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I am submitting herewith a dissertation written by Paul L. Busby entitled "Dimensions of Addictive Experience and 12-Step Program Participation." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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Dimensions of Addictive Experience and 12-Step Program Participation

A dissertation submitted for the degree of

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Paul Busby

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DEDICATION

I dedicate this leg of the expedition to my fiancée, Ammie Jo Glimp, who is my reason for climbing and to my Sherpa, Jim Gorney, who has devised ways for me to summit despite frostbite and broken limbs.

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This project took me much longer to complete than I would have liked. That phenomenon, though perhaps common, has nonetheless been a chronic life disturbance—one that I am relieved to have exorcised. During my dissertating tenure my committee suffered removals and additions over 5 years and I thank them for their patience. Special thanks go to my major professor, Eric Sundstrom, for his constancy of purpose and to Ron Hopson for being the original creative spirit of the research.

There are a few other people that were instrumental in my having completed this document, and I would like to acknowledge their contributions and offer my gratitude. For helping me write and rewrite and rewrite the web site that was used to collect the data I want to thank Chris Hurt, Jon Williams and Mike Phelps. Their technical expertise was invaluable and freely given. And last, for his assistance with some complicated statistical routines I'd like to thank the unassuming and deeply competent Soo Hee Park.

ABSTRACT

Three empirical studies investigated the relationships between 12-step participation, addictive modes of experiencing, and recovery from chemical addictions. Study one and two developed an addictive experience survey to be used in this paper's main study. The main study validates the addictive experience survey and tests relationships of interest.

The first study sought to validate a four-factor model of addictive experience based on clinical research. These four factors are experiential dimensions, assumed universal, that emerged from clinical interviews with persons addicted to chemical substances: 1) *Temporal Flow* (temporal flow vs. temporal arrest), 2) *Language Adequacy* (emotional articulation vs. impoverished emotional language), 3) *Connectedness* (connectedness vs. alienation), and 4) *Agency* (effectiveness vs. powerlessness). A survey was constructed using the content of the interviews to write items. This survey was distributed in pencil and paper form to college students (N=247). Data was gathered for three weeks. Results did not support the four-factor model. Principle components analysis extracted two factors accounting for 51.9% of response variance. Post-hoc analysis suggested the inadequacy of the response format.

A second study revised the survey's response format and its items. The revised survey was administered electronically over the Internet to college students, addicts, and interested others (N=751). Like study one, this second study hypothesized the existence of four factors. The results supported the four-factor hypothesis. Principle components analysis extracted four factors

accounting for 67.5% of response variance. Coefficient alphas for the four dimensions ranged from .84 to .89.

The main study performed a know-group validation of the addictive experience scales and tested the relationships between these dimensions and 12-step program participation. It was hypothesized that addicts' scores on the addictive experience dimensions would suggest greater disturbance than the scores of non-addicts. The second and third hypotheses predicted that greater 12-step participation would be associated with healthier or less disturbed addictive experiences. All three of this studies hypotheses received support.

Participation was divided into level of involvement and degree of affiliation. Involvement items measured frequency of participation and completion of 12-step tasks. Affiliation items centered on perceived salience of 12-step tasks and ideas. Greater involvement and affiliation in the 12-steps was associated with improvement in the addictive experience dimensions.

In addition to developing an addictive experience scale useful in future research this paper extends the literature on recovery from addiction by demonstrating linkages between 12-step participation, addictive experience and recovery. Results argue for greater concentration on first-person narratives in attempting to understand addictive phenomena.

A model for the relationships between 12-step participation, addictive experience dimensions, and recovery is offered.

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1. GENERAL INTRODUCTION

The primary goal of the present studies is to explore the idea that understanding the direct experience of addicts is integral to the development of an adequate understanding of addiction. This paper nests this exploration in the context of 12-step recovery programs like Alcoholics Anonymous (AA). It is suggested that the remedial efficacy of 12-step programs is a function of their experience offerings. That is, these programs work because their remedial nature is experiential, and that orientation is consistent with the nature of the phenomenon that they address—addiction. Study one develops an addictive experience scale and investigates its psychometric properties. Study two refines the addictive experience scale begun in Study one. The main study verifies that the addictive experience scale can discriminate between addicts and non-addicts. Finally, the main study evaluates the relationships between 12-step program participation and changes in the reported experiences of 12-step members. A model of recovery based on the 12-step program experiences is proposed.

The remainder of this introduction will focus on three areas. First, a theoretical framework will be developed for associating 12-step participation with changes in addictive experiences. Second, a brief history of AA is offered. And third, the research on AA effectiveness will be reviewed. This general introduction concludes with a summary of the hypotheses addressed in this paper.

Theoretical Framework

This paper builds on the clinical finding that addiction has experiential components. It has been observed that 12-step programs offer experiential solutions (e.g., Hopson, 1996). The following theoretical framework argues that the 12-step experiences are remedial because they address addictive experience. This framework is articulated first by discussing addictive experience and second by detailing the formal and informal remedial experiences available to the 12-step member. A third section proposes a map of these 12-step experiences to addictive experiences that they address.

Addictive Experience. Four interrelated modes of experience found in phenomenological research to be problematic in addicts include (1) intense feelings for which language is inadequate; (2) a disruption in the experience of time; (3) alienation from oneself and others; and (4) lack of sense of agency and self-efficacy and capacity for self-regulation (Hopson & Beaird-Spiller, 1995). The core of addictive distress is related to addicts' inability to translate their experiences into symbolic form (Hopson, 1996; Wurmser, 1978). Addicts experience intense affect without the ability to meaningfully reflect upon these experiences or adequately relate them to others (Hopson, 1993; Krystal & Raskin, 1970), and are thus absent essential tools for developing a sense of connection with the self and others. Alienated and overwhelmed, addicts lack a sense of personal agency and are unable to identify or adequately express this painful cluster of experiences. The drug becomes a shortcut to deal with otherwise overwhelming experiences. AA's effectiveness may reflect the impact

of 12-step participation on the transformation of these modes of experience (Hopson & Beaird-Spiller, 1995). Figure 1 depicts Hopson's (1993) model.

Formal Therapeutic Facets of 12-Step Programs. The 12 steps comprise AA's primary catalysts for transforming addictive experience through personal growth (Alcoholics Anonymous, 1976). The steps can be grouped according to psychological tasks as follows: a) 1-3: Surrender: acknowledgement of powerlessness; b) 4-7: Revelation: identification and communication of hidden aspects of the self; c) 8-9: Conciliation: atonement with objects of overwhelming affect; and d) 10-12: Structure and discipline: ongoing process of internalizing and refining a life affirming moral principle.

Steps 1 through 3 ask addicts to admit powerlessness and to surrender their alcohol and life problems to a higher power. Energy being expended maintaining denial and divisions in the self is freed. Paradoxically, while the first

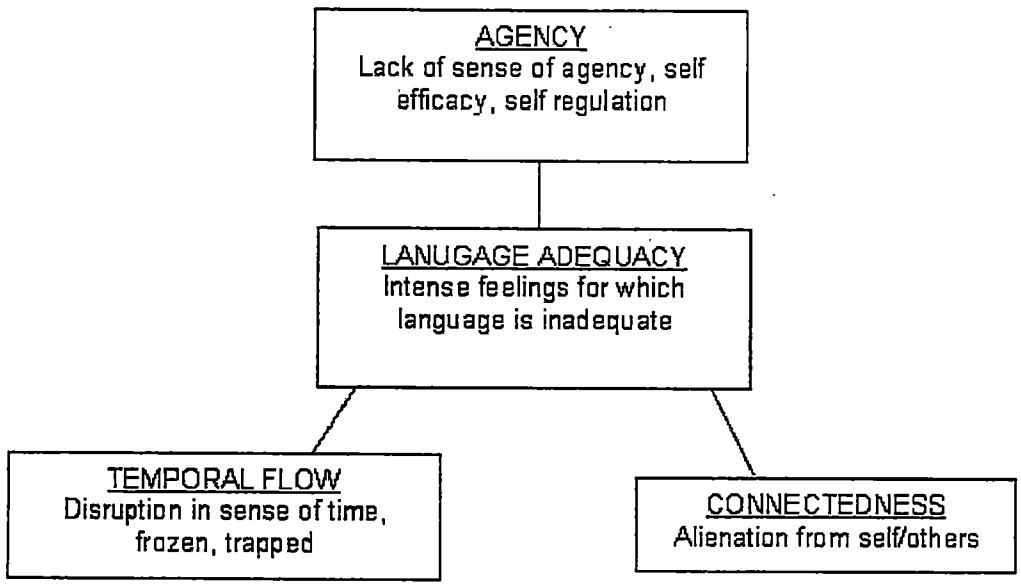


Figure 1: Relationship between Addictive Experience Dimensions

step asks for admission of powerlessness, step 3 requires a volitional act. The decision to surrender to a higher power and the implicit message of the alcoholic's capacity to do so are inconsistent with alienation and absent self-efficacy, respectively, and may be thus remedial.

Once alcoholics admit the unmanageability of their lives the causes at the core of addiction are then addressed. Steps 4 through 7 require alcoholics to uncover, acknowledge, and discuss what they find objectionable in themselves. Power from outside the self is then available for change to occur, and hope is introduced to despair (Hopson, 1996). These steps may assuage an addict's sense of alienation from the self and others and may foment a sense of agency. The tendency associated with shame to regard ones failings secretly is directly addressed and potentially diminished via reciprocal self-revelations. Energy dedicated to hiding faults can be redirected and the painful affect may be diminished.

Steps 8 and 9 provide addicts the opportunity for effective reparation without further injury. Klein (1975) argues that reparation is essential for the development of the capacity to care for the self and others. In making amends addicts experience themselves as capable of affecting the world for good or ill as well as repairing broken interpersonal attachments. Psychological energy devoted to resentment and fear of others is made available for living.

Steps 10 through 12 address the ongoing process nature of recovery by emphasizing daily self-examination and reparation, prayer and meditation, and

service to others. These steps ask addicts to dedicate themselves to a life-affirming moral principle and to pay continuous attention to themselves.

Informal Therapeutic Facets of 12-Step Programs. Alcoholics Anonymous' primary informal tool is language (Hopson, 1996). AA provides opportunities for generating and hearing symbolic representations of the self among persons with similar experiences inviting identification with others and reinforcing affiliates' sense of self. These practices directly address addicts' sense of alienation from self and others, perhaps fostering a sense of agency, and lessen affective intensity (Hopson & Beaird-Spiller, 1995).

Addicts' sense of alienation is also related to the interpersonal phenomenon of shame, which confers a tendency to regard ones faults and failings secretly (Ramsey, 1988). The practice of reciprocal self-revelation inherent in AA's sponsor system and AA meetings may be particularly salient for the redress of shame and its counterpart alienation (Valliant, 1996). AA's sponsor system provides affiliates with the opportunity to develop intimate, regular connection with an accepting and guiding individual. Through the practice of reciprocal self-revelation with sponsors and other AA affiliates, addicts' sense of alienation is transformed into a sense of connectedness (Flores, 1988). Regular contact with a sponsor and regularity of meeting attendance may also assist in establishing a sense of temporal flow.

Other facets of AA may assist in rendering affect manageable. Addicts are encouraged to attend meetings regularly and frequently. Cognitive strategies for affect management are hung on the walls and employed in discussion.

These strategies promote affect tolerance and remind the addict of the flow of time (e.g., This too shall pass, One day at a time). The discipline of regular attendance, by establishing a daily structure and thus continuous exposure to cognitive strategies for affect tolerance, may assist in the development a sense of temporal flow and of the capacity to manage painful emotional states.

12-Step Features and Addictive Experience. The phenomenon of addiction is characterized by disturbed experience along identified dimensions (Hopson, 1993) for which 12-Step programs offer experiential solutions. The most central of a 12-step program's components are the 12 steps themselves. The 12 steps can be described as directions for experiential exercises structured to lead someone through a process of surrendering, confessing, repairing

Table 1: The 12-Steps of Alcoholics Anonymous.

Psychological Tasks	Steps
Surrender	1. We admitted we were powerless over alcohol—that our lives had become unmanageable. 2. Came to believe that a Power greater than ourselves could restore us to sanity. 3. Made a decision to turn our will and our lives over to the care of God *as we understood him.*
Confession	4. Made a searching and fearless moral inventory of ourselves. 5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs. 6. Were entirely ready to have God remove all these defects of character. 7. Humbly asked Him to remove our shortcomings.
Repair Relationships	8. Made a list of all persons we had harmed, and became willing to make amends to them all. 9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
Maintenance and Growth	10. Continued to take personal inventory of ourselves and when we were wrong promptly admitted it. 11. Sought through prayer and meditation to improve our conscious contact with God *as we understood him*, praying only for knowledge of his will for us and the power to carry that out. 12. Having had a spiritual awakening as a result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.

* Quoted from AA, 1976. Original Italics

relationships and growing spiritually (Hopson, 1996). Table 1 presents the 12-steps of Alcoholics Anonymous. Other programs use the same steps but change the drug that is referenced.

History of Alcoholics Anonymous

During the years of prohibition (1919-1933) treatment efforts suffered as alcoholism was regarded legally rather than as a condition meriting assistance. Alcoholics Anonymous (AA) was formed by founding father Bill W. during a period of renewed emphasis on treatment that followed prohibition's repeal. Bill W. was an alcoholic who achieved sobriety with the help of his physician, but with abstinence came a severe depression that precipitated his vision of a society of alcoholics helping one another live without alcohol (Wilson, 1967).

The idea that alcoholism is a condition requiring the intervention of a Higher Power, an AA fundamental, was central to Bill W.'s vision. A paradoxical implication of the belief in the necessity of supernatural intervention is that human efforts to address alcoholic distress are doomed to have little success. Today, this notion is reiterated in the literature that is read before every AA meeting: "That probably no human power could have relieved our alcoholism," (Alcoholics Anonymous, 1976, p. 60). Bill W. addressed this seeming contradiction in his assertion that AA functions to make newcomers vulnerable to transforming spiritual experiences (Wilson, 1967). AA has since regarded alcoholism as a physical and psychological, degenerative condition for which help is available to the extent that the alcoholic is vulnerable to supernatural assistance. It follows that the efficacy of AA participation lies in the capacity of

that participation to render the individual susceptible to a source of power adequate to their condition. "Lack of power, that was our dilemma. We had to find a power by which we could live, and it had to be a *Power greater than ourselves,*" (Alcoholics Anonymous, 1976, p. 45).

12-Step Effectiveness Research

There are a multitude of 12-step programs (e.g., Cocaine Anonymous, Marijuana Anonymous, Alcoholics Anonymous). These programs are essentially identical in their approaches to the treatment of addiction. They differ primarily in the drug of choice that is the focus of the group's discussions. For example, Cocaine Anonymous centers their discussions on difficulties with cocaine; Heroin Anonymous focuses on heroin, and Alcoholics Anonymous focuses on alcohol. All 12-step programs were spawned from AA.

Alcoholism is typically understood as a chronic disorder that is necessarily socially embedded (George & Tucker, 1996; Valliant & Hiller-Sturmhöfel, 1996). The literature on AA effectiveness emphasizes AA's comprehensiveness and its fit with the social nature of alcoholism (Vailliant & Hiller-Sturmhöfel, 1996). AA provides a continuously available, supportive, social system of abstainers (Humphreys, Moos & Cohen, 1997). Claims about AA's effectiveness are common, but empirical research dealing with 12-step program effectiveness is still in its infancy (Allen, 2000). There is a scarcity of high quality, empirical studies that directly investigate how 12-step programs treat addiction.

The dearth of quality 12-step program research has recently been brought into greater focus (e.g., Tonigan, Toscova & Miller, 1996) perhaps because of its

prevalence as a remedial path. Though empirical justification is limited, in practice referring addicts to 12-step programs for treatment is almost automatic. Regular attendance of 12-step meetings is the foundation of essentially all contemporary remedial efforts (Boscarino, 1980; Gilbert, 1991; McCrady and Miller, 1993).

The research that exists suggests that 12-step programs are associated with positive outcomes or recovery. AA participation is typically shown to be associated with reduced drinking and with desirable social outcomes such as improved relationships and psychological and physical health (Valliant, 1983; Valliant & Hiller-Sturmhöfel, 1996; Humphreys, Moos, & Cohen, 1997; Timko, Moos, Finney, & Lesar, 2000). The following review briefly covers findings related to 12-step program participation and issues of AA research quality.

12-Step Participation. Participation in AA has been operationalized as a subset of two multidimensional constructs: (1) involvement and (2) degree of affiliation. Involvement ranges from the assessment of mere association with AA (e.g., AA exposure measured nominally—yes/no) to more discriminating variables including frequency of meeting attendance, having a home group, having or being a sponsor, leading AA meetings, steps completed, and speaking at meetings. Degree of AA affiliation has also been defined in a number of ways: (1) importance of AA in one's sobriety efforts, (2) attitudes and beliefs regarding AA features and practices, (3) percentage of an AA affiliate's friends who are active in AA, and (4) the degree to which an affiliate's life centers on AA. Degree of affiliation is distinct from involvement in its focus on measuring the extent to

which AA affiliates identify with and experience as salient AA and its various features.

Criterion variables that have been of primary interest in research include drinking status (abstaining, moderating, and abusing); social/family improvement; duration of sobriety (short, medium, and long-term); physical condition; and psychological health. Empirical studies demonstrating associations between AA participation and criterion variables are reviewed.

