages often relapsing into an earlier stage. They may cycle through many times before the change is a stable aspect of the individuals' life.

It is thought that the processes of change move individuals through the stages. For example, consciousness-raising can help people move from precontemplation to contemplation. The individual is made aware of their problem behavior and the consequences of that behavior through interventions, such as observations, confrontations, and interpretations (Prochaska & DiClemente, 1981). Dramatic relief provides clients with helpful affective experiences which can raise emotions related to problem behaviors. Self-reevaluation is an assessment of which values clients will try to actualize, act upon, and make real, and which they will let die. Self-liberation is based in part on self-efficacy (Bandura, 1977, 1982) the belief that one's own efforts play a critical role in succeeding in the face of difficult situations. It requires more than just an affective and cognitive foundation. Counterconditioning and stimulus control are behavioral processes that clients need to be effective enough with to be able to cope with those external circumstances that can coerce them into relapsing (Prochaska & DiClemente, 1981). People usually begin by taking small steps toward action. They may use counter conditioning and stimulus control processes to begin reducing their problem behaviors.

Given the above, the process of volitional change is quite different from transformational change, although both processes ideally have the same outcome. Whether through transformational or volitional change, individuals make or experience change in numerous areas of their lives. One important domain where change is often necessary is addictive behaviors. Researchers and scholars have examined both types of change in the context of addictive behaviors. What follows is a brief description of the concept of addiction and a discussion of the literature relevant to addiction and change.

Addiction

Addiction has been conceptualized in a variety of ways by those dealing with addiction, as well as researchers, psychologists, and counselors. Traditionally, addiction has been defined as the ability of a drug to induce tolerance, cause physical dependence, and withdrawal distress when used habitually in sufficient quantities over a prolonged period of time (Sobell & Sobell, 1976). Many people are interested in what causes an individual to engage in addictive behaviors. According to Donovan (1988), there has been a growing awareness that addictions are behaviors developed and maintained by multiple sources; they are multiply determined and multi-dimensional in nature. Addiction appears to be an interactive product of social learning in a situation involving physiological events as they are integrated, labeled, and given meaning by the individual (Donovan, 1988). An “addiction” is seen as a complex, progressive behavior pattern having biological, psychological, sociological, and behavioral components (Peele, 1985; Burglass & Shaffer, 1983; & Shaffer & Milkman, 1985). What sets this behavior apart from others is the individuals’ overwhelmingly pathological involvement in or attachment to it, subjective compulsion to continue it, and reduced ability to exert personal control over it (Donovan, 1988).

Addictive behaviors have also been conceptualized from a psychiatric perspective. According to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (APA, 1994), the essential feature of substance dependence is a cluster of cognitive, behavioral and physiological symptoms indicating that the individual continues use of the substance over a period of time despite significant substance-related problems. There is a pattern of repeated self-administration that can result in tolerance, withdrawal, and compulsive drug taking behavior (APA, 2000). These behaviors often lead to mounting psychosocial and physical consequences.

Although not considered addiction in and of itself the DSM-IV, also classifies certain substance using behaviors as meeting criteria for Substance Abuse. This occurs when an individual continues to consume a particular substance over a period of time despite consequences in one or more important areas of life function (e.g. work, school, hazardous situations, relationships).

Addiction is a significant and growing public health problem. Clayton (1986), states that a substantial number of individuals, often beginning at a relatively young age, have experimented with alcohol, tobacco, and/or drugs such as marijuana, cocaine, or opiates. It is estimated that 22 million Americans have a substance abuse problem (SAMHSA, Results from the 2002 National Survey on Drug Use and Health; National Findings (Rockville, MD: 2003)). That number has increased from 22 million in 2002 to 28.7 million in persons aged 12 or older classified with dependence on or abuse of alcohol (7.8 percent). Among past year users of alcohol, 11.9 percent were classified with alcohol dependence or abuse (SAMHSA, 2004). Rates of substance dependence or abuse in 2004 showed substantial variation by age. The rate for dependence or abuse was 1.3 percent at age 12, and rates generally increased until the highest rate (25.4%) at age 21. After age 21, there was a general decline with age. A similar pattern by age was observed in 2002 and 2003. In 2004, the rate of substance dependence or abuse was 8.8 percent for youths aged 12 to 17, 21.2% for persons aged 18 to 25, and 7.3 percent for persons aged 26 or older. These data point to the fact that a growing and significant number of individuals engage in a level of substance use that leads to negative consequences.

Consequences of alcohol and drug abuse problems

There are many adverse effects on health as well as many costs to the U.S. caused by alcohol and drug abuse each year. Alcohol and drug use are reported to cause more deaths, illnesses, and disabilities than any other preventable health condition (Robert Wood Johnson,

2001). The costs of drug abuse include premature death, institutionalization, short- and long-term hospitalization, productivity loss for victims of crime, and productivity loss for those who because of crime careers, might have contributed to legal productivity (Hernsen & Turner, 2003). Other costs of drug abuse are those such as administering the criminal-justice system (which is increasingly occupied with drug-related crimes), ensuring police protection, adjudicating defendants, maintaining state and federal corrections facilities, and federal spending to reduce supply and social welfare costs (ONDCP, 2001). According to the ONDCP the most recent estimates suggest the cost of illicit drug and alcohol abuse in 1992 in the U.S. was \$102.2 billion, and by 1998, this figure increased to \$143.4 billion. Given the number of abusers and the variety of debilitating consequences, addiction is a major personal and public health problem that necessitates those inflicted to engage in significant and difficult processes of change.