12-Step Involvement. Alcoholics Anonymous involvement is typically defined as either AA exposure alone or frequency of meeting attendance. Most commonly greater frequency of meeting attendance is shown to be associated with both the maintenance and acquisition of abstinence (e.g., Timko, Moos, Finney, & Lesar, 2000; Humphreys, Moos and Cohen, 1997; Cross, Morgan, Mooney, Martin & Rafter, 1990; Ellis & Mcclure, 1992). Humphreys, Moos and Cohen (1997), in a longitudinal study involving 395 alcoholics recruited at detox centers and from referral services, revealed a positive association between frequency of meeting attendance in the first 3 years and remission, lower depression and higher quality relationships with friends and with one's spouse or partner at the 8 year follow up. Timko et al. (2000) found that AA association at first-year follow up was associated with abstinence and other positive outcomes at eight-year follow up. Carroll (1993) measured the effects of AA step work and meeting frequency on various outcomes. Results indicated that practice of AA's 11th step and greater meeting frequency were positively associated with duration of sobriety and one's expressed degree of purpose in life. Cross et al. (1990)

examined a number of AA involvement variables (e.g., meeting attendance, being a sponsor and having a home group), however, only meeting attendance was found to predict sobriety. In a longitudinal, self-report study involving 75 alcohol dependent patients, Ellis and Mcclure (1992) found that abstinence was associated with greater frequency of AA attendance at 6 months and at 1 year.

12-Step Affiliation. In addition to 12-step involvement, degree of 12-step affiliation has been assessed, though less thoroughly. In a longitudinal study (N=183) Gilbert (1991) developed a questionnaire that measured level of agreement with each of AA's first three steps. Relationships between level of agreement and outcomes were assessed. Findings showed that agreement with AA's first step was positively associated with duration of sobriety. Further, when first step agreement was dichotomized into total and partial agreement accuracy predicting abstinence improved over a 12 month follow up period (1991). Morgenstern et al. (1996) followed 54 male alcoholics from hospital intake to 1 month following release using self-report and clinical ratings of progress. Findings indicate that greater commitment to AA and belief in a Higher Power were associated with reduced severity of relapse among those that relapsed. Valliant (1996) found that forming a "substitute dependency" upon AA was associated with stable abstinence in 2/3 of stably absent alcoholics.

Degree of affiliation may be more strongly related to positive outcomes during the early years of sobriety. Caldwell and Cutter (1998) followed up on 53 alcoholics after structured treatment when drop out and recidivism is very high. Relapse was associated with difficulty with less enthusiasm with the higher

power concept. Degree of affiliation with AA is as yet an underinvestigated predictor of outcomes for AA affiliates. Table 2 summarizes the 12-step experience variables that research suggests are affected by these AA experiences.

12-Step Research Quality. Study quality has recently become a subject of greater contention within AA literature with some authors expressing concern over the lack of experimental rigor (e.g., Tonigan, Toscova & Miller, 1996). It has also been suggested that this low level of quality reflects both inherent difficulties in AA research and the questionable desirability of methods like random selection, random assignment of subjects to treatment conditions and control groups when applied this population (Tonigan, Toscova & Miller, 1996; McCrady & Miller, 1993; McCrady). However, some practices seem to indicate immature methods. For example, the use of instruments with questionable or unknown psychometric properties is quite common.

Table 2: 12-Step Involvement and Affiliation and Related Variables.

Predictors		**Criteria**
Involvement	*Affiliation*	
• AA exposure • Meeting frequency • Home group • Having sponsor • Being sponsor • Leading AA meetings • Step work • Speaking at meetings	• Important of AA in sobriety efforts • Attitudes and beliefs about AA features and practices • Percentage of friends who are active in AA • Degree to which life centers on AA	• Drinking status • Social/family improvement • Duration of sobriety • Physical condition • Psychological health

A meta-analysis of 74 studies concerned with AA's effectiveness found that study quality moderated results (Tonigan, Toscova & Miller, 1996). AA participation and positive outcomes are most strongly related in higher quality studies and studies involving large outpatient samples (1996). Valliant and Hiller-Sturmhöfel (1996) reported on a study exemplary of greater quality in AA research that, ironically, did not originally center on AA effectiveness. This prospective, 50 year study employed 2 outpatient samples (n=268 and 464) that together reflected socioeconomic extremes. Multiple methods of data collection were used including interviews by psychiatrists and social workers, physical exams and psychological tests including intelligence. Findings indicated that AA was comparable with formal treatment in helping alcoholics achieve abstinence and had far more impact than formal treatment on long-term outcomes. Other findings supported AA's insistence on abstinence as the only legitimate goal of recovery (1996).

The three studies comprising this paper test four hypotheses. These hypotheses are summarized below.

- Hypothesis 1: There are four dimensions of addictive experience.
- Hypothesis 2: Addicts' addiction scores will indicate greater disturbance than non-addicts' addiction scores.
- Hypothesis 3: Greater involvement in the 12-steps will be related to improved experience.

- Hypothesis 4: Greater degree of affiliation with the 12-steps will be related to improved experience.

2. STUDY 1

Study one is a scale development study. The primary goal of study one is to create an addictive experience survey from Hopson's (1993) four-factor model that can be used in this paper's main study. To accomplish this goal study one will (1) translate Hopson's (1993) clinical observations into a survey and (2) explore Hopson's four-factor model. In the remainder of this introduction, I will present a model for the creation of the addictive experience scale and then state this study's hypothesis.

Model for the DAES' Development

Years of addiction research have offered neither a coherent explanation of nor "more than a glimpse" into the nature or addiction (Hopson, 1993, p. 481). The failure to adequately comprehend addiction despite much research combined with AA's rapid proliferation and focus on direct experience may suggest a change in our method of questioning. This paper is philosophically grounded in the tradition of Husserl in his call for a return to 'the things themselves' (Husserl, 1970). The development of the DAES has been sensitive to Husserl's admonition by faithfully attending to the first-person experience of addicts themselves in the development of the DAES.

Phenomenological Interviews and the Addictive Experience Dimensions. Specifically, the addictive experience dimensions were developed using themes that emerged from Hopson's (1993) phenomenological interviews with addicts. Hopson (1993) asked addicts to tell him everything they could about a single experience of using drugs or alcohol. Critical incidents illustrating experiential

themes were used to write items for each of the addictive experience dimensions.

Addictive Experience and the Recovery Process. It is suggested that addictive pathology has a significant experiential component. The addictive experience dimensions are assumed to be universal. It seems reasonable to expect that positive changes in these addictive experience dimensions parallels indices of recovery like sustained abstinence. Positive changes in each addictive experience dimension are defined as movement from disturbed experience to healthy experience. Study one hypothesizes that four dimensions underlie the addictive experience items. Table 3 displays the poles of each dimension.

Study 1 Method

Study 1 Research Design. In twelve clinical interviews addicts were asked to talk about their lives when their addictions were at their worst. Addictive experience themes were developed from transcripts of these interviews. Transcript content was sorted according to theme and critical incidents were developed using

Table 3: Pole Descriptions for Addictive Experience Dimensions.

DIMENSION	DISTURBED EXPERIENCE	HEALTHY EXPERIENCE
Temporal Flow	Frozen or trapped in time, Time is not moving	Time is flowing naturally.
Language Adequacy	Language is inadequate to expression of emotions	Language is sufficient to the task of emotional expression
Connectedness	Disconnectedness and Alienation	Connectedness and belonging
Agency	Emotional life is overwhelming	Emotional life is manageable

phenomenological techniques. Items were derived from these critical incidents and compiled in questionnaire format. College students completed addictive experience questionnaires comprised of four dimensions: perceived (1) temporal flow, (2) language adequacy, (3) connectedness, and (4) agency. Data was collected over a period of 3 weeks.

Study 1 Participants. Students from introductory psychology classes at The University of Tennessee at Knoxville made up the sample. To solicit undergraduate participation a notice was posted offering extra credit for participation. A total of 247 undergraduates picked up, completed and returned the questionnaire. The majority of the sample was female (66%; n = 163) and the average age was 19.5 years (SD = 2.3 years).

Study 1 Procedures. Addictive experience items were compiled into questionnaire form and made available to undergraduates. Participants picked up a copy of the questionnaire from a centralized location, completed it on their own time and then dropped the completed questionnaire off at the same location. A coversheet explained participation guidelines and was used to obtain informed consent. Appendix A presents the survey used in study one.

Study 1 Measures. Fifty-nine items comprised the initial addictive experience measures. Items were taken from experience transcripts with addicts. All items were responded to using a 5-point Likert-type format. Participants' choices were from left to right: *Almost never*, *Rarely*, *Sometimes*, *Often*, and *Almost Always*. (See Appendix 2).

Study 1 Variables. For each variable there were an initial number of items from which a subset was retained based on their psychometric properties. Scores on each dimension were calculated by summing the items that comprised the dimension.

Temporal Flow. One of four experience dimensions this variable centers on the experience of time as flowing or moving versus still or static. Hopson (1993) argued that the typical sense of temporality and flux is interrupted (p. 489). van Kaam (1965) described this as each moment taking on the weight of eternity. A sample item stated, "I feel trapped." Ten items assessed this dimension. Four items were culled. The potential range was from 6 to 30. The average score was 14.8 and the standard deviation was +/-3.9.

Language Adequacy. This variable centers on the experience of words as adequate to the expression of affect. Addicts tend to experience intense affect and to be unable to render those intense experiences symbolically. Hopson (1993) described this condition by saying, "The magnitude of the feeling state of the addicted person cannot be captured in words" (p. 487). This failure of language implies the inability to modulate affect or to develop adequate self-regulatory mechanisms (Sullivan, 1953; Lacan, 1968). Seven items assessed this dimension. Two items were culled. The potential range was from 7 to 35. The average score was 13.6 and the standard deviation was +/-4.3.

Connectedness. Addicts experience themselves as cut off or alienated from themselves and the world of others. Intra/interpersonal relationships are disrupted. Sixteen items comprised this dimension. Ten items

made the cut resulting in potential range from 10 to 50. The average score was 22.5 and the standard deviation was +/-6.7.

Agency. This dimensions concerns the disturbance of the addict's capacity to care for the self. An addict's experience is characterized by the inability to stop engaging in self-destructive behaviors. Stated another way, addicts are not likely to experience themselves as adequate self-parents. The transcript analysis suggested that addicts do things without experiencing themselves as having chosen to do them. Twenty-six items made up this dimension. Ten were retained. The average score was 22.1 and the standard deviation was +/-6.7.

Study 1 Results

Item analysis data were derived using SPSS. Decisions to discard items were based on corrected item-total correlations, alphas if item deleted, and item content. Thirty-seven of the original 63 items were kept. Table 4 presents the four factors, the items and item analysis data.

Correlational data revealed that the direction of relationships was not as anticipated for some items. Items written to have opposite meanings shared strong positive instead of strong negative correlations. For example, item 35 "Feelings are difficult for me to communicate," and item 57, "I express my emotions verbally quite easily," share a strong positive correlation ($r = .57$; $p < .001$). This pattern was consistent for all items written to be reverse-coded. Table 5 presents the correlations for all items that were retained.

Table 4: Means (± SDs) and reliability estimates of the addictive experience scales.

	Items	Alpha Initial / Final	Alpha if Item deleted	Scale Mean +/- SD
Temporal Flow	Q46: I get really tied up in intense feelings.	.71 / **.77**	.75	14.8+/-3.9
Temporal Flow	Q52: I have strong feelings that seem like they will never go away.		.74	
Temporal Flow	Q56: I find it difficult to relax.		.77	
Temporal Flow	Q75: I think I am wasting time		.77	
Temporal Flow	Q79: I feel trapped		.71	
Temporal Flow	Q90: I think that things will never get better.		.71	
*Temporal Flow	Q30: Time seems to go by without my knowing it.			
*Temporal Flow	Q38: Things seem to be continuously changing.			
*Temporal Flow	Q48: It seems like nothing ever changes.			
*Temporal Flow	Q81: I think that the way I am feeling will last forever.			
Language Adequacy	Q35: Feelings are difficult for me to communicate.	.26 / **.89**	.87	13.6+/-4.3
Language Adequacy	Q57: I express my emotions verbally quite easily.		.86	
Language Adequacy	Q63: Communicating my emotions is difficult for me.		.84	
Language Adequacy	Q72: I find it extremely difficult to talk about how I feel.		.85	
Language Adequacy	Q78: I talk about my deepest feelings.		.89	
*Language Adequacy	Q40: I communicate with others easily.			
*Language Adequacy	Q83: Words seem to fall short of how I really feel.			
Connectedness	Q43: It seems like no one understands me.	.57 / **.90**	.90	22.5+/-6.7
Connectedness	Q50: I don't know what's going on with my emotions.		.89	
Connectedness	Q62: My emotions are easy for me to understand.		.89	
Connectedness	Q65: I feel that I really know who I am.		.89	
Connectedness	Q69: I get confused about what emotion I'm feeling.		.89	
Connectedness	Q76: I have feelings I can't quite identify.		.89	
Connectedness	Q77: I don't feel loved by people		.88	
Connectedness	Q82: I have an intense sense of loneliness.		.88	
Connectedness	Q85: I feel alone in the world		.88	
Connectedness	Q88: I feel shut off from others.		.89	
*Connectedness	Q36: I have difficulty trusting people.			
*Connectedness	Q49: My relationships feel very intimate.			
*Connectedness	Q61: Getting too intimate with people makes me feel uneasy.			
*Connectedness	Q64: Communicating my emotions is difficult for me.			
*Connectedness	Q87: I can't identify what I am feeling.			
*Connectedness	Q91: It's easy for me to be around people.			
Agency	Q37: I am satisfied with my accomplishments.	.75 / **.90**	.90	22.1+/-6.7
Agency	Q54: I feel useless to myself and others.		.89	
Agency	Q58: I feel out of control.		.89	
Agency	Q60: I feel bad and I don't know why.		.89	
Agency	Q66: I worry that my feelings will get out of control.		.89	
Agency	Q68: Other people seem to manage their emotions more easily than I do.		.89	
Agency	Q74: My life feels unbearable.		.89	
Agency	Q80: The demands of life seem almost too great.		.89	
Agency	Q84: I feel in control of things in my life.		.89	
Agency	Q92: I feel good about myself.		.89	
*Agency	Q39: I can clearly identify what emotion I am feeling.			
*Agency	Q41: I get frightened because my feelings are too strong.			
*Agency	Q42: I feel like I should work harder than I do.			
*Agency	Q44: I make choices easily.			
*Agency	Q45: I feel great.			
*Agency	Q47: I am comfortable being myself.			
*Agency	Q51: I feel overwhelmed.			
*Agency	Q53: I want more control over my feelings.			
*Agency	Q55: I regret sharing my feelings with people.			
*Agency	Q59: I think that I am too passive.			
*Agency	Q67: I wish I were someone else.			
*Agency	Q70: I feel like I am doing things that I didn't choose to do.			
*Agency	Q71: I enjoy the time I spend by myself.			
*Agency	Q73: When I am upset it is easy for me to calm myself.			
*Agency	Q86: I feel uncomfortable.			
*Agency	Q89: My feelings scare me.			

N=227

* Deleted Item

Table 5: Legend.

Time	Q46: I get really tied up in intense feelings. Q52: I have strong feelings that seem like they will never go away. Q56: I find it difficult to relax. Q75: I think I am wasting time	Q79: I feel trapped Q90: I think that things will never get better.
Language Adequacy	Q35: Feelings are difficult for me to communicate. Q57: I express my emotions verbally quite easily. Q63: Communicating my emotions is difficult for me.	Q72: I find it extremely difficult to talk about how I feel. Q78: I talk about my deepest feelings.
Connectedness	Q43: It seems like no one understands me. Q50: I don't know what's going on with my emotions. Q62: My emotions are easy for me to understand. Q65: I feel that I really know who I am. Q69: I get confused about what emotion I'm feeling.	Q76: I have feelings I can't quite identify. Q77: I don't feel loved by people Q82: I have an intense sense of loneliness. Q85: I feel alone in the world Q88: I feel shut off from others.
Agency	Q37: I am satisfied with my accomplishments. Q54: I feel useless to myself and others. Q58: I feel out of control. Q60: I feel bad and I don't know why. Q66: I worry that my feelings will get out of control.	Q68: Other people seem to manage their emotions more easily than I do. Q74: My life feels unbearable. Q80: The demands of life seem almost too great. Q84: I feel in control of things in my life. Q92: I feel good about myself.

Table 5: Addictive Experience Item Correlations.