Addiction and change

A transformation of all aspects of the individual is a necessary component in changing addictive behaviors. Transformational change in individuals dealing with addiction has been well documented for hundreds of years. Seven of the 12 steps refer to a “Higher Power” or a spiritual awakening, defined in Alcoholics Anonymous “Big Book” (Alcoholics Anonymous World Services, 1976) as a “creative intelligence, a spirit of the universe underlying the totality of all things” (AA 1976, p.46). It has been posited that addiction is an individuals’ search for a higher power or God. This reasoning is the result of need to find meaning in life usually in the form God. Bill Wilson, co-founder of Alcoholics Anonymous, spoke in depth of his transformational experience which led him to co-found AA. He described the solution to alcoholism recovery as being found “on the spiritual plane as well as the altruistic plane” (p.xxiv). According to Kurtz (1979), essentially, the course of alcoholism is a thirst for

something greater than oneself. During this process, the alcoholic improperly identifies their spiritual needs, which in turn leads to dependence.

For a successful recovery to occur within the context of Alcoholics Anonymous, it is necessary that the individual have a spiritual experience (Sandoz, 1999a). Greater lengths of sobriety were positively related to claims of having a spiritual experience. Sandoz (1999b) concluded that “evidence of growth in spirituality is a sign of the recovery process” (p.56). Bill W. defined his spiritual awakening as a mystical and instantaneous life-changing incident. After years of drinking and many failed attempts to quit, Wilson “realized he was licked, admitted it, and was willing to turn his life over to the care of God” (Kurtz, 1979, p.19). White (2004) states that the clinical interest in transformational change stems from its potential healing effects. In most instances of transformational change that have involved addiction, the individual never drinks or takes drugs again. White (2004) documented the transformational changes of seven individuals who dealt with addiction throughout much of their lives. Before the transformational experience, accounts of these seven lives are filled with reports of acute withdrawal, delirium tremens, fear of insanity, occupational instability, institutionalization, family alienation, and social ostracism (White, 2004). The individuals he chose to document met three criteria: 1) they suffered from severe and persistent alcohol or other drug-related problems, 2) they resolved these problems through a brief experience that was unplanned and intense, and whose effects were positive and enduring, and 3) they went on to lead an abstinence-based mutual aid, advocacy, or religious/ cultural revitalization movement. Pledges of abstinence by White’s subjects were broken repeatedly, and all prior professional interventions had failed (White, 2004).

C’de Baca and Wilborne (2004) did a 10 year follow up study with the participants of the original quantum change study. Most of the quantum changers they interviewed remembered the

experience. The majority of the participants remembered it as quite vivid and still experienced the emotions felt at the time. These changes had endured. Some of the quantum changers experience was a one-time event that changed the way they lived while others described experiencing repeated changes that were of similar intensity or of a milder intensity to the initial experience. Some described the experience as one aspect of a continuing growth process (C' de Baca & Wilbourne, 2004). The phenomenon of transformational change has been described by C' de Baca and Wilbourne (2004), as an all encompassing and largely permanent personality change where "personality" is understood to mean complex human behaviors.

Forchimes (2004) explored the phenomenon of transformational change in members of Alcoholics Anonymous. The participants reported that the experience occurred without willfully trying to make it happen. They also reported being very confident their change would last, and indicated that their lives were much better since the experience. Lastly, the transformational change experience impacted their lives in such a way that they wanted to help others have an experience.

In addition to characterizing the nature of the change experience, Forchimes (2004) assessed the development of the transformational experience by using a card sort based on Glatt's (1958) progression of alcoholism recovery. This was also a means to assess what values became more important in the transformational changers' lives. She found a gender difference in age of completion of the event. Males completed the event earlier. Working the steps of A.A. seemed to surround the transformational experience. For males, the transformational experience occurred between step six and ten, and for females the transformational experience occurred between steps three and four (Forchimes, 2004). She found that for most of the participants the transformational experience was located in the middle of the progression. For all but one of her

subjects hitting bottom occurred prior to the transformational experience. The subjects also reported an expressed desire for help close to their transformational experience. After the experience eleven of the sixteen participants reported a feeling of peace, twelve reported an improved peace of mind, and nine reported a rebirth of ideals. Thirteen participants began contentment in sobriety after their transformational experience (Forchimes, 2004).

Volitional Change and Addiction

The transtheoretical model of change has been applied to all aspects of addictive behavior change. As mentioned, the precontemplation stage is defined by the fact that the individual is not seriously considering modifying a behavior in the foreseeable future (DiClemente, p.2003). People in this stage often don't even recognize there is a problem so there would be no reason to make a change. The person dealing with addiction in this stage is not engaging in the cognitive/experiential or behavioral processes of change that would shift the attitudes, intentions, or behaviors toward change (DiClemente, 2003). There is little consciousness-raising or self and environmental reevaluation going on and even less activity related to the behavioral processes of change (DiClemente, 2003). In almost all studies individuals who have the lowest levels of readiness to change and who are identified as Precontemplators experience significantly lower levels of processes of change than those in later stages (DiClemente & Prochaska, 1998; Carbonari, Zweben, et al., 2001; Carbonari, & DiClemente, 1999).