	Q46	Q52	Q56	Q75	Q79	Q90	Q35	Q57	Q63	Q72	Q78	Q50	Q62	Q65	Q69	Q76	Q77	Q43	Q82	Q85	Q88	Q37	Q54	Q80	Q84	Q92	Q58	Q60	Q66	Q68
Q52	.514**																													
Q56	.261**	.252**																												
Q75	.173**	.274**	.178**																											
Q79	.379**	.397**	.389**	.449**																										
Q90	.395**	.408**	.345**	.425**	.562**																									
Q35	0.003	0.077	.180**	.225**	.231**	.253**																								
Q57	-0.053	0.096	.227**	.145*	.216**	.261**	.575**																							
Q63	0.03	.201**	.281**	.225**	.295**	.290**	.651**	.718**																						
Q72	-0.001	.134*	.208**	.175**	.252**	.293**	.645**	.684**	.758**																					
Q78	-.232**	-0.092	.160*	0.11	0.021	0.072	.457**	.480**	.532**	.564**																				
Q50	.321**	.487**	.372**	.397**	.455**	.492**	.348**	.368**	.445**	.375**	.222**																			
Q62	.262**	.356**	.293**	.273**	.385**	.449**	.286**	.410**	.450**	.335**	.256**	.562**																		
Q65	.253**	.325**	.458**	.394**	.483**	.502**	.296**	.391**	.422**	.371**	.290**	.546**	.525**																	
Q69	.348**	.433**	.325**	.291**	.404**	.442**	.220**	.260**	.361**	.306**	.126*	.601**	.562**	.473**																
Q76	.332**	.416**	.241**	.401**	.480**	.472**	.242**	.260**	.342**	.276**	.142*	.564**	.555**	.445**	.621**															
Q77	.207**	.341**	.296**	.485**	.569**	.540**	.256**	.247**	.356**	.347**	.208**	.391**	.328**	.461**	.388**	.369**														
Q43	.293**	.313**	.358**	.291**	.518**	.454**	.295**	.247**	.331**	.333**	.265**	.366**	.307**	.340**	.298**	.246**	.477**													
Q82	.326**	.422**	.343**	.522**	.592**	.624**	.307**	.226**	.339**	.277**	.174**	.521**	.428**	.493**	.456**	.433**	.610**	.409**												
Q85	.296**	.341**	.341**	.527**	.607**	.635**	.292**	.259**	.356**	.297**	.185**	.488**	.434**	.522**	.437**	.397**	.668**	.467**	.765**											
Q88	.265**	.396**	.333**	.471**	.575**	.575**	.293**	.302**	.432**	.328**	.246**	.440**	.412**	.478**	.437**	.439**	.601**	.412**	.697**	.688**										
Q37	.136*	.139*	.327**	.245**	.367**	.298**	.242**	.247**	.335**	.321**	.198**	.295**	.347**	.413**	.291**	.236**	.289**	.279**	.309**	.322**	.297**									
Q54	.345**	.384**	.426**	.407**	.504**	.534**	.289**	.326**	.351**	.292**	0.08	.394**	.346**	.500**	.413**	.335**	.536**	.401**	.554**	.612**	.520**	.428**								
Q80	.368**	.485**	.328**	.401**	.617**	.456**	.189**	.223**	.358**	.321**	0.113	.433**	.361**	.368**	.442**	.452**	.426**	.435**	.500**	.466**	.529**	.388**	.443**							
Q84	.378**	.369**	.422**	.371**	.472**	.478**	.276**	.262**	.377**	.307**	.147*	.447**	.523**	.603**	.466**	.447**	.441**	.372**	.529**	.562**	.453**	.380**	.495**	.486**						
Q92	.339**	.321**	.384**	.373**	.511**	.611**	.291**	.317**	.406**	.295**	.184**	.461**	.474**	.586**	.452**	.418**	.536**	.378**	.600**	.609**	.523**	.462**	.573**	.443**	.563**					
Q58	.422**	.405**	.479**	.417**	.578**	.523**	.189**	.126*	.238**	.242**	0.026	.490**	.374**	.442**	.524**	.491**	.504**	.455**	.567**	.534**	.509**	.380**	.591**	.548**	.508**	.500**				
Q60	.355**	.410**	.412**	.441**	.517**	.561**	.136*	.208**	.309**	.245**	0.059	.543**	.451**	.495**	.575**	.476**	.515**	.380**	.580**	.537**	.509**	.399**	.571**	.545**	.509**	.563**	.613**			
Q66	.509**	.501**	.368**	.369**	.496**	.511**	.186**	.133*	.203**	.219**	0.027	.433**	.374**	.351**	.475**	.535**	.450**	.428**	.498**	.473**	.470**	.218**	.466**	.481**	.464**	.419**	.648**	.478**		
Q68	.362**	.433**	.308**	.274**	.386**	.455**	.240**	.230**	.321**	.290**	0.091	.418**	.451**	.395**	.502**	.448**	.408**	.325**	.444**	.362**	.363**	.261**	.433**	.426**	.511**	.436**	.506**	.488**	.526**	
Q74	.417**	.418**	.393**	.430**	.538**	.602**	.154*	.166**	.212**	.178**	0.026	.426**	.403**	.420**	.414**	.401**	.530**	.430**	.584**	.601**	.502**	.325**	.486**	.492**	.498**	.495**	.612**	.532**	.564**	.409**

To test the hypothesis that four factors underlie the addictive experience survey Principal Components Analysis (PCA) using Varimax rotation was conducted using SPSS on the items remained. Principal Components Analysis revealed that the 51.9% of the variance in item responding was accounted for by 2 factors. The four-factor hypothesis was not supported.

Study 1 Discussion

This study's principal goal was to develop the addictive experience criteria for use in the main study. Principal Components Analysis tested the four-factor model proposed in previous research. This analysis did not support the four-factor model yielding a two-factor solution.

Post-hoc investigations suggested three causes: (1) the direction of questionnaire items, (2) the immaturity of participants and (3) the response format. First, the items themselves were stated in terms of disturbed experiences. For example, "I find it difficult to relax," rather than, "It is easy for me to relax." This could account for general response tendencies across factors, thus minimizing already subtle distinctions in meaning. Second, because the differences in meaning between dimensions are subtle they may have been difficult for undergraduates to discern given their age and educational level. Third, and perhaps most important, the Likert-type response format required participants to judge how often each statement was true for them. This format produced some unexpected results regarding reverse coded items. For example I anticipated that items such as "Feelings are difficult for me to communicate," and, "I express my emotions verbally quite easily," would correlate negatively.

Instead these items shared a strong positive correlation. This pattern was found in every other instance where a negative correlation was expected. Upon reflection this finding does not seem at all improbable. It is fair to say that verbal expression of emotions is often difficult and often easy. It also seems reasonable that this pattern of responding may be a function of personal investment in or salience of these dimensions of experience rather than the degree to which they are problematic. This unexpected result is interesting and perhaps worthy of investigation in its own right.

Study 2 addressed this study's difficulties with item content and response format, rewriting some items to make the subtle meanings between dimensions more distinctive. All items were presented in both problematic and non-problematic directions. The response format revision was also designed so that disturbance could be detected rather than investment in addictive experience dimensions.

3. STUDY 2

Study two continues the scale development begun in study one and shares with study one the primary goal of creating addictive experience scales that can be used in this dissertation's main study. To accomplish this goal study two modified the response format and rewrote the items where appropriate. Study two hypothesizes that there are 4 dimensions of addictive experience.

Study 2 Method

Study 2 Research Design. Addictive experience data collected in study one was used to guide the refinement of the addictive experience survey's item content and response format. The revised questionnaire was distributed to 12-step program members and college students using a data collection Web site (See Appendix 3). Data from college students were collected over a period of about 3 weeks. Data from 12-step program members and interested others were collected over a period of about 6 months.

Study 2 Participants. Students from psychology classes at The University of Tennessee at Knoxville (n=228), 12-step members (n=454) and interested others (n=69) comprised the sample (n=751). The majority of the undergraduate sample was female (72.8%; n=166) and the average age was 19.1 years (SD = 2.4 years). Twelve-step members were solicited through 12-step communities on the Internet via postings and direct email solicitations. The vast majority of respondents reported memberships in Alcoholics Anonymous (n = 292) or Narcotics Anonymous (n=142). The majority of the sample was white (n=417), had finished some college (n=222), made between $25 and $44,999 and worked

full-time (n=294). The participation of interested others were solicited through Internet advertising. Demographic characteristics of respondents are presented in Table 6.

Study 2 Procedures. Unlike the data collection methods used in study 1, study 2 gathered data using an Internet application written and designed specifically for the purpose of gathering data for this paper. In order to collect data using a web site one must have the web site, a place for the

Table 6: Demographic Characteristics of Study 2 Participants.

VARIABLE	VALUES	FREQUENCIES N=751	PERCENTAGES
Marital Status	Married	223	29.7
	Single	371	49.4
	Divorced	145	19.3
	Widowed	8	1.1
Sex	Male	296	39.4
	Female	450	59.9
Race	Black	25	3.3
	White	674	89.7
	Asian	14	1.9
	Other	21	2.8
Income	$0 - $14,000	303	40.3
	$15,000 - $24,999	114	15.2
	$25,000 - $44,999	177	23.6
	$45,000 - $64,999	94	12.5
	$65,000 or more	55	7.3
Education	Some High School	21	2.8
	High School	86	11.5
	Some College	467	62.2
	Associates Degree	32	4.3
	Bachelors Degree	93	12.4
	Masters Degree	38	5.1
	Doctoral Degree	10	1.3
Employment Status	Full-time	342	45.5
	Part-time	176	23.4
	Unemployed	196	26.1
	Retired	32	4.3
Age	Range	Min = 13	Max = 67
	Mean	33.86	
	Std. Dev.	13.16	

site to reside, methods for exposing the site to people, and incentives for people to come to the site.

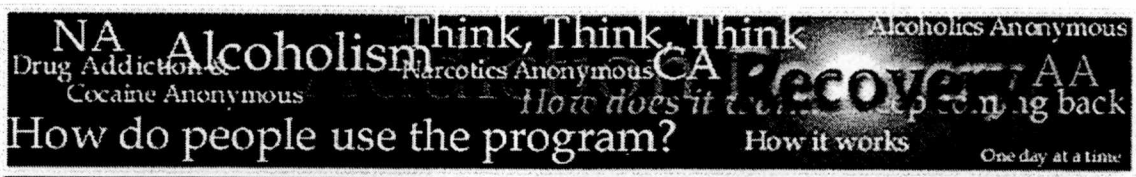
Overview. To illustrate the process from invitation to SPSS analysis by way of example, I sent an email to a 12-step member asking him or her to click on the link in the body of the email. The user clicked on the link opening a browser window and bringing up the application home page. The user took the survey and viewed their feedback. Upon submitting the last page of the survey the respondent's data was written to an XML file on the hosting service's server. I used an ftp client to download the user's XML data file to my local computer adding it to the existing collection of XML files. I then ran a script across the length of the collection extracting all the users data and creating an SPSS consumable text file.

The Data Collection Web Site. The application was created using a fairly common blend of technologies. To create the presentation layer, what a user actually sees, Hypertext Markup Language (HTML), Active Server Pages (ASP) and JavaScript were employed. A web page is a specific example of a presentation layer. In this case the web pages were dynamically generated using ASP. To promote data integrity client-side validation was performed using JavaScript. Simply stated, I used JavaScript to ensure that the people that took the survey answered all the questions. If the respondent requested the next page in the survey without first finishing the one he or she was presently on a message would pop up requesting that the user answer "Please answer the following question(s): 11 12 15." Other messages were also possible.

Extensible Markup Language (XML) provided the storage mechanism for all the respondents' answers to the survey (i.e., the data persistence layer). XML is a convenient and easy way to persist data. Each respondent generated an XML file that was saved on the server's file system. All the code related to this application was written using Microsoft's Developer Studio environment.

Getting to the Data Collection Web Site. When a user types a URL into their Internet browser's location space and hits return the URL is looked up and if found the request is routed to the appropriate server. That means that in for this application to be visible I needed a Unique Resource Location or a URL and be associated with a web server. To accomplish this I purchased the domain name www.sobersteps.org and some space from a hosting service. So, participation required a computer that was connected to the Internet and an Internet browser. Typing the URL into the browser's location space and pressing return took participants to the data collection Web site where they took the questionnaire.

Advertising Methods. To make it possible for people to take the survey three methods were employed including posting invitations on 12-step newsgroups and bulletin boards, sending email invitations directly to 12-step members and enrollment in a link exchange, advertising program. All advertising methods presented the potential participant with a hyperlink to the data collection Web site: http://www.sobersteps.org. Figure 2 depicts the home page of the data collection Web site. The three advertising methods are discussed here briefly.



If you're interested in addiction this Web site's for you.	
What is this site about?	This is an experimental Web site designed primarily to give feedback to alcohol and drug addicts. If you continue you will be asked questions about your perceptions, feelings, and 12-step program usage (if you're in a program). You will then receive feedback comparing your responses to addicts who have taken the survey.
How long will this take?	This survey consists of about 90 items (less depending on your answers) and takes about 15 minutes to finish.
Why did I build this site?	To collect data for my dissertation and to allow addicts to compare their perceptions, feelings and program experiences with other addicts. You do not have to be in a 12-step program to use this site and to get experience feedback, however.

Please choose the sentence that describes you accurately?	
You are in a 12-step program, and you have a sponsor.	Continue→
You are in a 12-step program, but do NOT have a sponsor.	Continue→
You are NOT in a 12-step program.	Continue→

This site is only affiliated with 12-step programs through my interest in them. It is intended to generate data for my academic research and enjoyment and thought for you. You will never be contacted by anyone as a result of your having been on this site. You participate anonymously. Thanks for your time. Your comments are welcome.

Figure 2: Data Collection Web Site Home Page.

Both newsgroups and bulletin boards are forums for electronic discussions or communities that center on particular interests. Internet sites were chosen if they explicitly catered to members of 12-step programs. Selected newsgroups consisted of the following: alt.recovery.aa, alt.recovery.na and alt.recovery. Other online communities were located at http://clubs.yahoo.com/ and included AlcoholicsAnonymous, A New Beginning, Friends of Bill W., Narcotics Anonymous, and TwelveStep SoulFood 4 the Spirit.

Emails requesting research participation were sent out to 12-step members identified through newsgroups and bulletin boards. E-mails were sent

one at a time and used the name of the e-mail recipient whenever available (e.g., Dear Sue). This is an important detail as initial mass emails generated responses suggesting that the candidate participants found mass mailings offensive. Individualized email content was integral for generating significant traffic.

Link exchange programs are methods commonly employed on the Internet to generate traffic for a Web site. There are many ways that links can be exchanged. In the present case I designed a banner for the data collection Web site and uploaded on the link exchange Web site http://www.linkexchange.com. This Web site manages banner exchanges between advertising Web sites. Basically, if you will allow other advertisers to place a banner on your Web site then they will reciprocate. Figure 3 is the banner that was used in the link exchange program.
Clicking on this banner brought the data collection Website's home page up in the participants Internet browser.

Incentives to Participate. The challenge once the application was built was generating site traffic. To make it interesting for people in general and for members of 12-step programs in particular to take the survey I created feedback for the users. This feedback dynamically compared the individual's responses to other people who had also taken the survey (See Appendix 4). For

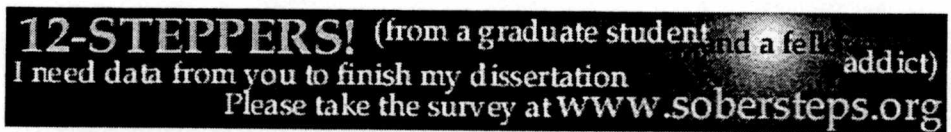


Figure 3: Link Exchange Program Banner

example, the respondent could see how his or her addictive dimension scores compared to the average scores already derived from the group. It is difficult to estimate the impact of this incentive on traffic generation. I suspect that it may have had less to do with getting people to come to the site and more to do with their resilience. That is, I suspect that people, because this feedback was offered at the end of the survey, were more likely to take the survey to completion.

Study 2 Measures. The addictive experience dimensions were revised based on the data from Study 1. Items were written to anchor the opposing poles of each dimension as illustrated here in Table 7. The survey is reproduced in its entirety in Appendix 3.

Thirty items comprised the initial addictive experience measures. Twenty items were retained—five per dimension. Variable scores were calculated for each respondent by summing items within dimensions. For each dimension the minimum score was 5 and the maximum 25.

Study 2 Variables. Each of the addictive experience variables is described in greater detail in Study one.

Temporal Flow. This dimension centers on the experience of time as flowing versus static. A sample item asked the participant to locate

Table 7: Response Format Illustration for Addictive Experience Scales.

	1	2	3	4	5	
Communicating my emotions is difficult.	○	○	○	○	○	Communicating my emotions is easy.

him/herself between "Often time seems to pass too slowly for me," and "Usually time seems to pass naturally". The average score was 20.6 and the standard deviation was +/-4.3. Coefficient alpha for the scale is .89.

Language Adequacy. This variable centers on the experience of words as adequate to the expression of affect. The poles of a sample item were "I can usually find the right words to talk about how I feel", and "Sometimes there are no words to describe how I feel". The average score was 18.3 and the standard deviation was +/-4.9. Higher scores on this dimension indicate greater language adequacy. Again, higher scores are healthier scores.

Connectedness. This dimension centers on the disruption of Intra/interpersonal relationships. A sample item stated, "I feel alone in the world", and "I do not feel alone in the world". The average score was 20.1 and the standard deviation was +/-4.7. Higher scores on the connectedness dimension indicated more perceived connection to the self and the world of others.

Agency. This dimensions concerns the disturbance of the addict's capacity for to care for the self. A sample item stated, "I rarely feel in control of things in my life", and "I always feel in control of things in my life". The average score was 17.9 and the standard deviation was +/-4.5.

Study 2 Results

Principle Components Analysis (PCA) using Varimax rotation was performed using SPSS. Items were retained on the basis of their factor characteristics. Two criteria were used in the decision to retain items. The

primary criterion is that the item load on the expected factor. A secondary criterion of independence was also employed. That is, items were favored if they were not double or triple loaded items. The resultant set consisted of twenty items, 5 per scale. A second PCA using Varimax rotation run on the resultant twenty items extracted four factors accounting for 67.49% of the variance in item responses. Table 8 presents the initial PCA rotated factor matrix. Item analysis was then performed on the remaining items using SPSS. Table 9 presents the four factors, the items and item analysis data. Table 10 presents item correlations.