When an individual begins to consider behavior change they are well on their way to contemplation. Addicted individuals often find it difficult to consider change long enough to make a decision toward lasting change (DiClemente, 2003). Many chronic alcoholics get stuck in chronic contemplation (DiClemente, 2003). Contemplators are not incapable of change they are just not fully convinced of the need for it. Decision making is the critical outcome of the

contemplation stage and marks the beginning of the preparation stage. The primary tasks of the contemplation stage are 1) gathering decisional considerations, 2) examining them, and 3) engaging in the comparative process that would resolve decisional conflict. The goal of contemplation is the firm decision to change. This is needed to move effectively into the preparation stage (DiClemente, 2003).

Preparation is essential in the decision to change an addictive behavior. Preparation stage tasks focus on securing the commitment and doing the planning needed for successful action (DiClemente, 2003). Alterations in attitudes and thinking begin to blend with small steps toward significant action (DiClemente, 2003). As individuals begin to plan a strategy for conquering the addiction, people in the preparation stage have to evaluate how they will deal with other issues in the context of change. Consideration of the negative aspects of the addiction and the pros for change must be sustained in order for the planning to continue. Self-efficacy begins to play an increasing role in the preparation stage (DiClemente, 2003).

The action stage of change requires a concentration of energy and attention in order to interrupt the habitual pattern of addictive behavior. During this stage individuals begin to break the physiological, psychological, and social ties that bind them to the addictive behavior (DiClemente, 2003). The four defining characteristics of the action stage are 1) breaking free of the addiction by utilizing behavioral change processes and the strategies of the plan, 2) commitment, 3) revising the plan in the face of difficulties, and 4) managing temptations and slips that can provoke relapse (DiClemente, 2003). A recent study on predicting alcohol treatment outcome found that pretreatment scores on action were predictive of abstinence at follow-up (Carbonari & DiClemente, 2000).

The maintenance stage is the final stage in the transtheoretical model. In this stage, not engaging in an addictive behavior becomes established as a personal norm for the formerly addicted individual. Individuals are successful in the maintenance stage by actively countering any threats and temptations, checking and renewing commitment, making sure that the decisional balance remains negative for reengaging in the addictive behavior, and establishing a protective environment and a satisfying lifestyle (DiClemente, 2003). Carbonari and DiClemente, 2000 found that higher pretreatment maintenance scores predicted positive drinking outcomes at follow-up. Similar findings were found by Henderson, Galen, & Saules, 2004) with polysubstance abuses, that is, pretreatment maintenance scores predicted cocaine-free urines and length in treatment.

Both types of change explained above have been applied to addictive behaviors. It is assumed that these types of change, although leading to similar outcomes, involve different processes. Most of the writing on transformational change differentiates it from volitional change qualitatively as opposed to quantitatively. If the differences are qualitative in nature, then it is possible that what separates these types of change is the individual experiencing the change. If this is true, it is important to understand the conditions operating within the individual and their context associated with these differing types of change. There have been no empirical studies testing the differences between these two types of change. The purpose of this study is examine possible differences between individuals based on the type of change experienced in the context of addictive behavior.

Purpose

Given that there are no empirical studies to date comparing these types of change, the purpose of this study is to provide a novel and needed contribution to the literature on change by

comparing formerly substance dependent individuals who have experienced a transformational change to those whose change was volitional on a number of factors related to personality and addictive behaviors. Specifically, these two groups will be compared on measures of personality, psychopathology, drug use and treatment history, AA/NA involvement. The following hypotheses will be tested.

1. Transformational changers will evidence less psychopathology than volitional changers.
2. Transformational changers will evidence greater degrees of openness to experience than volitional changers.
3. Transformational changers may differ on substance use history and type of drug problem.

Method

Recruitment

Participants were recruited from ten of the free standing Alcoholics Anonymous and Narcotics Anonymous meeting sites in Wilmington, North Carolina (n = 23). One of the meeting sites was the local Intergroup office which acts as the headquarters for A.A. and N.A. Flyers were posted here as well as at the nine other sites visited. The first method of recruitment was carried out by visits to each site and randomly speaking to members of the organization. Leaders of some meetings were approached so as to allow for the distribution of flyers. We also requested the allowance of a verbal announcement at the beginning or end of each meeting. The sign and announcement asked for participants who had experienced a transformational change, defined as a deep shift in core values, feelings, attitudes, or actions. They also had to have maintained abstinence from alcohol or drugs for at least six months (Conoway, 1991). A six-month period of abstinence is the time period in which research indicates a lasting change has been made in that the ability to sustain total abstinence during the first six months is a reliable

predictor of stability of abstinence at a later time (Project MATCH Research Group, 1997; 1998). The flyer also called for individuals who had gone through a volitional change which is a change that one willfully enters into. A phone number of the investigator was listed on the flyer for contact information.

Screening

Participants were screened for eligibility. Eligibility requirements were such that the participants had to be at least 18 years of age, have a history of DSM-IV substance dependence and had to be abstinent from alcohol or drugs for at least six months. A copy of the screening interview can be found in Appendix (A). Individuals were screened for type of change as well. The guidelines established in the quantum change study were used to meet criteria for transformational change. Those who underwent a transformational change had to differ subjectively from volitional change (Miller & C'de Baca, 2001). Our transformational participants must have experienced an “enduring change in a broad range of behaviors and attributes” (Miller & C'de Baca, 1994, p.258). The certainty of the transformational changers' experience was questioned using a four point Likert scale response ranging from definitely yes to definitely no. If the participants could not describe the experience vividly and/or were unsure they were assumed volitional changers. We asked a fifth question which inquired of the year in which the experience occurred. If eligible, participants were informed that they would be explaining their experiences in an open-ended interview and would be filling out several questionnaires. If the participants remained interested we set up a time in which he or she could meet with an interviewer at which time informed consent was obtained to reproduce the participants' story.