Study 2 Discussion

The principal goal of study two was to create a survey that could be (1) used to evaluate the adequacy of the four-factor model of addictive experience and (2) used in this paper's main study. Study two revised the addictive experience questionnaire based on the results of study one. Study two hypothesized based on Hopson's (1993) clinical observations that there were four dimensions of addictive experience. This hypothesis was supported. The post hoc finding of study one regarding the inadequacy of the survey's response format appears to have been on the mark.

Limitations. There are at least two limitations to the generalizability of the current findings. First the number of participations in the original clinical research was small. Second, the analysis used to evaluate the four-factor model was exploratory rather than confirmatory. Because this study sought to

Table 8: Initial PCA Rotated Factor Matrix for the Dimensions of Addictive Experiences.

Left Item Text and Item numbers	Agency	Temporal Flow	Language Adequacy	Connected-ness
Q4: Often time just does not seem to be passing.	.317	.712	.145	.130
Q16: Often time passes more slowly for me than other people.	.283	.741	.176	.172
Q22: I often feel like time has stopped.	.209	.774	.173	.177
Q33: Usually time seems to flow naturally.	.321	.660	.241	.134
Q35: Often time seems to pass too slowly for me.	.265	.783	.197	.184
Q1: I can usually find the right words to talk about how I feel.	.255	.109	.694	.632
Q12: I communicate emotions clearly.	.198	.038	.712	.105
Q23: I cannot find the words to fit my emotions.	.215	.285	.765	.216
Q30: Communicating my emotions is difficult.	.226	.209	.739	.261
Q32: I cannot seem to find the words to talk about how I feel.	.261	.286	.768	.262
Q6: I feel alone in the world.	.488	.345	.115	.486
Q8: I do not feel loved.	.442	.310	.102	.605
Q14: I never seem to get really close to anyone.	.191	.089	.276	.776
Q17: I feel shut off from others.	.415	.350	.255	.583
Q18: I do not have any truly close friends.	.158	.179	.197	.779
Q9: My life feels like it is coming apart.	.653	.365	.202	.250
Q20: I often feel great.	.721	.085	.261	.092
Q24: I often experience a sense of dread.	.678	.249	.201	.108
Q26: I rarely feel in control of things in my life.	.627	.270	.224	.177
Q29: My emotional life is comfortable.	.685	.146	.275	.153
*Q15: I often feel disconnected from myself.	.530	.363	.315	.242
*Q21: I often feel like I am not being myself.	.341	.378	.408	.274
*Q25: I rarely feel hollow inside.	.642	.166	.273	.170
*Q27: I feel really empty inside.	.594	.412	.293	.339
*Q28: I'm out of touch with my feelings.	.279	.402	.523	.274
*Q2: I get dull suicidal feelings.	.544	.310	.078	.220
*Q5: I do not know what to do about the problems in my life.	.496	.381	.238	.172
*Q7: I feel trapped.	.553	.428	.175	.354
*Q10: My life is unmanageable.	.568	.320	.191	.181
*Q31: I cannot stand being me sometimes.	.592	.405	.249	.282

* Item was culled from further analysis.

Table 9: Means (± SDs) and Reliability Estimates of the Addictive Experience Scales (Study 2).

N=741	Left Anchor	Right Anchor	Coefficient Alpha	Alpha if Item deleted	Scale Mean +/- SD
Temporal Flow	Q4: Often time just does not seem to be passing.	Usually times passes rather comfortably for me.	.89	.88	20.6+/-4.3
Temporal Flow	Q16: Often time passes more slowly for me than other people.	Usually time passes the same for me as it does for other people.		.87	
Temporal Flow	Q22: I often feel like time has stopped.	I usually feel like time is moving.		.87	
Temporal Flow	Q33: Usually time seems to flow naturally.	Often time does not seem to be moving at all.		.87	
Temporal Flow	Q35: Often time seems to pass too slowly for me.	Usually time seems to pass naturally.		.85	
Language Adequacy	Q1: I can usually find the right words to talk about how I feel.	Sometimes there are no words to describe how I feel.	.87	.87	18.3+/-4.9
Language Adequacy	Q12: I communicate emotions clearly.	I do not seem to be able to clearly communicate emotions.		.87	
Language Adequacy	Q23: I cannot find the words to fit my emotions.	I can usually find the words to fit my emotions.		.83	
Language Adequacy	Q30: Communicating my emotions is difficult.	Communicating my emotions is easy.		.84	
Language Adequacy	Q32: I cannot seem to find the words to talk about how I feel.	I can usually find the right words to talk about how I'm feeling.		.82	
Connectedness	Q6: I feel alone in the world.	I do not feel alone in the world.	.86	.84	20.1+/-4.7
Connectedness	Q8: I do not feel loved.	I feel loved.		.83	
Connectedness	Q14: I never seem to get really close to anyone.	I get really close to people.		.84	
Connectedness	Q17: I feel shut off from others.	I feel connected to others.		.82	
Connectedness	Q18: I do not have any truly close friends.	I have truly close friends.		.84	
Agency	Q9: My life feels like it is coming apart.	I think I have my life together.	.84	.81	17.9+/-4.5
Agency	Q20: I often feel great.	I feel just horrible sometimes.		.82	
Agency	Q24: I often experience a sense of dread.	I never experience a feeling of dread.		.82	
Agency	Q26: I rarely feel in control of things in my life.	I almost always feel in control of things in my life.		.82	
Agency	Q29: My emotional life is comfortable.	My emotional life is very painful.		.82	

Table 10: Addictive Experience Dimensions Item Correlations with Legend.

Temporal Flow	Q4: Often time just does not seem to be passing.	Q6: I feel alone in the world.	**Connectedness**
	Q16: Often time passes more slowly for me than other people.	Q8: I do not feel loved.	
	Q22: I often feel like time has stopped.	Q14: I never seem to get really close to anyone.	
	Q33: Usually time seems to flow naturally.	Q17: I feel shut off from others.	
	Q35: Often time seems to pass too slowly for me.	Q18: I do not have any truly close friends.	
Language Adequacy	Q1: I can usually find the right words to talk about how I feel.	Q9: My life feels like it is coming apart.	**Agency**
	Q12: I communicate emotions clearly.	Q20: I often feel great.	
	Q23: I cannot find the words to fit my emotions.	Q24: I often experience a sense of dread.	
	Q30: Communicating my emotions is difficult.	Q26: I rarely feel in control of things in my life.	
	Q32: I cannot seem to find the words to talk about how I feel.	Q29: My emotional life is comfortable.	

	Q4	Q16	Q22	Q33	Q35	Q1	Q12	Q23	Q30	Q32	Q6	Q8	Q14	Q17	Q18	Q9	Q20	Q24	Q26
Q16	.632**																		
Q22	.585**	.627**																	
Q33	.534**	.592**	.611**																
Q35	.652**	.652**	.666**	.697**															
Q1	.273**	.286**	.306**	.320**	.296**														
Q12	.257**	.256**	.228**	.338**	.257**	.444**													
Q23	.425**	.433**	.415**	.422**	.444**	.560**	.555**												
Q30	.373**	.408**	.376**	.394**	.414**	.488**	.527**	.696**											
Q32	.422**	.462**	.437**	.464**	.488**	.560**	.541**	.787**	.762**										
Q6	.476**	.482**	.457**	.469**	.487**	.304**	.284**	.438**	.401**	.442**									
Q8	.425**	.498**	.463**	.462**	.483**	.270**	.295**	.408**	.389**	.441**	.668**								
Q14	.302**	.312**	.315**	.337**	.350**	.266**	.308**	.406**	.454**	.459**	.432**	.532**							
Q17	.515**	.537**	.495**	.500**	.537**	.376**	.344**	.507**	.497**	.536**	.628**	.588**	.595**						
Q18	.328**	.360**	.359**	.351**	.385**	.233**	.258**	.389**	.394**	.444**	.440**	.524**	.598**	.587**					
Q9	.529**	.517**	.502**	.475**	.518**	.351**	.306**	.491**	.446**	.509**	.587**	.582**	.394**	.598**	.379**				
Q20	.367**	.364**	.319**	.434**	.390**	.401**	.363**	.363**	.384**	.425**	.460**	.410**	.318**	.467**	.324**	.540**			
Q24	.444**	.443**	.397**	.407**	.429**	.310**	.267**	.403**	.422**	.440**	.456**	.403**	.332**	.491**	.306**	.547**	.507**		
Q26	.431**	.453**	.424**	.415**	.473**	.312**	.295**	.416**	.422**	.468**	.420**	.445**	.380**	.517**	.366**	.583**	.488**	.520**	
Q29	.397**	.408**	.360**	.483**	.407**	.368**	.365**	.407**	.431**	.458**	.466**	.488**	.369**	.493**	.321**	.536**	.567**	.483**	.512**

** Correlation is significant at the 0.01 level (2-tailed).

determine the number of factors underlying addictive experience and to see how each variable loaded on the other factors this type of analysis was appropriate (Stevens, 1996). A definitive statement concerning the underlying factors of addictive experience awaits a stronger empirical base, which will have to include confirmatory analysis. The limited number of addicts interviewed in Hopson's (1993) research also limits the generalizability of this study's findings. While twelve was an adequate number of participants for Hopson's clinical research, experimental research tends to have greater confidence in representative sampling and massive data sets.

Conclusions. The four-factor solution though derived using exploratory analysis was supported. I would tentatively conclude that Hopson's (1993) four-factor model is a reasonable framework. I would further conclude that it is now reasonable to use this instrument this paper's main study for the investigation of the experience of addicts in 12-step programs.

4. MAIN STUDY

The main study has three goals: (1) to validate the addictive experience scale, (2) to evaluate the relationships between participation in the 12-steps and changes in the reported experiences of 12-step members, and (3) to propose a model of recovery based on the 12-step program experiences.

This study's first goal is to validate the addictive experience scales. An assumption underlying the newly codified addictive experience scales is that addicts and non-addicts differ in the way they experience the constituent dimensions. The first goal after the quantification of the dimensions of addictive experience is an assessment of this assumption.

This validation will classify individuals as addicts and non-addicts and then see if they differ in their responses to the addictive experience dimensions. This procedure is pursuant to establishing known-group validity. Known-group validity is a form of validity where scores from two contrasting groups "known" to differ on a construct or set of constructs are compared. In this case the groups that are "known" to differ are addicts and non-addicts.

In order to discriminate between addicts and non-addicts people must be clearly classified as addicts or non-addicts. A common way to predict if an individual is an addict is to use an addiction-screening instrument to detect the presence of a substance abuse disorder. This study leverages the SASSI (Substance Abuse Subtle Screening Inventory), a popular screening inventory, for this classification purpose.

The following hypotheses were generated from the general and main study introductions.

- Hypothesis 1: Addicts' addictive experience scores will indicate greater disturbance than non-addicts' addictive experience scores.
- Hypothesis 2: Greater involvement in the 12-steps will be related to improved experience.
- Hypothesis 3: Greater degree of affiliation with the 12-steps will be related to improved experience.

Main Study Method

Main Study Design. The main study is a cross-sectional and retrospective. The questionnaire was distributed to 12-step program members and college students using the data collection Web site described in detail in Study 2 (See Appendix 3).

Main Study Participants. The participants for this study are a superset of those that comprised the sample for study two. The additional participants knew about the survey presumably through word of mouth and the link exchange program. The responses of an additional 67 individuals were added to the existing data.

Students from psychology classes at the University of Tennessee at Knoxville, 12-step members, and interested others comprised the sample. Overall the sample tended to be white (89.6%), female (60.1%) and to have finished at least some college (60.6%) and to be employed at least part-time (69.7%). A total of 811 people responded to the survey, 454 reported

membership in a 12-step program. Most 12-step members reported belonging to Alcoholics Anonymous (n = 318) or Narcotics Anonymous (n=156). Three persons reported membership in Cocaine Anonymous and 19 specified other as their membership. Sample demographic characteristics are presented in Table 11.

Main Study Procedures. The main study gathered data using procedures described in detail in the second study.

Table 11: Sample Demographic Characteristics for the Main Study.

VARIABLE	VALUES	FREQUENCIES N=811	PERCENTAGES
Marital Status	Married	252	30.8
	Single	397	48.5
	Divorced	156	19.1
	Widowed	10	1.2
Sex	Male	322	39.4
	Female	492	60.1
Race	Black	27	3.3
	White	733	89.6
	Asian	16	2.0
	Hispanic	12	1.5
	Other	24	2.9
Income	$0 - $14,000	315	38.5
	$15,000 - $24,999	126	15.4
	$25,000 - $44,999	197	24.1
	$45,000 - $64,999	104	12.7
	$65,000 or more	69	8.4
Education	Some High School	28	3.4
	High School	99	12.1
	Some College	496	60.6
	Associates Degree	35	4.3
	Bachelors Degree	104	12.7
	Masters Degree	41	5.0
	Doctoral Degree	12	1.5
Employment Status	Full-time	385	47.1
	Part-time	185	22.6
	Unemployed	210	25.7
	Retired	34	4.2
Age	Range	Min = 13	Max = 67
	Mean	34.12	
	Std. Dev.	13.01	

Main Study Measures.

Addictive Severity. Addictive severity was assessed using an adapted version of the Substance Abuse Subtle Screening Inventory (SASSI). Addictive severity was used to help categorize participants as addicts or non-addicts. Each of the 25 SASSI items depicted a situation indicative of addictive behavior. Participants were asked how often they had experienced the situation described. A sample item the respondent "[How often have you] tried to kill yourself while drunk?" Response options included "1 - Never", "2 - Once or twice", " 3 - Several Times" and "4- Repeatedly".

Addictive Experience. This measure is taken directly from study two in this paper and is described in some detail there. The addictive experience measure is used to explore the relationships between experiences in 12-step programs and changes in addictive experiences that parallel recovery. This measure consists of four subscales: (1) temporal flow, (2) connectedness, (3) language adequacy and (4) agency. Each addictive experience subscale consists of 5 items as previously described. Respondents located themselves between two opposing anchors using 5 response options (See Appendix 3).

12-Step Participation. Twelve-step participation consists of 12-step affiliation and 12-step involvement. Items were inspired by 12-step literature, direct observation at 12-step meetings and the text of the steps themselves. Degree of affiliation differs measures importance of and agreement with 12-step program principles and practices. Level of 12-step program involvement measures behavioral compliance with program principles and practices.

Twelve degree of affiliation items addressed perceived importance of working the steps, going to meetings, interacting with ones sponsor and being a sponsor. Level of involvement was assessed using twelve items centering on step completion, meeting attendance and sponsorship. The text of all participation items is available in appendix 1.

Demographics. Demographic characteristics assessed include variables including sex, marital status, employment status, race, income educational level, and age.

Main Study Variables.

Addictive Experience Variables. The addictive experience variables include temporal flow, connectedness, agency and language adequacy and are described in detail in study 2.

Addictive Severity. Addictive severity scores were averages calculated for the 25 SASSI items. A participant's severity score was his or her average response. Larger averages were indicative of greater addictive severity. The average score for the whole sample (n=818) was 2.37 and the standard deviation was .97. Among participants reporting 12-step membership (n=496) the average score was 2.89 and the standard deviation was .76.

Addict. This variable is used in the validation of the addictive experience dimensions. This variable's use is to establish "known" groups for validation of the addictive experience scales. This validation depends upon correct classification of participants' addict status. To do this an attempt was made to minimize false positives and false negatives. (i.e., incorrectly classifying

a non-addict as an addict and addicts as non-addicts). Accordingly, participants were classified as addicts or non-addicts using duration of abstinence, 12-step membership and addictive severity scores.

Addicts were defined as 12-step members who had been continuously sober for less than one year and had an addictive severity score above the 66th percentile. All persons not in 12-step programs with addictive severity scores below the 33rd percentile were classified as non-addicts. This method of classification resulted in 53 participants being classified as addicts and 220 as non-addicts.

12-Steps Affiliation. Five items focused on salience of spirituality and abstinence, two integral ideas in the 12-steps. Each of the five items asked respondents to locate themselves between opposing items using one of 5 options. A sample item included, "A Higher Power helps my life make sense" and "I do not need a Higher Power for my life to make sense". This variable was used to determine the effect of high versus low affiliation on the addictive experience scales. Respondent scores were calculated by summing across constituent items. High scores were scores above the 66th percentile. Low scores were scores below the 33rd percentile. This classification resulted in 149 lows and 241 highs.

12-Steps Involvement. Eight items assessed completion of steps 3, 4, 5, 6, 7, 10, 11 and 12. The response format was one of three kinds. The response format used for addressing steps 4 and 5 asked respondents how many times the step had been completed. Response options included *0, 1, 2, 3*

and *More than 3.* A second format used for the remaining steps involvement items asked respondents to locate themselves between two opposing sentences depicting greater or lesser involvement in the step of interest. A sample item included, "When I sense that I am wrong I always admit it quickly", and "When I sense that I am wrong I rarely or never admit it quickly". This variable was used to determine the effect of high versus low involvement on the addictive experience dimensions. The item that assessed step 12 used a third response format. This item asked respondents "Have you ever sponsored someone?" Response options included *1-No, 2-Yes, but not currently* and *3-Yes, and am currently.* For the purpose of aggregation this format was recoded to be consistent with the other two formats, which used 5-point scales, such that a 2 became a 3 and a 3 became a 5. Respondent scores were calculated by summing across items. High scores were scores above the 66th percentile. Low scores were below the 33rd percentile. This classification resulted in 157 lows and 184 highs.