Materials

A battery of questionnaires was assembled to define a broad range of variables. A demographics survey was used to collect data on gender, age, ethnicity, marital status, employment and education. The remaining questionnaires address A.A./N.A. involvement, personality characteristics, psychopathology, impulsive behavior and spiritual beliefs. The battery consisted of the following questionnaires:

NEO-Personality Index Scale (NEO) (Costa & McCrae, 1985): The NEO-PI is a 60-item questionnaire that measures the five-factor personality model; neuroticism, extraversion, open mindedness, agreeableness, and conscientiousness. (Appendix B)

Symptom Checklist-90 (SCL-90) (Derogatis & Spitzer, 1977): The SCL-90 is a 90-item self report inventory (with nine subscales) that assesses psychopathological symptoms: depression, anxiety, phobic anxiety, somatic concerns, interpersonal sensitivity, obsessive-compulsive, hostility, paranoia and psychosis. (Appendix C)

UPPS Impulsive Behavior Scale (UPPS) (Whiteside & Lynam, 2001): The UPPS is a 45-item self-report inventory that measures impulsive behavior in four domains: urgency, premeditation, perseverance, and sensation seeking. (Appendix D)

Treatment History: A questionnaire that assesses if, when, how long and how many times the participant has been in treatment.

Alcoholics Anonymous Involvement Scale (AAI) (Tonigan, Conners, & Miller, 1996): The AAI is a 13-item scale designed to measure lifetime and more recent participation in Alcoholics Anonymous. The inventory includes items pertaining to the A. A. program such as step work and other reflecting commitment to the A.A. fellowship such as have you ever been an A.A. sponsor. (Appendix E)

General A.A. Tools of Recovery Questionnaire (GAATOR) (Montgomery, Tonigan, & Miller, 1991): The GAATOR is a 24-item questionnaire that documents the participant's spiritual activities and behaviors during the previous 90 days in A.A. Responses are indicated on a 4-point likert scale, with answers ranging from definitely false to definitely true. This scale characterizes alcohol involvement in three domains—higher power, inventory, and self-inventory. (Appendix F)

Religious Practices and Beliefs (RPB 21) (CASAA Research Division): The RPB 21 is a 3 item questionnaire which assesses the participants' religious affiliation on that day. The inventory includes items which inquire of the participants' belief in God and their participation in religious or spiritual practices. (Appendix G)

Quantity and Frequency of Alcohol and Drug use (QFAD): The QFAD is an eleven item questionnaire which asks the participant to report age of first alcohol and drug use, number of days at peak use and last use. The last two questions ask the participant to report on treatment status. "Have you ever been in treatment? When was the last time?" (Appendix H)

Coping Behaviors Inventory (CBI) (Litman, Stapleton, Oppenheim and Peleg, 1983): The CBI is a 36 item questionnaire which assesses the degree to which an individual uses certain behaviors to stop them from drinking. The behaviors are measured on a four point likert scale with 0 being usually stops me and 3 being don't know. The behaviors indicated are "Going for a walk", "Thinking positively", and "Telephoning a Friend".

Quantum Change Retrospective Interview (QUERI) (Miller, 2001): The QUERI begins with an unstructured narrative: "Now I'd like you to tell me about your experience in your own words. Tell me how it was before your experience, what happened, and how it is now." During this semi-structured interview questions are asked pertaining to age and time, beginning of the

experience, context of the experience, description of the experience, ending of experience, feelings afterward, general effects and perspectives, and history. They were also asked about childhood religious affiliation, and whether they were in counseling during the experience.

Procedure

Each participant entered the room on the campus of UNCW and the consent form was explained. Upon completion of the consent form the participant was asked to tell their story using the QUERI as a guide. Using Forchimes (2004) study as a guide we asked the participants to tell their story first to build rapport. The participant was informed again that their story would be recorded and transcribed, but names would not be attached. When the participant was finished telling their story they filled out the battery of questionnaires. This process took approximately 1 to 2 hours.

Results

We began the recruitment process when IRB approval was given in February of 2006. As of December, 2006, twenty-three participants had been interviewed. First we calculated and analyzed simple demographics to explore between-group differences. Nineteen subjects described a volitional change whereas three subjects described a transformational change.

For demographic analysis, groups were compared through a series of univariate ANOVAS on continuous variables. Ages ranged from 21 to 50 within the entire sample. Participants' ages in the transformational group ranged from 28-44 while the volitional changers ages ranged from 21 to 50. The mean age for the volitional group was ($M= 36.4, SD=2.36$) while the mean age for the transformational group was ($M = 39, SD = 5.45$). An analysis of level of education yielded a mean of ($M=14.2, SD = .52$) years of education for the volitional group and a mean of ($M=14, SD = 1.3$) years of education for the transformational group.

For hypothesis one, a between-groups Multivariate Analysis of Variance (MANOVA) was computed. Level of psychopathology was examined with change-type as the independent variable and SCL-90 subscale scores as the dependent variable. A significant difference was not found between groups.

For hypothesis two, a between-groups Multivariate Analysis of Variance (MANOVA) was computed to examine the differences between transformational changers and volitional changers on degree of openness as well as other personality characteristics. A trend was found with the transformational changers reporting a higher degree of openness than the volitional changers, $F(1, 21) = 3.02, p > .05$ ($M = 4.33, SD = 7.72$). No significant differences were found between groups on other personality characteristics such as neuroticism, extraversion, agreeableness and conscientiousness.