Duration of Abstinence. One item measured duration of abstinence. Duration of abstinence was used to indicate recovery. The item read, "How long have you been completely without drugs or alcohol?" There were eight response options: *Less than 30 days, 1-3 months, 3-6 months, 6-12 months, 1-2 years, 2-4 years, 4-7 years,* and *More than 7 years.* Seventy-three percent of the 496 12-step members had been sober for at least 2 years (n=277).

Considers Self an Addict. One item asked, "Do you consider yourself to be an alcoholic and/or drug addict?" Response options included, "Yes, I do," and "No, I don't." This variable was only asked of 12-step members. Most respondents considered themselves to be addicts (96.2%).

Main Study Results

Addictive Experience Dimensions Validation. Hypothesis 1 predicted addicts' addictive experience scores would indicate greater disturbance than the scores of non-addicts on the four dimensions of addictive experience. A discriminant function analysis was performed. Discriminant function analysis is used to predict group membership based on single or multiple criteria (Tatsuoka, 1988). Here participants' responses to addictive experience items were used to predict whether or not the respondent was an addict. Discriminant analysis using proportional priors (n for addicts = 54; n for non-addicts = 220) predicted addict/non-addict status with 81.4% accuracy. The expected hit ratio due to chance alone was 68% ($\sum p_i^2 p_i^{2*}$). A Z-score test of significance showed that the obtained hit rate was significantly better than chance ($Z = 5.0$; $p<.001$). A SPSS's Box's M test for differences between variance-covariance matrices revealed significant differences (Box's M = 6.98; p= .076). Table 12 shows the classification performance for each addictive experience dimension.

Table 12: Discrimination Performance by Addictive Experience Dimension.

	Wilks' Lambda	*F*	*Df1*	*Df2*	*Sig.*
Temporal Flow score	.920	23.621	1	271	.000
Language Adequacy Score	.955	12.721	1	271	.000
Connectedness Score	.872	39.864	1	271	.000
Agency Score	.851	47.555	1	271	.000

12-Steps Involvement and Addictive Experience. Hypothesis 2 predicted that greater involvement in the 12-steps would be associated with improvement in experience scores. Lower addictive experience scores indicate improved experience. A one-way multivariate analysis of variance (MANOVA) was conducted to test the relationships between 12-step involvement and addictive experience scores. MANOVA revealed that greater 12-step involvement was associated with lower addictive experience scores overall ($F = 28.16$; $p = .000$; $n = 341$). Univariate F-Tests were conducted for each of the dependent measures. The result were uniformly significant and in the predicted direction for each measure. Table 13 presents univariate statistics. Table 14 presents the correlations between involvement items and the addictive experience scores.

Table 13: Involvement Univariate F Statistics for Addictive Experience Variables.

VARIABLE	*HYPOTH. SS*	*ERROR SS*	*HYPOTH. MS*	*ERROR MS*	*F*	*p*	*Eta²*
Temporal Flow	36.67	245.73	36.67	.72	50.59	.000	.13
Language Adequacy	59.95	300.56	59.95	.89	67.62	.000	.17
Connectedness	76.73	259.41	76.74	.77	100.28	.000	.23
Agency	48.28	257.52	48.28	.76	63.56	.000	.16

*D.F. = 1,481

Table 14: Involvement Items and Addictive Experience Scores Correlations.

12-Step Feature	Items	Time score	Language Score	Connection Score	Agency Score
Step 3	Frequency of surrendering to Higher Power	-.383**	-.358**	-.434**	-.390**
Step 4	Number of 4th steps completed	-.190**	-.234**	-.252**	-.252**
Step 5	Number of 5th steps completed	-.173**	-.227**	-.236**	-.244**
Steps 6 & 7	Frequency of asking Higher Power to remove character flaws	-.271**	-.280**	-.344**	-.213**
Step 10	Frequency of admitting promptly when wrong	-.252**	-.299**	-.264**	-.353**
Step 11	Frequency of prayer	-.300**	-.304**	-.385**	-.301**
Step 11	Frequency of meditation	-.260**	-.321**	-.345**	-.277**
Step 12	Has ever sponsored someone	-.199**	-.276**	-.247**	-.185**

N ranges from 283 to 492. Negative correlations mean more participation is associated with less disturbance in the addictive experience dimension.

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

12-Steps Affiliation and Addictive Experience. Hypothesis 3 predicted greater 12-step affiliation would be associated with improved addictive experience scores. Lower addiction scores indicate improved experience. A one-way MANOVA was conducted to test the relationships between 12-step affiliation and addictive experience scores. MANOVA revealed that greater 12-step affiliation was associated with lower addictive experience scores overall ($F=37.48$; $p<.000$; $n=390$). Univariate F-Tests were conducted for each of the dependent measures. The results were uniformly significant and in the predicted direction for each measure. Table 15 presents univariate statistics. Table 16 presents the correlations between affiliation items and addictive experience scores.

Proposed Model. To explore a model for the relationships between 12-step program experiences, the disturbed addictive experiences of addicts and recovery, overall scores were calculated for program participation and addictive experience dimensions. For 12-step participation, involvement and affiliation were averaged. For addictive experience an average was calculated across constituent dimensions. Recovery was defined as duration of continuous abstinence. Correlations were calculated for the resulting scores. Figure 4 depicts the results. The association between program participation and addictive

Table 15: Affiliation Univariate F Statistics for Addictive Experience Variables.

VARIABLE	HYPOTH. SS	ERROR SS	HYPOTH. MS	ERROR MS	F	p	Eta^2
Temporal Flow	61.46	248.52	61.46	.64	95.95	.000	.20
Language Adequacy	42.05	345.07	42.06	.89	47.29	.000	.11
Connectedness	94.40	269.24	94.40	.69	136.04	.000	.26
Agency	43.06	284.76	43.06	.73	58.67	.000	.13

*D.F. = 1,443

Table 16: Affiliation Items and Addictive Experience Scores Correlations.

12-Step Idea	Items	Time score	Language Score	Connection Score	Agency Score
Spirituality/God	Step work has awakened my spiritual life.	-.318**	-.281**	-.380**	-.336**
Spirituality/God	A Higher Power helps person make sense of life.	-.316**	-.200**	-.337**	-.219**
Spirituality/God	Prayer is important to me.	-.259**	-.262**	-.311**	-.224**
Abstinence	I can drink or use drugs recreationally.	-.222**	-.159**	-.221**	-.160**
Abstinence	I can drink alcohol and still live a manageable life.	-.216**	-.126**	-.209**	-.104*
Abstinence	When I solve some personal problems I'll be able to drink again.	-.210**	-.155**	-.238**	-.151**
Attendance	Knowing I can go to a 12-step meeting is a great comfort to me.	-.265**	-.194**	-.304**	-.216**
Attendance	I have to attend 12-step meetings to feel ok.	.117**	.097*	.007	.122*
Sponsorship	Knowing I can talk to my sponsor makes me feel more secure.	-.169**	-.185**	-.326**	-.099
Sponsorship	I need my sponsor to stay sober.	-.127*	-.160**	-.109*	-.163**
Sponsorship	I depend upon my sponsor for help when I need it.	-.179**	-.175**	-.223**	-.100
Being a Sponsor	How important is being a sponsor to your sobriety?	-.204**	-.217**	-.275**	-.232**

N ranges from 356 to 492. Negative correlations mean more participation is associated with less disturbance in the addictive experience dimension.

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

experiences was in the predicted direction (r = -.49; p<.001; n = 493). It suggests that 12-step members that participate more extensively in the 12-steps have less disturbed addictive experience. The association between 12-steps participation and recovery was also in the predicted direction (r = .50; p<.001; n = 496). This relationship suggests that more extensive participation in the 12-steps is associated with longer periods of sustained abstinence. Last, the

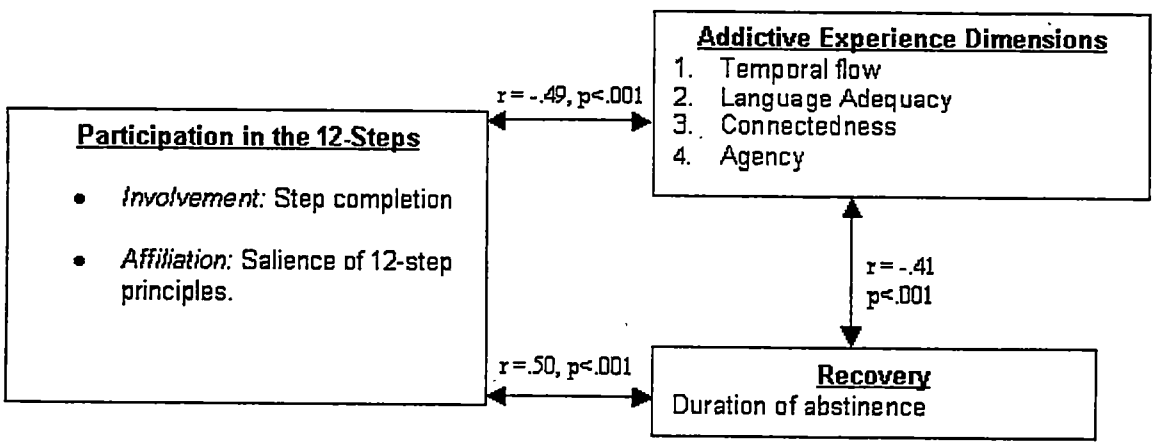


Figure 4: Addictive Experience, Recovery and 12-Step Program Participation.

relationship between recovery and addictive experience was also in the anticipated direction ($r = -.41$; $p < .001$; $n = 493$). This relationship suggests that longer periods of sustained abstinence are associated with less disturbed experiences. Figure 4 depicts these relationships and Table 17 presents the correlations between this study's major variables.

Table 17: Correlations Between Major Variables in the Main Study.

	M	SD	1	2	3	4	5	6
1. Temporal Flow	1.90	.87						
2. Language Adequacy	2.35	.98	.57**					
3. Connectedness	2.07	.94	.65**	.61**				
4. Agency	2.52	.90	.69**	.61**	.68**			
5. 12-Step Involvement	28.31	7.29	-.35**	-.40**	-.47**	-.40**		
6. 12-Step Affiliation	22.68	3.50	-.37**	-.29**	-.41**	-.29**	.69**	
7. Sobriety	6.21	2.07	-.32**	-.33**	-.38**	-.38**	.52**	.34**

N ranges from 487 to 496.

* Correlation is significant at the .05 level (2-tailed)

** Correlation is significant at the .01 level (2-tailed)

5. GENERAL DISCUSSION

The first two studies supported Hopson's (1993) four-factor model of addictive experience. In general the properties of the addictive experience dimensions that resulted from this scale development effort were satisfactory with one possible exception. Upon reviewing the addictive transcripts and Hopson's (1993) theoretical reflections on the agency dimension I am concerned that the items that assess this dimension do not adequately saturate the dimension's bandwidth.

Agency's Construct Bandwidth

Agency is perhaps wider in scope than the other addictive experience dimensions and is certainly comprised of complex and subtle meanings. Hopson argues that the agency dimension "goes beyond the regulation of feeling states and involves regulation of the self" (p. 490). The following is exemplary of the agency dimension and is excerpted from one of Hopson's (1993) clinical interviews:

> "I like to play... I don't want to leave until it's getting dark... most people watch a movie... I want to watch 2 or 3 straight... I'm so into everything I do that I don't pay a lot of attention to everything around me. I was juggling full-time school... I found myself into an all or nothing situation... I'm either full steam all the way or 0 like right now. I was very passive...I didn't feel I could really take care of myself...I didn't choose anything...you just kinda do it even though you don't choose." (p. 490)

This passage depicts a fuzzy or diffuse and multifaceted sort of experience where the addict experiences himself as a passive observer of his own extreme behavior. In another excerpt the person used the

metaphor of a nightmare to depict the experience of being powerless to stop his drug usage:

> "I think the best place people can find it is probably in their nightmares. In their dream world. Where things are so unreal, so frighteningly unreal, and so unescapable, sort of like the common dream I think of trying to run away from something that's after you and you can't move your feet. Or they feel like they've got lead boots on or something like that. And it never catches you. But you're always struggling to get away from it." (p. 486)

This curious absence of agency seems to be comprised of four interrelated components: (1) passivity or ineffectual struggling and perhaps as a result (2) fear or dread in the face of ones own (3) extreme behavior that is (4) unmanageable or out of control.

The 5 items that make up the agency dimension assess dread and unmanageability but do not appear to cover passivity or ineffectual struggling and extremity of behavior. It is not clear whether these components are sub facets of the same dimension or would constitute additional factors. Future research should concentrate on adequate coverage of the agency construct.

Main Study Hypotheses

The three hypotheses addressed in the main study were all supported.

Main Study Hypothesis 1. *H1: Addicts' addictive experience scores will indicate greater disturbance than non-addicts' addictive experience scores.*

Testing this hypothesis constituted a test of the validity of the addictive experience scales. Respondents were classified as addicts or non-addicts based on their addictive severity scores, program membership and duration of

abstinence. Multiple variables were used to ensure accurate classification. A discriminant function analysis predicted addict versus non-addict status with 81.4% accuracy. The addictive experience dimensions demonstrated that they could discriminate between addicts and non-addicts rather well. The fundamental assumption of the scales was that addicts and non-addicts experience is different along four dimensions. The addictive experience scales demonstrated that they could make this discrimination based on responses alone.

Main Study Hypothesis 2. *Greater involvement in the 12-steps will be related to improved experience.*

To get a sense of what ought to constitute involvement in the 12 steps I analyzed the text of the steps. Not all steps were easily amenable to being translated into involvement items. The steps amenable to this translation were identified and comprised the involvement dimension. Steps involvement roughly corresponds to frequency of enacting the behaviors depicted in the text of the steps including prayer, meditation, sponsoring people, admitting when wrong, relying on ones Higher Power, taking an inventory and revealing the findings of that inventory to another person.

This hypothesis focuses on the central tenet of all 12-step programs that the 12 steps themselves are the vertebras that make up the spine of the program. This hypothesis predicts that more involvement is better. That is, if working the steps is associated with positive outcomes then working the steps more frequently ought to be associated with even better outcomes. This idea

was supported. Though steps involvement was significantly associated with each of the dimension of addictive experience its strongest relationship was with connectedness (Eta^2= .23). The weakest relationship was with temporal flow (Eta^2= .13).

Results were consistent with the general tendency in prior research to find a positive association between 12-step program involvement and positive outcomes. The addictive experience dimensions as outcome variables are closely related to psychological health criteria. In this sense the findings here are consistent with Carroll's (1993) finding that prayer and meditation, the 11th step, were associated with sense of purpose in life. The text of the 11th step is, "Sought through prayer and meditation to improve our conscious contact with God *as we understood him* praying only for knowledge of his will for us and the power to carry that out" (Alcoholics Anonymous, 1976).

Working step 11 involves prayer and meditation. In the present study frequency of prayer and frequency of meditation both showed positive associations with each addictive experience dimension. The strongest relationships were between connectedness and frequency of prayer (r = .-39; p<.001; n=492) and between connectedness and frequency of meditation (r=-.35; p<.001; n=492). In all cases working step 11 was associated with less disturbed experiences.

Discussions of assessments that focus on the relationships between involvement in the 12 steps and transformations of experience are just beginning to emerge in the literature. Allen (2000) reviewed a surrender scale. The scale

focuses on the relationship of surrendering to God and increases in positive affect and sense of unity with the world. In a validation study of the surrender scale involving 190 addicts, Reinert (1997) found that surrendering was associated with less psychopathology and increased internal locus of control. In the present study one item assessed frequency of surrendering to a Higher Power—the central concept of step 3. Of the 8 items that assessed involvement in the 12-steps this item had the strongest relationship with the addictive experience dimensions ranging from -.36 to -.43, language adequacy and connectedness respectively. Future research should investigate the relationships between the addictive experience dimensions and existing scales. For example, what is the relationship between agency and Bandura's (1997) self-efficacy and Rotter's (1982) locus of control?

Additional program involvement data was collected not directly relevant to involvement in the steps themselves including meeting attendance and participation in sponsorship. The result was neither anticipated nor consistent with the most often repeated finding in the literature that frequency of meeting attendance is associated with positive outcomes like less depression (e.g., Humphreys, Moos & Cohen, 1997) and stable abstinence (e.g., Ellis & McClure, 1992; Fiorentine & Hillhouse, 2000). Typical frequency of meeting attendance and number of meetings in the last 7 days were both assessed by the present study. Neither had a detectable relationships with duration of sobriety and there was sufficient statistical power (n=412) should they have been present. The strongest relationship involving attendance and the addictive experience

dimensions was between connectedness and number of meetings attended in the last 7 days ($r = -.197$; $p < .01$). The only other significant relationship was between connectedness and usual frequency of meeting attendance ($r = -.14$; $p < .05$). Both of these relationships are in the direction anticipated but much weaker than might have been predicted by the literature. Involvement with ones sponsor was not related to any outcome variables.