For hypothesis three, a between-groups MANOVA was computed to examine the differences in substance abuse history. Change type was the independent variable and QFAD scores was the dependent variable. There was not a significant difference found between groups.

Additional Analyses

While additional hypotheses were not postulated, analyses were conducted on several variables to examine potential differences between groups. A between-groups MANOVA was conducted to examine the differences between transformational changers and volitional changers on degree of impulsivity. Impulsivity was measured on four domains (lack of premeditation, urgency, sensation seeking and perseverance) using the UPPS (Whiteside & Lynam, 2001). A significant difference was found between groups in the domain of lack of premeditation with volitional changers having higher scores than transformational changers, $F(1, 21) = 6.86, p < .05$ ($M = 22.33, SD = 2.86$). Lack of premeditation is defined in this context as a difficulty

contemplating the consequences of an act before engaging in the act (Whiteside, Lynam, Miller & Reynolds, 2005). No significant differences were found between groups in the other three domains.

A between-groups ANOVA was computed to examine the differences between groups and their ability to cope with not drinking/using. There was a significant difference found between the transformational group and volitional changers' ability to cope. Transformational changers reported more effective coping behaviors than did the volitional changers, $F(1, 21) = 6.90, p < .05$ ($M = 41.63, SD = 3.28$). Items on the CBI referred to coping behaviors such as telephoning a friend, thinking positively, going to an A.A. meeting and facing up to my bad feelings instead of trying to drown them.

A between-groups MANOVA was computed to examine the differences between groups on spiritual activities and involvement in alcoholics' anonymous during the past ninety-days. There was not a significant difference found between transformational changers and volitional changers spiritual activities and A.A. involvement.

A series of MANOVAs were run to examine differences between groups on drug use consequences, drinking consequences, and spiritual activities and involvement in alcoholics' anonymous. No significant differences were found between groups on any of these variables.

A between-groups ANOVA was computed to examine the differences between groups where change-type was a factor and last use in months was the dependent variable. There were no significant differences found between transformational changers and volitional changers on this variable. There were similarities between the groups in terms of last use of alcohol in months. The volitional group used alcohol last a mean of ($M = 52.56, SD = 22.12$) months ago and the transformational group used alcohol last a mean of ($M = 46.3, SD = 54.18$) months ago.

Discussion

The phenomenon of transformational change has been documented since the early 1900's (James, 1902) and has been an area of great interest since that time. Although this phenomenon has been of great interest there have not been many empirical studies to date which examine transformational change (Miller & C'de Baca, 1994; White, 2004; Loder, 1989; Forchimes, 2004) and there are no studies which examine the differential characteristics between transformational changers and volitional changers who are DSM-IV substance dependent individuals.

The purpose of this study was to examine the differences between individuals in recovery who experienced a transformational change and those who experienced a volitional change. Specifically, differences between groups on variables such as age, level of education, psychopathology and personality characteristics were examined. Participants' alcoholics' anonymous involvement, drug use history and coping behaviors were also analyzed. Significant differences were found on variables such as openness, impulsivity and ability to cope with not drinking despite unequal sample sizes. It is conceivable that with an increase in sample size in both groups even more differences may be found.

In this study transformational changers showed a trend toward a higher degree of openness than did volitional changers which supports the hypotheses. The data also suggest that volitional changers exhibit more impulsive behaviors than do transformational changers meaning they do not think about the consequences of their actions before they engage. With respect to volitional changers, the data suggests that transformational changers also engage in better coping behaviors when dealing with drinking. A higher degree of psychopathology in the volitional

changers was expected but no significant differences between groups were found. Again, this is likely due to the low number of transformational changers interviewed.

It is difficult to know the degree to which these differences are true differences given that there is a significant lack of power to test the hypotheses. The trend toward greater openness is consistent with expectation in that people may be more or less likely to experience a transformational change based on their personality. This to some extent also accounts for the difference in lack of premeditation being greater in the volitional group. Individuals less likely to engage in thinking about the consequences of their behavior may be more likely to experience repeated relapses and need to learn from experience over time how to cope with substance abuse. This may also explain the fact that transformational changers reported better coping with substance abuse issues. Even though these findings to some degree make sense, little confidence can be assumed given the number of limitations that reduced the power of this study.

Limitations

Due to our low sample size in the transformational change group attempts were made to understand transformational change as a continuous process rather than as a dichotomous process. This was done by including a coding system which used the four criteria of a transformational change; benevolence, vividness, surprise, and permanence (Miller & C'de Baca, 1994). This coding system was tested on a student population who experienced significant changes in their lives. Transformational change was operationally defined as individuals who experience a major life changing event and had to include surprise, benevolence, vividness and permanence. Tapes were analyzed to obtain some contiguity of the four criteria and the outcome was such that the substance abusers were clearly transformational or volitional. There seemed no apparent way to create dimensionality within participants.

Another limitation was age as students fell within a restricted age range as they were students from psych 105 courses. The students also described significant life events such as divorced parents or a friends' death. Some described rape or death of a parent or grandparent. While these events are no less significant than a transformational change, they were not behavior changes.

A large limitation of this study was the lack of transformational changers who responded to the announcements and ads. There is a possibility that transformational changers are not attending Alcoholics' Anonymous. Advertisements were placed in local newspapers. No one responded to these ads that ran for a week at a time. Another possibility is that transformational change is more of a phenomenon rather than a quantifiable construct. The results do suggest that transformational changers do differ on personality characteristics, are better at the utilization of certain coping behaviors, and are less impulsive but do not differ on drug and alcohol use. These data provide a starting point for prospective research on differences between changers, change processes and ultimately recovery.