A plausible explanation for the absence of an attendance relationship is that the sample used in this study is different than the population of addicts who participated in other studies. The present population is Internet savvy, predominantly white and well educated. Some 95.1% of the 496 total addicts were white and 48.5% had at least some college, and 17.5% had bachelor's degrees. Sixty-five percent were employed full time and 10% made $65,000 a year or more. They all, of course, had sufficient skill with the Internet to navigate to and through the survey that was used for this study. Perhaps the most drastic statistic in favor of this argument is that a full 81.5% had been sober at least one year. To the contrary this is a very high-function subset of the total population of addicts.

Another explanation for why the absence of an attendance relationship may be that involvement in 12-step program activities is more important in the early stages of recovery than it is in later. This notion is backed up by the practices of 12-step programs themselves. In 12-step programs there is a great deal of emphasis on attendance for everyone but especially those that are new in the program. "New" is informally understood as less than one year of

membership. Indeed newcomers are admonished to go to a meeting a day for their first 90 days. To not do so is widely viewed as courting relapse.

A third explanation centers on the nature of recovery on the Internet itself. It may be that for the people who answered this survey showing up to meetings in physical locations is not important because their experience of their 12-step program is through the Internet.

Main Study Hypothesis 3. *Greater degree of affiliation with the 12-steps will be related to improved experience.*

The steps affiliation dimension focused on the steps as they related to the Higher Power concept and the necessity of accepting the idea that abstinence is essential to recovery. Hypothesis 3 focuses on the degree to which twelve-step members hold these ideas sacred and predicts that fervency of belief matters. Specifically, hypothesis 3 predicted that more deeply held belief in the intrinsic value of the steps would be associated with improved experiences. This idea was supported. Though affiliation was significantly associated with each of the dimension of addictive experience its strongest relationship was with connectedness (Eta^2= .26). The weakest relationship was with language adequacy (Eta^2= .11).

These findings are consistent with previous research findings that agreement with ideas that underlie the steps is associated with positive outcomes. For example, Gilbert (1991) found that acceptance of powerlessness and admitting the unmanageability of ones life, concepts in step 1, are associated with duration of sobriety. The present findings also reinforce the

linkage between acceptance of the Higher Power concept and positive outcomes (e.g., Morgenstern, 1996; Caldwell & Cutter, 1998).

In addition to steps concepts, affiliation with several other variables was assessed including attendance, sponsorship and being a sponsor. Findings were consistent with prior research associating these variables with positive outcomes (e.g., Valliant, 1996). Regarding meetings, greater endorsement of the item, "Knowing I can go to a 12-step meeting is a great comfort to me" was associated with improved addictive experience scores. The strongest relationship was with connectedness ($r = -.30$; $p<.001$). This finding suggests that while these 12-step members are not actually going to physical, as opposed to online, meetings they find the possibility of doing so comforting. Regarding sponsorship, higher levels of agreement with the statement, " Knowing I can talk to my sponsor makes me feel more secure" were associated with improved experiences. The strongest relationship was with connectedness ($r = -.32$; $p<.001$). This finding strengthens the previously found relationship between having a sponsor and improvements in emotional experiences (e.g., Chappel, 1994). Again this finding suggests that though these participants may not have been actually using their sponsor (e.g., talking to them) they were comforted by the possibility. Regarding sponsorship, those who reported that being a sponsor was more important to their sobriety enjoyed healthier experiences with the strongest relation, once again, being with connectedness ($r = -.28$; $p<.001$).

Implications for Theory

Regarding addiction theory, the present findings support an experiential paradigm for understanding addiction and recovery. Findings are therefore supportive of Hopson's (1993) call for a phenomenological approach to understanding addiction and of Hopson's (1996) four-factor model of addictive experience.

Hopson theorized that intense affective experience for which language was inadequate was the mode of experience out of which three other problematic experiences emerged. That is to say, language inadequacy is the background against which emerge three interrelated phenomena: difficulties with agency, temporal flow and connectedness. Hopson's model and the correlations between these dimensions of experience are presented here in figure 5. The high correlations are to be expected in part because each dimension has in common intense affect.

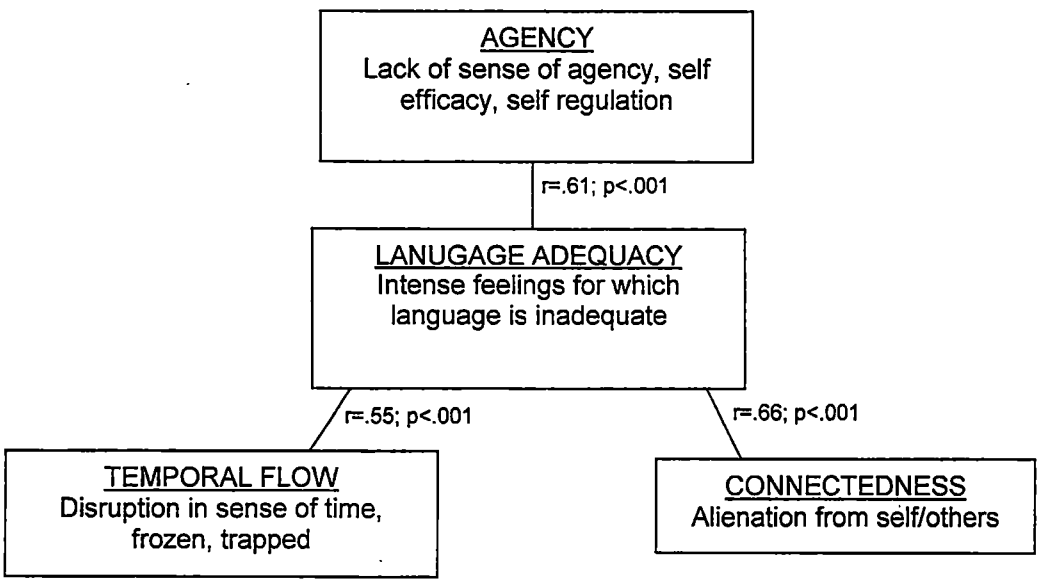


Figure 5: Correlations in the Addictive Experience Model

Findings are also indirectly supportive of dynamic theories that regard addiction as comprised of core affects that originate during childhood, are caused by disturbances in the developmental environment and are continuous across time (e.g., Wurmser, 1995). For example, relational therapists understand addiction as symptomatic of absent ego functions primarily related to self-governance (Mack, 1981) or self-care (Khantzian, 1981) and affect management. Further, relational therapists understand ego functions as developing through the processes of identification and internalization (Mitchell, 1988). For a relational therapist, if therapy is to be successful the addict must have ego-function-internalizing experiences. That is, the therapist must provide a "good enough holding environment" (Winnicott, 1958; Bowlby, 1969). Therein the addict comes to identify with the therapist and to internalize ego functions provided initially by the therapist (Cashdan, 1988). From this perspective a 12-step program could be conceived as a developmental environment for the convalescence and growth of addicts.

Implications for Practice

The present findings suggest that the provision of experiences is integral to remedial practices with addicts. This focus on experience has implications for both the common practice of recommending that addicts attend 12-step meetings and the practice of psychotherapy with addicts.

First, the practice of sending people to 12-step programs is supported by the present findings. While additional research is needed some speculation may be in order. This paper in a general sense supports the proposition that 12-step

participation is associated with positive changes in disturbed experiences that parallel indices of recovery like sustained abstinence. However, one can imagine a customized approach to 12-step program usage based on mapping addicts' addictive experience deficits to 12-step program participation experiences. Assuming that different experiences afforded via 12-step participation are differentially effective in bringing about experiential change, a reasonable though untested assumption, one could choose from a menu of 12-step experience options according to the persons addictive experience profile. An addict would take the addictive experience assessment and based on his or her profile certain 12-step features would be more salient than others. Addicts, for example, whose language scores indicated less disturbance than their connectedness scores might be best served by sponsorship participation than by telling their stories in speaker meetings.

Second, though outcome studies are mired in methodological difficulties and are inconclusive regarding the superiority of a particular psychotherapeutic approach (Hopson, 1993) the present findings argue that psychotherapy is most likely to be successful if it is experientially sensitive and based in supportive relationships. Relational psychotherapy is such an approach. Hopson (1993) highlighted various aspects of the therapeutic environment that obtain greater salience in light of the present findings. Regularity of meetings, for example, may be more important with addicts than is typically the case. Table 18 proposes mappings between addictive experience, experiential features of 12-step programs and various therapeutic approaches.

Table 18: 12-Step Features and Relationally Based Psychotherapies.

Dimensions of Addictive Experience	12-Step Features	Relationally Based Psychotherapies*
TEMPORAL FLOW Disturbed Time perception is disturbed - sense of being frozen in time. Healthy Time perception is normal. Time is experienced as flowing without effort.	• Chip system - tokens given as part of a rituals that commemorate significant sobriety dates (e.g., annual AA birthday's) • Progress in the steps • Cognitive strategies that remind addicts of the passage of time • First step meetings • Practice of marking life according to sobriety date • Regular and frequent attendance of scheduled meetings • Regular and frequent contact with sponsor	• Regularity of sessions • Imposition of strict time constraints • Predictable presence of the therapist providing sense of continuity (Kohut) • Management of session as practice in managing temporality
LANGUAGE ADEQUACY Disturbed Language is experienced as inadequate to express intensity of feelings. Healthy Language is comfortable vehicle for emotional expression.	• Step 4: Identification of intense emotions • Step 5: Express identified, intense emotions • Step 12: Telling one's story • Talking about feelings in meetings	• Holding, soothing functions (Winnicott) • Representing self in language (Lacan, Kahn) • Translating intense affective experiences into symbols (Wurmser)
CONNECTEDNESS Disturbed Individual experiences the sense of being disconnected and alienated from him/herself and others. Person doesn't notice or misreads intense emotional states. Healthy Individual has sense of connection with the self and others. Person has sense of belonging in the presence of others and can identify his/her emotional states.	• Step 1: Admission of alcohol/drug problem. • Step 10: Daily personal inventory • Step 11: Prayer and meditation • Step 12: Service to others • Step 5: Confession of wrongs • Steps 8- 9: Repairing/attending to relationships disturbed during drinking/drug usage • Talk about affectively intense experiences. • Telling one's story in speaker meetings • Friendships • Sponsor system • Talk about affectively intense experiences with others in meetings • Telling one's story in speaker meetings	• Therapist valuing patient/actively seeking connection to patient (Fairbairn) • Stable, predictable connection to benign helpful other
AGENCY Disturbed The individual experiences the self as unable make positive changes in his or her affective life or in the world. Healthy Person experiences the self as capable of both managing affect and making positive changes in the world.	• Step 3: Making a life affirming decision • Step 12: Service to others • Progress in the steps • Step 4: Identification of intense emotions • Progress in the steps • Cognitive strategies for affect management hung of the walls and employed in discussion • Step 3: Making a life affirming decision • Step 12: Service to others • Progress in the steps • Step 4: Identification of intense emotions • Progress in the steps • Cognitive strategies for affect management hung of the walls and employed in discussion • Cognitive strategies for affect management hung of the walls and employed in discussion • Talking about feelings in meetings	• Therapist as "good enough" nurturing figure to prompt movement into agency, activity, creativity (transitional experiencing—Winnicott) • Internalization of self-regulatory functions of therapist • Identification with therapist as efficacious agent • Cultivation of "illusions" of power by therapist (Kohut)

*Reproduced from Hopson 1993

Addicts may also benefit from more directly experiential therapies including psychodramas, role-playing, sculpturing, visualization, sharing, mirroring, creative play, video feedback, art therapy and group therapy (Verhofstadt-Deneve, 2000; Waller & Mahoney, 1999). If identification with the therapist provides requisite interpersonal leverage for internalization to occur then the creative use of these therapeutic techniques might be initially employed to engender this essential sense of connection.

Limitations to Generalizibility

There are at least 5 factors that limit the generalizability of the present findings. First, the samples used in the present study were not random. Second, measures of 12-step participation were exploratory, so their psychometric properties are unknown. Third, data was collected via the Internet. This method is relatively new in the context of psychological research. It is unknown how this method impacts results. Fourth, range restriction may be an issue as access to a computer was necessary to participate in this study. The socioeconomic status of addicts with that access may be significantly different from the total population of addicts. This subset of addicts appears to be higher functioning as well. Though there are limitations to generalizability the sample was not limited to any geography and may in some ways be more representative that is typically the case. Respondents came from all over the world. I did not collect geographical information, but because many participants actually contacted me I know that the responses came from diverse locations including London, England and Perth, Australia.

Directions for Future Research

The present studies suggest that future research needs to concentrate on addictive experience dimensions themselves. A definitive set of pertinent dimensions will most likely be quite different from the current set. In addition, online recovery communities could constitute a very fruitful area of inquiry. Future research should define the role of online recovery communities in the domain of alternative treatments for addiction. My experiences while conducting this research online lead me to believe that a real sense of community is possible using the Internet. The extant research says nothing about these communities. Last, the scope of experiences made available via 12-step program participation is vast. Future research should concentrate on the classification of these experiences and measuring the remedial merit of each.

Future research should also concentrate on the "thing itself". The existing research is silent on addictive experience. I speculate that this silence is what has left research on the periphery of understanding addictive phenomena. If that is true then addictive experience dimensions may be key to understanding of the recovery process.

Conclusions

These studies began with the notion that understanding addiction required attending to the phenomenon itself—the subjective experience of the addict. The findings here support this approach. The main findings are (1) that there are four addictive experience dimensions and (2) that greater involvement and affiliation are associated with improvements in the addictive experience

dimensions. I list four conclusions here but all must be interpreted with caution. This sample was potentially unusual. All that I really know is that the conclusions are reasonable for these 492 participants.

First, attending to first person accounts of addictive experience has value in the empirical study of addiction. This value was evidenced in the ability of the addictive experience scales to discriminate between addicts and non-addicts and in the significant relationships between addictive experience and recovery and 12-step participation. Second, level of 12-step participation matters. Twelve step affiliates that were more deeply involved reported less disturbed experiences. These changes in experience parallel recovery. Third, I would tentatively conclude that the efficacy of 12-step programs involves both involvement in and affiliation with the experiences afforded by the programs. It is interesting to note that this relationship between steps affiliation and experience transformation resembles the role of identification with the therapist and ego function internalization. That is, identification like affiliation may provide requisite leverage for internalization or vitalization of functional ego structures initially provided by the therapist or program. The observed relationship between 12-step participation and duration of abstinence supports a fourth tentative conclusion, that changes in addictive experience are related to recovery.

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APPENDIX

Appendix I: Addictive Severity

Alcohol Severity.

How often have you experienced the situation described?

1. Drank alcohol during the day?
2. Taken a drink or drinks to help you talk about your feelings or ideas?
3. Taken a drink or drinks so you wouldn't feel tired or to give you a lift when you had to keep going?
4. Had more to drink than you intended to?
5. Gotten sick from drinking? (e.g., vomiting, dizziness, headache)?
6. Gotten into trouble in school, at home, on the job, or with the police because of drinking?
7. Become very sad or felt "down" after having sobered up?
8. Argued with you family or friends because of your drinking?
9. Had a strange experience when drinking (such as seeing something not really there) that came back when you hadn't been drinking for a while?
10. Lost friends because of drinking?
11. Tried to kill yourself while drunk?

Drug Severity.

How often have you experienced the situation described?

1. Taken drugs to improve your thinking and feeling?
2. Taken drugs to help you feel better about a problem?
3. Taken drugs to be more aware of your senses (e.g., sight, hearing, touch, etc.)?

4. Taken drugs so you could enjoy sex more?
5. Taken drugs to help you forget that you feel helpless and worthless?
6. Taken drugs to forget school, work or family pressures?
7. Gotten into trouble with the police because of drugs?
8. Gotten really stoned or wiped out on drugs(more than just high)?
9. Tried to talk a doctor into giving you some prescription drug (e.g., tranquilizers, pain killers, diet pills, etc.)?
10. Spent your spare time buying, selling, taking or talking about drugs?
11. Used alcohol and other drugs at the same time?
12. Continued to take a drug or drugs to avoid the pain of withdrawal?
13. Felt your drug use has kept you from getting what you want out of life?
14. Been accepted into a treatment program because of your drug use?

Addictive Experience

Temporal Flow.

Often time just does not seem to be passing.	Usually times passes rather comfortably for me.
Often time passes more slowly for me than other people.	Usually time passes the same for me as it does for other people.
I often feel like time has stopped.	I usually feel like time is moving.
Usually time seems to flow naturally.	Often time does not seem to be moving at all.
Often time seems to pass too slowly for me.	Usually time seems to pass naturally.

Language Adequacy.

I can usually find the right words to talk about how I feel.	Sometimes there are no words to describe how I feel.
I communicate emotions clearly.	I do not seem to be able to clearly communicate emotions.
I cannot find the words to fit my emotions.	I can usually find the words to fit my emotions.
Communicating my emotions is difficult.	Communicating my emotions is easy.
I cannot seem to find the right words to talk about how I feel.	I can usually find the right words to talk about how I'm feeling.

Connectedness.

I feel alone in the world.	I do not feel alone in the world.
I do not feel loved.	I feel loved.
I never seem to get really close to anyone.	I get really close to people.
I feel shut off from others.	I feel connected to others.
I do not have any truly close friends.	I have truly close friends.

Agency.

My life feels like it is coming apart.	I think I have my life together.
I often feel great.	I feel just horrible sometimes.
I often experience a sense of dread.	I never experience a feeling of dread.
I rarely feel in control of things in my life.	I almost always feel in control of things in my life.
My emotional life is comfortable.	My emotional life is very painful.

12-Step Participation

12-Step Involvement.

I continually surrender to the guidance of a higher power.	I rarely or never surrender to the guidance of a higher power.
How many fourth steps have you completed?	
How many fifth steps have you completed with another person?	
I ask a Higher Power to help me with what I do not like about myself.	I rarely or never ask a Higher Power to help me with what I do not like about myself.
When I sense that I am wrong I always admit it quickly	When I sense that I am wrong I rarely or never admit it quickly.
I often try to feel connected to a Higher Power through prayer.	I rarely or never try to feel connected to a Higher Power through prayer.
I often try to feel connected to a Higher Power through meditation.	I rarely or never try to feel connected to a Higher Power through meditation.
Have you ever sponsored someone?	

12-Step Affiliation.

Step work has awakened my spiritual life.	Step work has not awakened my spiritual life.
A Higher Power helps person make sense of life.	I do not need a Higher Power for my life to make sense.
Prayer is important to me.	Prayer is not important to me.
I can drink or use drugs recreationally.	I cannot drink or use drugs responsibly.
I can drink alcohol and still live a manageable life.	I cannot drink alcohol and still live a manageable life.

Appendix 2: Pencil and Paper Survey from Study 1

Extra-Credit Sign-up Sheet Used in Study 1.

I need your help. I am studying drug addition and how much it helps to be involved in 12-step programs like Alcoholics Anonymous. You can help by filling out this questionnaire. Your participation is completely voluntary.

If you decide to answer the questions, please DO NOT PUT YOUR NAME ON ANY OF THE SHEETS. Just answer as many questions as you can, and return the questionnaire to Suite 215 in the Austin Peay Building. Please let me know if you want a written summary of what I find in the study. You can contact me at 974-6843 or by e-mail (pbusby@ddiscoveries.com).

Instructions for Participation

Step 1. Fill out the DAES questionnaire attached to these instructions.

Step 2. Return the DAES to the DAES inbox.

Step 3. Get an extra credit form from the person at the desk in Suite 215 (this is usually Janet).

Step 4. Fill out the extra credit form (I have partially filled them out)

Step 5. Tear off the white copy and put it into the EXTRA CREDIT TRAY. Keep the yellow copy so that you will be able to prove that you participated in this study.

Step 6. Begin throwing daises in the nearest open field.

Survey 1 Instructions.

DIMENSIONS OF ADDICTIVE EXPERIENCE SCALE

This 92-item questionnaire measures the relationships between recovery practices found in 12-step programs and aspects of psychological well being. Scientific understanding of recovery from alcoholism and addictions is growing but still very much incomplete. Being frank and sincere with your answers when completing this form will assist greatly in our ongoing attempts to understand the nature of addiction and recovery.

Revised 10.9.97

Paul L. Busby
University of Tennessee, Knoxville
Knoxville, TN 37996

Study 1 Survey.

Page 1

INSTRUCTIONS

This questionnaire assesses relationships between practices of 12-step programs and aspects of psychological well being. Mark all your answers on the test form by placing checks in the spaces provided. Where the questionnaire requests more information please provide it in the indicated spaces. There are no right or wrong answers, and you need not be an "expert" to complete this questionnaire. Describe yourself honestly and state your thoughts and feelings as accurately as you can. If you make a mistake or change your mind either erase your incorrect response or make an "X" through the incorrect response and then check the correct response. Please respond to all items that apply to you.

BIOGRAPHICAL INFORMATION

1. Sex: M☐ F☐
2. Age: _____
3. How long have you been without drugs or alcohol? A.☐ Less than 30 days B.☐ 30-90 days C.☐ 90 days to 6 months D.☐ 6 months to 1 year E.☐ Other: Please specify _____

If you do *not* belong to a 12-step program, please skip to *ITEM 23*.

4. Indicate the 12-step program to which you belong: ☐AA ☐NA ☐CA ☐Other: Please specify _____
5. How long have you been in a 12-step program? A.☐ Less than 30 days B.☐ 30-90 days C.☐ 90 days to 6 months D.☐ 6 months to 1 year E.☐ More than 1 year: Please specify _____
6. Have you told your story at a speaker meeting?..... ☐Yes ☐No
7. Have you relapsed since you have been a member of your 12-step program?..... ☐Yes ☐No
8. Have you completed a fourth step inventory?..... ☐Yes ☐No
9. Have you done a fifth step with someone?..... ☐Yes ☐No
10. Have you made a list of the people that you harmed in the past?..... ☐Yes ☐No
11. How many meetings did you attend in the last 7 days? ☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 or more
12. How often do you usually attend meetings? ☐5-7 a week ☐3-4 a week ☐1-2 a week ☐1-3 a month ☐Less than 1 a month

If you do *not* have a sponsor, please skip to *ITEM 19*.

13. How long have you had your current sponsor? ☐0-6 months ☐6-12 months ☐1-2 years ☐2-3 years ☐More than 3 years
14. How many times have you talked to your sponsor in the past week? ☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 or more
15. How many years has your sponsor been sober? ☐ Less than 1 ☐ 1-2 ☐3-4 ☐5-6 ☐6-7 ☐ More than 7 ☐I don't know
16. About how many times per week do you usually talk to your sponsor? ☐0 ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 or more

INSTRUCTIONS ➡ **Respond to items by checking the box that best corresponds to your level of agreement.**

	Strongly Agree	Agree	In Between	Disagree	Strongly Disagree
18. The time I spend with my sponsor(s) is very important in my recovery.	☐	☐	☐	☐	☐
19. I have made direct amends to the people in my past that I harmed.	☐	☐	☐	☐	☐
20. I have to attending meetings to have a sense of well being.	☐	☐	☐	☐	☐
21. Step-work has awakened my spiritual life.	☐	☐	☐	☐	☐
22. When I solve some personal problems, I will be able to drink again.	☐	☐	☐	☐	☐
23. I continually surrender to the guidance of a Higher Power.	☐	☐	☒	☐	☐
24. I have secrets that I will never been able to tell anyone.	☐	☐	☐	☒	☐
25. Prayer is important to me.	☒	☐	☐	☐	☐
26. I ask a Higher Power to remove what I find objectionable in myself.	☐	☐	☒	☐	☐
27. I can drink alcohol and still live a manageable life.	☐	☒	☐	☐	☐
28. A Higher Power helps my life make sense.	☐	☒	☐	☐	☐
29. If people knew everything about me they would not like me.	☐	☐	☐	☒	☐

Go on to the next page...

Page 2

DIMENSIONS OF EXPERIENCE

Check the box that best corresponds to how often the statement is true for you.	Almost Never	Rarely	Sometimes	Often	Almost Always
30. Time seems to go by without my knowing it.	☐	☒	☐	☐	☐
31. I try to feel connected with a higher power through prayer.	☐	☐	☐	☐	☒
32. When I sense that I am wrong I admit it quickly.	☐	☐	☒	☐	☐
33. I get on my knees and pray.	☐	☒	☐	☐	☐
34. I try to feel connected with a higher power through meditation.	☒	☐	☐	☐	☐
35. Feelings are very difficult for me to communicate.	☐	☒	☐	☐	☐
36. I have difficulty trusting people.	☐	☐	☒	☐	☐
37. I am satisfied with my accomplishments.	☐	☐	☒	☐	☐
38. Things seem to be continuously changing.	☐	☐	☐	☐	☒
39. I can clearly identify what emotion I am feeling.	☐	☐	☐	☒	☐
40. I communicate with others easily.	☐	☐	☐	☐	☐
41. I get frightened because my feelings are too strong.	☒	☒	☐	☐	☐
42. I feel like I should work harder than I do.	☐	☐	☒	☐	☐
43. It seems like no one understands me.	☐	☒	☐	☐	☐
44. I make choices easily.	☐	☐	☒	☐	☐
45. I feel great.	☐	☐	☒	☐	☐
46. I get really tied up in intense feelings.	☐	☐	☐	☒	☐
47. I am comfortable being myself.	☐	☐	☒	☐	☐
48. It seems like nothing ever changes.	☒	☐	☐	☐	☐
49. My relationships feel very intimate.	☐	☐	☒	☐	☐
50. I don't know what's going on with my emotions.	☐	☒	☐	☐	☐
51. I feel overwhelmed.	☐	☐	☐	☒	☐
52. I have strong feelings that seem like they will never go away.	☐	☐	☒	☐	☐
53. I want more control over my feelings.	☐	☒	☐	☐	☐
54. I feel useless to others and myself.	☐	☒	☐	☐	☐
55. I regret sharing my feelings with people.	☒	☐	☐	☐	☐
56. I find it difficult to relax.	☐	☐	☒	☐	☐
57. I express my emotions verbally quite easily.	☐	☐	☐	☒	☐
58. I feel out of control.	☐	☒	☐	☐	☐
59. I think that I am too passive.	☐	☐	☒	☐	☐
60. I feel bad and I don't know why.	☐	☐	☒	☐	☐
61. Getting too intimate with people makes me feel uneasy.	☐	☒	☐	☐	☐
62. My emotions are easy for me to understand.	☐	☒	☐	☐	☐

Go on to the next page...

	Almost Never	Rarely	Sometimes	Often	Almost Always
63. Communicating my emotions is difficult for me.	☐	☒	☐	☐	☐
64. I feel connected to the people around me.	☐	☐	☒	☐	☐
65. I feel that I really know who I am.	☐	☐	☒	☐	☐
66. I worry that my feelings will get out of control.	☐	☒	☐	☐	☐
67. I wish I were someone else.	☐	☐	☒	☐	☐
68. Other people seem to manage their emotions more easily than I do.	☐	☐	☒	☐	☐
69. I get confused about what emotion I am feeling.	☐	☒	☐	☐	☐
70. I feel like I am doing things that I didn't choose to do.	☐	☒	☐	☐	☐
71. I enjoy the time I spend by myself.	☐	☐	☐	☒	☐
72. I find it extremely difficult to talk about how I feel.	☐	☒	☐	☐	☐
73. When I am upset it is easy for me to calm myself.	☐	☐	☒	☐	☐
74. My life feels unbearable.	☐	☐	☒	☐	☐
75. I think that I am wasting time.	☐	☒	☐	☐	☐
76. I have feelings I can't quite identify.	☒	☐	☐	☐	☐
77. I don't feel loved by people.	☐	☒	☐	☐	☐
78. I talk about my deepest feelings.	☐	☒	☐	☐	☐
79. I feel trapped.	☒	☐	☐	☐	☐
80. The demands of life seem almost too great.	☐	☐	☐	☒	☐
81. I think that the way I am feeling will last forever.	☐	☐	☒	☐	☐
82. I have an intense sense of loneliness.	☐	☐	☒	☐	☐
83. Words seem to fall short of how I really feel.	☐	☐	☒	☐	☐
84. I feel in control of things in my life.	☐	☒	☐	☐	☐
85. I feel alone in the world.	☐	☐	☒	☐	☐
86. I feel uncomfortable.	☐	☐	☒	☐	☐
87. I can't identify what I am feeling.	☐	☒	☐	☐	☐
88. I feel shut off from others.	☐	☒	☐	☐	☐
89. My feelings scare me.	☒	☐	☐	☐	☐
90. I think that things will never get better.	☐	☒	☐	☐	☐
91. It's easy for me to be around people.	☐	☐	☐	☒	☐
92. I feel good about myself.	☐	☐	☒	☐	☐

Appendix 3: Online Survey Used in Study 2 and Main Study

Addictive Experience and 12-Step Involvement Items.

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left	In Between	I agree with the sentence on the right
1. I can usually find the right words to talk about how I feel.	○ ○ ○ ○ ○	Sometimes there are no words to describe how I feel.
2. I get dull suicidal feelings.	○ ○ ○ ○ ○	I never feel suicidal.
3. Knowing I can talk to my sponsor makes me feel more secure.	○ ○ ○ ○ ○	Knowing I can talk to my sponsor does not make me feel more secure.
4. Often time just does not seem to be passing.	○ ○ ○ ○ ○	Usually times passes rather comfortably for me.
5. I do not know what to do about the problems in my life.	○ ○ ○ ○ ○	I know what to do about the problems in my life.
6. I feel alone in the world.	○ ○ ○ ○ ○	I do not feel alone in the world.
7. I feel trapped.	○ ○ ○ ○ ○	I do not feel trapped.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left	In Between	I agree with the sentence on the right
8. I do not feel loved.	○ ○ ○ ○ ○	I feel loved.
9. My life feels like it's coming apart.	○ ○ ○ ○ ○	I think I have my life together.
10. My life is unmanageable.	○ ○ ○ ○ ○	My life is manageable.
11. I do not need a sponsor to stay sober.	○ ○ ○ ○ ○	I need my sponsor to stay sober.
12. I communicate emotions clearly.	○ ○ ○ ○ ○	I do not seem to be able to clearly communicate emotions.
13. My sponsor is or has been very important in my recovery.	○ ○ ○ ○ ○	My sponsor has never been important in my recovery.
14. I never seem to get really close to anyone.	○ ○ ○ ○ ○	I get really close to people.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left			In Between			I agree with the sentence on the right
15. I often feel disconnected from myself.	○	○	○	○	○	I rarely feel disconnected from myself.
16. Often time passes more slowly for me than other people.	○	○	○	○	○	Usually time passes the same for me as it does for other people.
17. I feel shut off from others.	○	○	○	○	○	I feel connected to others.
18. I do not have any truly close friends.	○	○	○	○	○	I have truly close friends.
19. I think I would make it just fine without a sponsor.	○	○	○	○	○	I do not think I could make it without my sponsor.
20. I often feel great.	○	○	○	○	○	I feel just horrible sometimes.
21. I often feel like I am not being myself.	○	○	○	○	○	I almost always feel like I am being myself.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left			In Between			I agree with the sentence on the right
22. I often feel like time has stopped.	○	○	○	○	○	I usually feel like time is moving.
23. I cannot find words to fit my emotions.	○	○	○	○	○	I can usually find the words to fit my emotions.
24. I often experience a sense of dread.	○	○	○	○	○	I never experience a feeling of dread.
25. I rarely feel hollow inside.	○	○	○	○	○	I often feel hollow inside.
26. I rarely feel in control of things in my life.	○	○	○	○	○	I almost always feel in control of things in my life.
27. I feel really empty inside.	○	○	○	○	○	I do not feel empty inside.
28. I'm out of touch with my feelings.	○	○	○	○	○	I'm in touch with my feelings.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left			In Between			I agree with the sentence on the right
29. My emotional life is comfortable.	○	○	○	○	○	My emotional life is very painful.
30. Communicating my emotions is difficult.	○	○	○	○	○	Communicating my emotions is easy.
31. I cannot stand being me sometimes.	○	○	○	○	○	I genuinely like myself most of the time.
32. I cannot seem to find the words to talk about how I feel.	○	○	○	○	○	I can usually find the right words to talk about how I'm feeling.
33. Usually time seems to flow naturally.	○	○	○	○	○	Often time does not seem to be moving at all.
34. I depend on my sponsor for help when I need it.	○	○	○	○	○	I do not depend on a sponsor to help me when I need it.
35. Often time seems to pass too slowly for me.	○	○	○	○	○	Usually time seems to pass naturally.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left			In Between			I agree with the sentence on the right
36. I often try to feel connected to a higher power through prayer.	○	○	○	○	○	I rarely or never try to feel connected to a higher power through prayer.
37. I can drink or use drugs recreationally.	○	○	○	○	○	I can not drink or use drugs responsibly.
38. Prayer is important to me.	○	○	○	○	○	Prayer is not important to me.
39. Step work has awakened my spiritual life.	○	○	○	○	○	Step work has not awakened my spiritual life.
40. I can drink alcohol and still live a manageable life.	○	○	○	○	○	I can not drink alcohol and still live a manageable life.
41. I continually surrender to the guidance of a higher power.	○	○	○	○	○	I rarely or never surrender to the guidance of a higher power.
42. I often get on my knees and pray.	○	○	○	○	○	I rarely or never get on my knees and pray.

NEXT

For each sentence pair please click the button that corresponds with your level of agreement. If you agree most with the sentence on the left then click one of the two leftmost buttons. If you are in between or agree with neither sentence then click the button in the center. If you agree most with the sentence on the right then click one of the two rightmost buttons.

I agree with the sentence on the left			In Between			I agree with the sentence on the right
43. A higher power helps my life make sense.	○	○	○	○	○	I do not need a Higher Power for my life to make sense to me.
44. Knowing that I can go to an AA meeting is a great comfort to me.	○	○	○	○	○	Knowing that I can go to an AA meeting does not make me feel more comfortable.
45. When I solve some personal problems I'll be able to drink again.	○	○	○	○	○	Because I am an alcoholic I know that I'll never be able to drink responsibly.
46. I ask a Higher Power to help me with what I do not like about myself.	○	○	○	○	○	I rarely or never ask a Higher Power to help me with what I do not like about myself.
47. I often try to feel connected to my higher power through meditation.	○	○	○	○	○	I rarely or never try to feel connected to a higher power through meditation.
48. I have to attend AA meetings to feel OK.	○	○	○	○	○	I do not have to attend meetings to feel OK.
49. When I sense that I am wrong I always admit it quickly.	○	○	○	○	○	When I sense that I am wrong I rarely or never admit it quickly.

NEXT

12-Step Program Participation Items.