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Appendix A: Screening Form for Potential Participants

SCREENING FORM

(For use during initial phone call)

1. Are you over 18 years of age? YES ____ NO ____ (discontinue)
2. Are you a member of AA/NA? YES ____ NO ____ (discontinue)
3. Have you maintained abstinence from alcohol for at least six months prior to today's date?

YES ____ NO ____ (discontinue)

4. In the course of their lives, some people have a sudden and highly memorable experience that changes them dramatically and permanently. Would you say that you had such an experience?

_____ Yes, definitely (Continue to question 5)
_____ Yes, I think so (Continue to question 5)
_____ I'm not sure (skip question 5)
_____ No (skip question 5)

5. In what year did your experience occur? Year: _____
(If cannot remember, will have to assume volitional change occurred)

6. Are you willing to have your interview tape-recorded for transcription purposes?

YES ____ NO ____ (discontinue)

The nature of the study asks participants to describe their experiences in an open-ended Interview as well as fill out several questionnaires and complete a card-sort. It is expected to take no more than 2 hours. Would you be interested in participating?

Time Scheduled? _____ Person conducting assessment? _____

Appendix B

NEO-PI

This questionnaire contains 60 statements. Read each statement carefully. For each statement, circle the response that best represents your opinion.

Circle **SD** if you *Strongly Disagree* or the statement is definitely false.

Circle **D** if you *Disagree* or the statement is mostly fake.

Circle **N** if you are *Neutral* on the statement, you cannot decide, or the statement is about equally true or false.

Circle **A** if you *Agree* or the statement or the statement is mostly true.

Circle **SA** if you *Strongly Agree* or the statement is definitely true.

- | | | | | | |
|---|----|---|---|---|----|
| 1. I am not a worrier. | SD | D | N | A | SA |
| 2. I like to have a lot of people around me. | SD | D | N | A | SA |
| 3. I don't like to waste my time daydreaming. | SD | D | N | A | SA |
| 4. I try to be courteous to everyone I meet. | SD | D | N | A | SA |
| 5. I keep my belongings clean and neat. | SD | D | N | A | SA |
| 6. I often feel inferior to others. | SD | D | N | A | SA |
| 7. I laugh easily. | SD | D | N | A | SA |
| 8. Once I find the right way to do something, I stick to it. | SD | D | N | A | SA |
| 9. I often get into arguments with my family and coworkers. | SD | D | N | A | SA |
| 10. I'm pretty good about pacing myself so as to get things done on time. | SD | D | N | A | SA |
| 11. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces. | SD | D | N | A | SA |
| 12. I don't consider myself especially "light-hearted." | SD | D | N | A | SA |
| 13. I am intrigued by the patterns I find in art and nature. | SD | D | N | A | SA |
| 14. Some people think I'm selfish and egotistical. | SD | D | N | A | SA |
| 15. I am not a very methodical person. | SD | D | N | A | SA |

16. I rarely feel lonely or blue. SD D N A SA
17. I really enjoy talking to people SD D N A SA
18. I believe letting students hear controversial speakers can only confuse and mislead them.
19. I would rather cooperate with others than compete with them. SD D N A SA
20. I try to perform all the tasks assigned to me conscientiously. SD D N A SA
21. I often feel tense and jittery. SD D N A SA
22. I like to be where the action is. SD D N A SA
23. Poetry has little or no effect on me. SD D N A SA
24. I tend to be cynical and skeptical of others' intentions. SD D N A SA
25. I have a clear set of goals and work toward them in an orderly fashion.
26. Sometimes I feel completely worthless. SD D N A SA
27. I usually prefer to do things alone. SD D N A SA
28. I often try new and foreign foods. SD D N A SA
29. I believe that most people will take advantage of you if you let them.
30. I waste a lot of time before settling down to work. SD D N A SA
31. I rarely feel fearful or anxious. SD D N A SA
32. I often feel as if I'm bursting with energy. SD D N A SA
33. I seldom notice the moods or feelings that different environments produce.
34. Most people I know like me. SD D N A SA
35. I work hard to accomplish my goals. SD D N A SA

36. I often get angry at the way people treat me. SD D N A SA
37. I am cheerful, high-spirited person. SD D N A SA
38. I believe we should look to our religious authorities for decisions on moral issues.
39. Some people think of me as cold and calculating. SD D N A SA
40. When I make a commitment, I can always be counted on to follow through.
41. Too often, when things go wrong, I get discouraged and feel like giving up.
42. I am not a cheerful optimist. SD D N A SA
43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
44. I'm hard-headed and tough-minded in my attitudes. SD D N A SA
45. Sometimes I'm not as dependable or reliable as I should be. SD D N A SA
46. I am seldom sad or depressed. SD D N A SA
47. My life is fast-paced. SD D N A SA
48. I have little interest in speculating on the nature of the universe or human condition.
49. I generally try to be thoughtful and considerate. SD D N A SA
50. I am a productive person who always gets the job done. SD D N A SA
51. I often feel helpless and want someone else to solve my problems. SD D N A SA
52. I am a very active person. SD D N A SA
53. I have a lot of intellectual curiosity. SD D N A SA
54. If I don't like people, I let them know it. SD D N A SA
55. I never seem to be able to get organized. SD D N A SA

56. At times I have been so ashamed I just wanted to hide. SD D N A SA

57. I would rather go my own way than be a leader of others. SD D N A SA

58. I often enjoy playing with theories or abstract ideas. SD D N A SA

59. If necessary, I am willing to manipulate people to get what I want. SD D N A SA

60. I strive for excellence in everything I do. SD D N A SA

Appendix C

Below is a list of problems people sometimes have. Please read each one carefully, and circle that number that best describes HOW MUCH THIS PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST SEVEN DAYS INCLUDING TODAY. Please do not skip any items.

Not at all A Little Bit Moderately Quite a Bit Extremely

1. Headaches
2. Nervousness or shakiness inside.
3. Repeated unpleasant thoughts won't leave your mind.
4. Faintness or dizziness.
5. Loss of sexual interest or pleasure.
6. Feeling critical of others.
7. The idea that someone else can control Your thoughts.
8. Feeling others are to blame for most of your troubles.
9. Trouble remembering things
10. Worried about sloppiness or carelessness.
11. Feeling easily annoyed or irritated.
12. Pains in the heart or chest.
13. Feeling afraid in open spaces or on the streets.
14. Feeling low in energy or slowed down.
15. Thoughts of ending your life.
16. Hearing voices that other people do not hear.
17. Trembling.
18. Feeling that most people cannot be trusted.
19. Poor appetite.
20. Crying easily.
21. Feeling shy or uneasy with the opposite sex.
22. Feelings of being trapped or caught.

23. Suddenly scared for no reason.
24. Temper outburst that you could not control.
25. Feeling afraid to go out of your house alone.
26. Blaming yourself for things.
27. Pains in lower back.
28. Feeling blocked in getting things done.
29. Feeling lonely.
30. Feeling blue.
31. Worrying too much about things.
32. Feeling no interest in things.
33. Feeling fearful.
34. Your feelings being easily hurt.
35. Other people being aware of your private thoughts.
36. Feeling that others do not understand you or are unsympathetic.
37. Feeling that other people are unfriendly or dislike you.
38. Having to do things very slowly to insure correctness.
39. Heart pounding or racing.
40. Nausea or upset stomach.
41. Feeling inferior to others.
42. Soreness of your muscles.
43. Feeling that you are watched or talked about by others.
44. Trouble falling asleep.
45. Having to check and double-check what you do.
46. Difficulty making decisions.
47. Feeling afraid to travel on buses, subways, or trains.
48. Trouble getting your breath.
49. Hot or cold spells.
50. Having to avoid certain things, places, or activities because
They frighten you.

51. Your mind going blank.
52. Numbness or tingling in parts of your body.
53. A lump in your throat.
54. Feeling hopeless about the future.
55. Trouble concentrating.
56. Feeling weak in parts of your body.
57. Feeling tense or keyed up.
58. Heavy feelings in your arms or legs.
59. Thoughts of death or dying.
60. Overeating.
61. Feeling uneasy when people are watching or talking about you.
62. Having thoughts that are not your own.
63. Having urges to beat, injure, or harm someone.
64. Awakening in the early morning.
65. Having to repeat the same action such as touching, counting, Or washing.
66. Sleep that is restless or disturbed.
67. Having urges to break or smash things.
68. Having ideas or beliefs that others do not share.
69. Feeling very self-conscious with others.
70. Feeling uneasy in crowds, such as shopping or at a movie.
71. Feeling everything is an effort.
72. Spells of terror or panic.
73. Feeling uncomfortable about eating or drinking in public.
74. Getting in to frequent arguments.
75. Feeling nervous when you are left alone.
76. Others not giving you proper credit for your achievements.
77. Feeling lonely even when you are with people.

78. Feeling so restless you couldn't sit still.
79. Feelings of worthlessness.
80. The feeling that something bad is going to happen to you.
81. Shouting or throwing things.
82. Feeling afraid that you will faint in public.
83. Feeling that people will take advantage of you if you let them.
84. Having thoughts about sex that bother you a lot.
85. Feeling you should be punished for your sins.
86. Thoughts and images of a frightening nature.
87. The idea that something serious is wrong with your body.
88. Never feeling too close to another person.
89. Feelings of guilt.
90. The idea that something is wrong with your mind.

Appendix D

UPPS

This questionnaire contains 45 statements. Read each statement carefully. For each statement, circle the response that best represents your opinion.

ANSWER SCALE:

	1	2	3	4
	EXTREMELY UNCHARACTERISTIC OF ME	UNCHARACTERISTIC OF ME	CHARACTERISTIC OF ME	EXTREMELY CHARACTERISTIC OF ME
1. I have a reserved and cautious attitude toward life.				1 2 3 4
2. I have trouble controlling my impulses.				1 2 3 4
3. I generally seek new and exciting experiences and sensations.				1 2 3 4
4. I generally like to see things through to the end.				1 2 3 4
5. My thinking is usually careful and purposeful.				1 2 3 4
6. I have trouble resisting my cravings (for food, cigarettes, etc.).				1 2 3 4
7. I'll try anything once.				1 2 3 4
8. I tend to give up easily.				1 2 3 4
9. I am not one of those people to blurt out things without thinking.				1 2 3 4
10. I often get involved in things I later wish I could get out of.				1 2 3 4
11. I like sports and games in which you have to choose your next move more quickly.				1 2 3 4
12. Unfinished tasks really bother me.				1 2 3 4
13. I like to stop and think things over before I do them.				1 2 3 4
14. When I feel bad, I will often do things I later regret in order to make myself better now.				1 2 3 4