Please answer the following questions about your experiences in 12-step programs by choosing from the options presented in the pulldown menus. Recovery

1. How long have you been completely without drugs or alcohol?	Select
2. Which 12-step Program do you go to most of the time?	Select
3. How many fourth steps have you completed?	Select
4. How many fifth steps have you completed with another person?	Select
5. Do you consider yourself to be an alcoholic and/or drug addict?	Select
6. Have you relapsed since you joined a 12-step program?	Select
7. How many meetings did you attend in the last 7 days?	Select
8. How often do you usually attend meetings?	Select
9. How long have you had your current sponsor?	Select
10. How many times did you talk to your sponsor last week?	Select
11. How many years has your sponsor been sober?	Select
12. How many times a week do you usually talk to your sponsor?	Select
13. Have you ever sponsored someone?	Select
14. How important is being a sponsor to your sobriety?	Select

Next

SASSI Addiction Severity Items.

Regarding alcohol and drugs: How often have you experienced the situation described?	Response Key 1=Never 2=Once or twice 3=Several times 4=Repeatedly
1. Drank alcohol during the day?	1 ○ 2 ○ 3 ○ 4 ○
2. Taken a drink or drinks to help you talk about your feelings or ideas?	1 ○ 2 ○ 3 ○ 4 ○
3. Taken a drink or drinks so you wouldn't feel tired or to give you a lift when you had to keep going?	1 ○ 2 ○ 3 ○ 4 ○
4. Had more to drink than you intended to?	1 ○ 2 ○ 3 ○ 4 ○
5. Gotten sick from drinking? (e.g., vomiting, dizziness, headache)?	1 ○ 2 ○ 3 ○ 4 ○
6. Gotten into trouble in school, at home, on the job, or with the police because of drinking?	1 ○ 2 ○ 3 ○ 4 ○
7. Become very sad or felt "down" after having sobered up?	1 ○ 2 ○ 3 ○ 4 ○
8. Argued with you family or friends because of your drinking?	1 ○ 2 ○ 3 ○ 4 ○
9. Had a strange experience when drinking (such as seeing something not really there) that came back when you hadn't been drinking for a while?	1 ○ 2 ○ 3 ○ 4 ○
10. Lost friends because of drinking?	1 ○ 2 ○ 3 ○ 4 ○
11. Tried to kill yourself while drunk?	1 ○ 2 ○ 3 ○ 4 ○
12. Taken drugs to improve your thinking and feeling?	1 ○ 2 ○ 3 ○ 4 ○
13. Taken drugs to help you feel better about a problem?	1 ○ 2 ○ 3 ○ 4 ○
14. Taken drugs to be more aware of your senses (e.g., sight, hearing, touch, etc.)?	1 ○ 2 ○ 3 ○ 4 ○
15. Taken drugs so you could enjoy sex more?	1 ○ 2 ○ 3 ○ 4 ○
16. Taken drugs to help you forget that you feel helpless and worthless?	1 ○ 2 ○ 3 ○ 4 ○
17. Taken drugs to forget school, work or family pressures?	1 ○ 2 ○ 3 ○ 4 ○
18. Gotten into trouble with the police because of drugs?	1 ○ 2 ○ 3 ○ 4 ○
19. Gotten really stoned or wiped out on drugs(more than just high)?	1 ○ 2 ○ 3 ○ 4 ○
20. Tried to talk a doctor into giving you some prescription drug (e.g., tranquilizers, pain killers, diet pills, etc.)?	1 ○ 2 ○ 3 ○ 4 ○
21. Spent your spare time buying, selling, taking or talking about drugs?	1 ○ 2 ○ 3 ○ 4 ○
22. Used alcohol and other drugs at the same time?	1 ○ 2 ○ 3 ○ 4 ○
23. Continued to take a drug or drugs to avoid the pain of withdrawal?	1 ○ 2 ○ 3 ○ 4 ○
24. Felt your drug use has kept you from getting what you want out of life?	1 ○ 2 ○ 3 ○ 4 ○
25. Been accepted into a treatment program because of your drug use?	1 ○ 2 ○ 3 ○ 4 ○

Next!

Demographic Data.

Almost finished! The last 7 questions are demographics.
Please answer as indicated and then click "send me."

1. How old are you? Select
2. What is your sex? Select
3. What is marital status? Select
4. What is your ethnic origin? Select
5. What is you income level? Select
6. What is your employment level? Select
7. What is you education level? Select

See Results

Appendix 4: Survey Feedback to Respondents.

Results Overview.

Demographics | Program Participation | Addiction Severity | Experiences | Contact Me|?

Thanks for taking this survey! **Use the links above to access your feedback.** You can print out your results by using the print option in your browser's file menu. To read an explanation of this survey click here or on the ? above.

The results are divided into four sections. Each section gives you both individual and comparison information. I hope that you find them informative and enjoyable.
(1) Experience Dimensions: Experiences of time, language, effectiveness, and connection
(2) Program Participation: Steps and practices of the program*,
(3) Addiction Severity: Experiences with drugs and alcohol, and
(4) Demographics: Age, sex, ethnicity and the like.

* Visible only if you are in a 12-Step program

Demographic Results.

Demographics | Program Participation | Addiction Severity | Experiences | Contact Me|?

This page contains demographic information of all the people who have taken the survey. Your answers are shown as the **highlighted text**

EDUCATION		Explain
Answers	**Percentage**	**Total**
Some High School	2.58%	3
High School	9.48%	11
Some College	55.17%	64
Bachellor's Degree	21.55%	25
Masters Degree	8.62%	10
Doctoral Degree	2.58%	3
Associates Degree	0%	0

EMPLOYMENT		Explain
Answers	**Percentage**	**Total**
Full Time	78.72%	74
Part Time	21.27%	20
Unemployed	0%	0
Retired	0%	0

ETHNICITY		Explain
Answers	**Percentage**	**Total**
Black	1.83%	2
White	97.24%	106
Asian	0.91%	1
Hispanic	0%	0
Other	0%	0

INCOME		Explain
Answers	**Percentage**	**Total**
0-14.9	15.17%	17
15-24.9	17.85%	20
25-44.9	30.35%	34
45-64.9	25%	28
65 and up	11.60%	13

MARITAL STATUS		Explain
Answers	**Percentage**	**Total**
Married	39.65%	46
Single	30.17%	35
Divorced	30.17%	35
Widowed	0%	0

GENDER		Explain
Answers	**Percentage**	**Total**
Male	63.04%	61
Female	46.95%	54

AGE	
Average Age	41.25

12-Step Program Participation Results.

This page reports on four dimensions associated with 12-Step program participation. Your answer is shown as the highlighted text

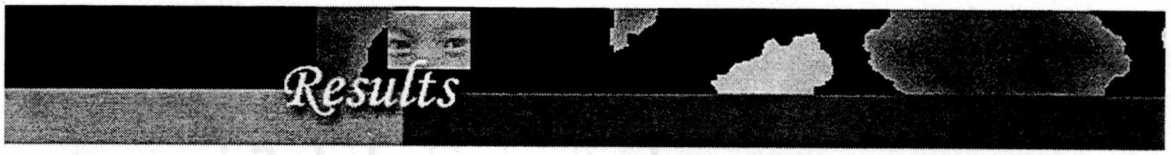
Which 12-Step Program?		Explain
Answers	**Percentage**	**Total**
Alcoholics Anonymous	65%	78
Cocaine Anonymous	2.5%	3
Narcotics Anonymous	26.66%	32
Other Program	5.83%	7
Marijuana Anonymous	0%	0

How often do you go to meetings?		Explain
Answers	**Percentage**	**Total**
Less than once a month	38.88%	14
1 to 3 times a month	16.66%	6
1 or 2 times a week	5.55%	2
3 or 4 times a week	5.55%	2
More than 4 a week	33.33%	12

Degree of Program Affiliation		Explain
Answers	**Percentage**	**Total**
Little Affiliation	13.33%	16
Moderate Affiliation	9.16%	11
Affiliation	5.83%	7
High Affiliation	26.66%	32
Very High Affiliation	45.0%	54

Amount of Program Involvement		Explain
Answers	**Percentage**	**Total**
Little Involvement	34.16%	41
Moderate Involvement	15.83%	19
Involvement	20.83%	25
High Involvement	18.33%	22
Very High Involvement	10.83%	13

Addiction Severity Results.



Demographics | Program Participation | **Addiction Severity** | Experiences | Contact Me|?

This page reports on five dimensions related to chemical dependence severity. Your answer is shown as the **highlighted text**

TOTAL SOBRIETY TIME		Explain
Answers	**Percentage**	**Total**
Less than 30 Days	3.33%	4
1-3 Months	4.16%	5
3-6 Months	3.33%	4
6 Months to 1 Year	8.33%	10
1-2 Years	8.33%	10
2-4 Years	28.33%	34
4-7 Years	22.5%	27
More than 7 Years	21.66%	26

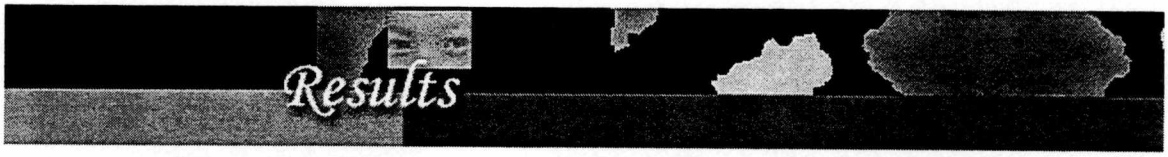
RELAPSE FREQUENCY		Explain
Answers	**Percentage**	**Total**
Never	62.5%	75
One Time	18.33%	22
Two or Three Times	5.83%	7
More than 3 Times	13.33%	16

SEVERITY OF ALCOHOL ADDICTION		Explain
Answers	**Percentage**	**Total**
Mildly or Not Addicted	15.83%	19
Moderately Addicted	15%	18
Somewhat Severely Addicted	44.16%	53
Severely Addicted	25%	30

SEVERITY OF DRUG ADDICTION		Explain
Answers	**Percentage**	**Total**
Mildly or Not Addicted	22.5%	27
Moderately Addicted	23.33%	28
Somewhat Severely Addicted	32.5%	39
Severely Addicted	21.66%	26

CONSIDER YOURSELF TO BE AN ADDICT?		Explain
Answers	**Percentage**	**Total**
No, I don't	5.04%	6
Yes, I do	94.95%	113

Addictive Experience Dimension Results.



This page reports on the Dimensions of Addictive Experience(DAES). Your answers are shown on the left. Group averages are on the right.

PERCEIVED AGENCY — Explain

Your Average: Less — More

Group Average: Less — More

PERCEIVED ADEQUACY OF LANGUAGE — Explain

Your Average: Less — More

Group Average: Less — More

PERCEIVED CONNECTION — Explain

Your Average: Less — More

Group Average: Less — More

PERCEIVED FLOW OF TIME — Explain

Your Average: Less — More

Group Average: Less — More

Explanation of Survey.

EXPLANATION OF SURVEY

This survey is divided into four primary sections. Each section's dimensions have a distinct focus. The table below provides an overview of these sections, the dimensions within each, and a summary of the reason that each dimension was included.

SECTION	*DIMENSIONS*	*REASON FOR INCLUSION*
DIMENSIONS OF ADDICTIVE EXPERIENCE	1. Perceived ability to communicate emotions 2. Perception of the flow of time 3. Perceived agency (self efficacy) 4. Perceived connection	These dimensions of experience were found to be distrurbed in addicts.
ADDICTION SEVERITY	1. Alcohol severity 2. Other drug severity	To get a sense of how far addiction has progressed for the person taking the survey
PROGRAM PARTICIPATION	1. Program involvement 2. Program affiliation/salience	To see the relationships between aspects of 12-step programs and addictive severity and subjective experiences and perceptions.
DEMOGRAPHICS	Age, sex, marital status, cultural background, income, employment status, and educational level	To get a sense of who is taking the survey (e.g, men or women, older versus younger people)

DIMENSIONS OF ADDICTIVE EXPERIENCE

There are a number of assumptions that went into the creation of this survey. First, it is assumed that in order to understand addiction one must understand the first-hand emotional and perceptual experiences of the addict. That is, the heart of addiction resides in the subjective experience of the addict, which is characterized by overwhelming emotional experiences for which language is inadequate. This notion is implicit in the alcoholic prayer as it highlights that addicts find it difficult to

experience serenity. Second, 12-step programs are participative programs whose therapeutic efficacy derives from their ability to make meaningful changes in the lived experience of addicts. Said in AA vernacular, by working the steps addicts work their way to sobriety, which is a good and meaningful life without drugs or alcohol.

Accordingly, this survey measures four universal, experiential dimesions found in clinical interviews to be troublesome for addicts. These experiential dimensions include the experience of time, personal agency, language for expression of emotion, and connection to the self and others. The idea that the emotional lives of addicts are disturbed goes all the way back to the early days of psychoanalytic thought, so it's not new. What is new is the attempt to isolate particular dimensions of experience and to measure them.

Now let's define each of these dimensions in turn. Each dimension of exprience is not unique to addicts. What is unique to addicts is where they as a population fall along each of these dimensions.

Perceived Agency

This dimensions deals with ones perception of ones life as manageable/comfortable or unmanageable/uncomfortable. A person who is well-functioning would tend to see themselves as able to effect changes in both their emotional lives as well as with their daily problems. In contrast addicts are more likely to experience themselves as at the whim of uncontrollable circumstance rather than as an active agent in the ongoing construction of their lives.

Perceived Adequacy of Language

Humans communicate their emotional lives through language. A health person is able to transform their emotions into words, to render their emotional experiences symbolically, and to perceive language itself as adequate to the expression of their emotional life. The struggle for adequate emotional expression is thought to be universal; to some extent everyone is doing it. However, addicts tend to have difficulty expressing their emotional selves (i.e., talking about how they feel). Language for addicts tends to be experienced as inadequate to the task of emotional expression. When emotions are not rendered symbolically they, one might say, "stay in" the person. What cannot be rendered symbolically must be enacted or lived out in the world. Clinical research suggests that not being able to talk you feel, to render feelings symbolically, leave one with a chronic sense of overwhelm that may be experienced consciously as a mix of anxiety, frustration, depression and despair. 12-Step staples like talking in meetings, readings at the beginnings of meetings, step work, and slogans hung on the walls all attest to the view that addicts need practice with the language of emotions. Healthier persons should experience language as more adequate to emotional expression than less healthy persons.

Perceived Connection

We're social animals, and one way that we experience our relationships with others is through perceived connection. This dimension ranges from alienated/not belonging to connected/belonging. We should expect healthier people, for example,

to have greater capacities to experience a belonging and connectedness with others.

The Perceived Connection dimension also incorporates ones sense of connection with oneself. Our hypothetically healthier person should typically experience their emotions as an integral part of their ongoing functioning, as an ongoing source of information adding richness and texture to life. On the other hand, addicts tend to experience themselves as alienated from others. They have difficulty experiencing a sense of belonging even in intimate relationships. Further, far from being a source of richness and texture their emotional lives tend to be experienced as alien, impenetrable, and even hostile.

Perceived Flow of Time

Time can be experienced as standing still or as moving naturally. It is assumed that normal perception of time involves the experience of time as moving or passing and that this experience is universal. Addicts, it is thought, tend to experience time as not moving. For example, addicts talk about "being stuck". They say, "Nothing ever changes," or "My life feels like it is on hold." While it is pretty abstract these sort of comments suggest that rather than flowing or moving naturally time for addicts is experienced as stopped or arrested.

SEVERITY OF ADDICTION

This report consists of five dimensions depending upon the version of the survey that you took. TOTAL SOBRIETY TIME is the total amount of time that you have been continuously sober. RELAPSE FREQUENCY is the estimated number of times since joining a 12-step program that they have started using again. Addiction severity is measured using a psychological screening tool developed in 1968. It consists of items dealing with SEVERITY OF ALCOHOL ADDICTION and items dealing with SEVERITY OF DRUG ADDICTION. The last item reports on whether people considered themselves to be addicts. CONSIDER YOURSELF TO BE AN ADDICT is interesting because it only pertains to people in 12-step programs. If everyone in the program has internalized the first step then you would expect that the total for "No, I don't" would be 0. Knowing how severe addiction is for someone allows me to ask some interesting questions. One can test whether severely versus moderately addicted persons are different in their usage of 12-step programs and whether severity is related to how their subjective experiences change across time.

12-STEP PROGRAM PARTICIPATION

This section was designed to assess two aspects of participation in 12-step program, affiliation and involvement. Items that measure affiliation deal with perceived importance of different aspects of 12-step programs. For example, if you regard going to meetings as VITAL to your sobriety then your level of affiliation with that aspect is pretty high. In contrast, if you see going to meetings as only loosely related to your sobriety or well being then your level of affiliation is lower. The

second aspect measured by this section, involvement, attempts to measure the extent to which you are involved in 12-step activities regardless of what you think or feel about them. So, someone who goes to 5 meetings a week has a higher level of involvement at least with respect to attendance than someone who goes once a month. The same logic applies to other areas of affiliation and involvement.

DEMOGRAPHICS

The demographic section ask some fairly standard question about age, sex, income, education, etc.

VITA

Paul's research interests in graduate school were rather ecclectic including environmental, organizational and social topics. While working as a research assistant he co-authored a number of publications including a review of environmental psychology in Annual Review of Psychology. He currently works in a sofware development company in Knoxville, Tennessee. There he directs engineers and conceives and designs internet-based products focusing mainly on the people-product interactions. Paul is fascinated with inventiveness and creativity. His immediate career interests are decidely applied, but he plans on teaching classes part-time.