- | | | | | |
|--|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| 15. I would enjoy water skiing. | 1 | 2 | 3 | 4 |
| 16. Once I get going on something I hate to stop. | | | | |
| 17. I don't like to start a project until I know exactly how to proceed. | 1 | 2 | 3 | 4 |
| 18. Sometimes when I feel bad, I can't seem to stop what I am doing even though it is making me feel worse. | | | | |
| | 1 | 2 | 3 | 4 |
| 19. I enjoy taking risks. | | | | |
| 20. I concentrate easily. | 1 | 2 | 3 | 4 |
| 21. I tend to value and follow a rational, "sensible" approach to things. | 1 | 2 | 3 | 4 |
| 22. When I am upset I often act without thinking. | 1 | 2 | 3 | 4 |
| 23. I would enjoy parachute jumping. | 1 | 2 | 3 | 4 |
| 24. I finish what I start. | 1 | 2 | 3 | 4 |
| 25. I usually make up my mind through careful reasoning. | 1 | 2 | 3 | 4 |
| 26. When I feel rejected, I will often say things that I later regret. | 1 | 2 | 3 | 4 |
| 27. I welcome new and exciting experiences and sensations, even if they are a little frightening and unconventional. | | | | |
| | 1 | 2 | 3 | 4 |
| 28. I am pretty good about pacing myself so as to get things done on time. | 1 | 2 | 3 | 4 |
| 29. I am a cautious person. | 1 | 2 | 3 | 4 |
| 30. It is hard for me to resist acting on my feelings. | 1 | 2 | 3 | 4 |
| 31. I would like to learn to fly an airplane. | 1 | 2 | 3 | 4 |
| 32. I am a productive person who always gets the job done. | 1 | 2 | 3 | 4 |
| 33. Before I get into a new situation I like to find out what to expect from it. | 1 | 2 | 3 | 4 |
| 34. I often make matters worse because I act without thinking when I am upset. | 1 | 2 | 3 | 4 |
| 35. I sometimes like doing things that are a bit frightening. | 1 | 2 | 3 | 4 |
| 36. Once I start a project, I almost always finish it. | 1 | 2 | 3 | 4 |
| 37. I usually think carefully before doing anything. | 1 | 2 | 3 | 4 |
| 38. In the heat of an argument, I will often say things that I later regret. | 1 | 2 | 3 | 4 |
| 39. I would enjoy the sensation of skiing very fast down a high mountain slope. | 1 | 2 | 3 | 4 |

40. There are so many little jobs that need to be done that I sometimes just ignore them all. 1 2 3 4
41. Before making up my mind, I consider all the advantages and disadvantages. 1 2 3 4
42. I am always able to keep my feelings under control. 1 2 3 4
43. I would like to go scuba diving. 1 2 3 4
44. Sometimes I do things on impulse that I later regret. 1 2 3 4
45. I would enjoy fast driving. 1 2 3 4

Appendix E

AAI

Item	Response
1. Have you ever attended an AA meeting?	(No-Yes)
2. Have you attended an AA meeting in the last year?	(No-Yes)
3. Have you ever considered yourself to be a member of AA?	(No-Yes)
4. Have you ever gone to 90 AA meetings in 90 days?	(No-Yes)
5. Have you ever celebrated an AA sobriety birthday?	(No-Yes)
6. Have you ever had an AA sponsor?	(No-Yes)
7. Have you ever been an AA sponsor?	(No-Yes)
8. If you have been in an alcohol treatment program (inpatient	
9. or outpatient), did they require that you work any of the AA steps?	(No-Yes)
10. What steps did you complete when you were in alcohol treatment?	Circle all that apply (Steps 1-12 listed).
11. Regardless of whether you have or have not been in alcohol treatment, which of the twelve steps of AA have you “worked”?	
12. How many AA meetings have you attended in the last year?	
13. What is the total number of AA meetings that you have ever attended?	
14. Have you ever had a spiritual awakening or conversion experience since Your involvement in AA?	

Note: AA = Alcoholics Anonymous

Appendix F

General AA Tools of Recovery (GAATOR 2.1)

Henry A. Montgomery

During the past 90 days, how many Twelve-Step meetings have you attended? (Twelve-Step meetings include Alcoholics Anonymous, Narcotics Anonymous, Cocaine Anonymous, etc.)

_____ meetings during the past 90 days

Now for each of the following questions, please circle the number which best describes you during the past 90 days.

How true has this been of you during the past 90 days?	Definitely False	False	True	Definitely True
1. I have turned my will and my life over to my Higher Power.	1	2	3	4
2. I have made direct amends to those whom I Had harmed.	1	2	3	4
3. I have shared my personal inventory with Another person.	1	2	3	4
4. I have believed that my recovery could Only come from a power greater than Myself.	1	2	3	4
5. I have made a list of my resentments.	1	2	3	4
6. I have recognized that the amount of Serenity I have is the direct result of The amount of humility which I have.	1	2	3	4
7. I have taken a daily inventory of my Behavior.	1	2	3	4
8. I have accepted the fact that I can never Drink or use again.	1	2	3	4
9. I have told others about my spiritual Experience.	1	2	3	4

- | | | | | |
|--|---|---|---|---|
| 10. I have been ready to let my Higher Power remove my shortcomings. | 1 | 2 | 3 | 4 |
| 11. I have made indirect amends to those Whom I've harmed, when direct amends Were not possible. | 1 | 2 | 3 | 4 |
| 12. I have found character defects which I am Willing to give up. | 1 | 2 | 3 | 4 |