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Concepts of Addiction: Assessing the Beliefs of Addiction in University and Treatment Center Populations

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Concepts of Addiction:
Assessing the Beliefs of Addiction in University and Treatment Center Populations

Krystle M. Balhan
Illinois Wesleyan University
Abstract

This study sought to identify differences in the beliefs about addiction between a sample of university students ($N=81$) and a sample of clients diagnosed with substance abuse or dependence from a drug/alcohol treatment center ($N=14$). It was hypothesized that treatment center clients would present beliefs that correspond to the disease concept of addiction (Jellinek 1960), while members of the university sample would express more personal or environmental attitudes towards addiction. To assess these potential differences, a survey questionnaire based on the Addiction Belief Inventory (ABI) was administered to both samples (Luke, Ribisl, Walton, and Davidson, 2002). Results of $t$-tests showed that university students and treatment center clients differed in their responses on the Inability to Control [$t(93)=-4.12$, $p<0.05$], Chronic Disease [$t(93)=-3.22$, $p<0.05$], and Responsibility for Action [$t(93)=3.22$, $p<0.05$] subscales. Limitations of the current study and suggestions for future research are also discussed.
Assessing the Beliefs of Addiction in University and Treatment Center Populations

Americans spend an astounding $112.6 billion on alcohol each year (Helmuth, 2003, ¶ 1), with college students contributing $5.5 billion to that sum (http://www.psu.edu/dept/ATOD/aip.html, ¶ 1). On illicit drugs, Americans spend $64 billion (DEA Intelligence Division, 2002, ¶ 10): $39 to $77 billion on cocaine and $10 to $22 billion on heroin (Abt Associates, 2000, as cited in http://drugwarfacts.org/economi.htm, 2004, ¶ 9).

Approximately six percent of the American household population over 12 years old use illegal drugs on a regular basis (http://www.ncjrs.org/htm/chapter2.htm, ¶ 1). Though most Americans believe that drug abuse is not their problem, about 45% of the population knows someone with a substance abuse problem (http://www.ncjrs.org/htm/chapter2.htm, ¶ 2).

The prevalence of substance abuse has given rise to many different concepts of alcoholism and addiction. Concepts, or attitudes, people have towards the nature of addiction vary greatly and are typically based upon an existing theory on the causes, etiology, and treatment of addiction. However, the attitudes do not suggest scientific truth and do not necessarily represent the current state of addiction treatment. Many concepts have emerged through the years (i.e. moral/volitional, psychoanalytic, family-interaction, Alcoholics Anonymous, adaptive, etc.); yet much of recent research supports the disease concept, or medical model of addiction.

In light of the multitude of models focused on explaining alcoholism and addiction, the current study examines the attitudes of an alcohol or substance abusing
group and those of a non-abusing group. Residential clients in a treatment center comprised the substance abusing sample, while university students were surveyed to form the non-abusing sample. The study seeks to identify aspects of the disease and adaptive models of addiction in the attitudes of respondents from both samples.

Overview of Existing Concepts of Addiction

**Moral/Volitional concept.** The moral model finds alcoholics lacking in moral fortitude and suffering from alcoholism is a result of their drinking (Siegler, 1968; Miller and Kurtz, 1994). Proponents of this model deny that alcoholism is in any way an illness. Any reported “loss of control” is interpreted as evidence of the alcoholic’s weak character and depravity.

**Psychoanalytic concept.** The psychoanalytic model defines alcoholism as the result of an underlying neurosis (Siegler, 1968; Ward, 1985). Treatment consists of psychotherapy which seeks to lead the alcoholic to a mature lifestyle by penetrating early childhood emotions and memories. Therapy is typically a long and involved process with minimal success. The psychoanalytic model gave rise to notion of the alcoholic personality, which is the idea that certain immature negative personality traits are common to all alcoholics (Miller, 1994).

**Family interaction concept.** Family-interaction proponents conceive of alcoholism as a role assigned to an individual member of a family while the other relatives play complementary parts in the lifestyle of addiction (Siegler, 1968; Ward, 1985). Because the family members define themselves by the roles they play, removing the key actor—the alcoholic—results in the other members trying to restore him/her to an alcoholic state. A life of sobriety is possible with family therapy.
Alcoholics Anonymous concept. The Alcoholics Anonymous (AA) model states that alcoholism is a spiritual problem (Siegler, 1968; Miller, 1994). They identify a need for a spiritual recovery in order to lead a life of sobriety. Participation in the brotherhood of AA helps the recovering alcoholic to maintain his/her relationship with a healing Higher Power. The AA model also states that untreated, alcoholism is a progressive and fatal disease, specifically a disease of the mind (Ward, 1985).

The disease concept. The disease concept, or medical model, describes alcoholism as a progressive disease with its own set of symptoms (Jellinek, 1960; Miller, 1994; Siegler, 1960; Ward, 1985). Often, the disease is hereditary and can be fatal. Alcoholics are people whose body chemistry allows them to become addicted more readily than the general population. Under the medical model, alcoholism must be identified as a primary disorder and treated as such (Siegler, 1968).

Early research on alcoholism as a disease was done by Jellinek (1960) who authored *The Disease Concept of Alcoholism*, a seminal work in the field, which is a compilation of data obtained by surveying over 2000 Alcoholics Anonymous members. The study revealed a pattern to the appearance of symptoms reported by the participants and a progression of increasing dysfunction. Jellinek (1960) grouped these symptoms, including physiological tolerance and withdrawal, into four phases of alcoholism: prealcoholic, prodromal, crucial, and chronic stages.

Current research on addiction has supported the disease concept of addiction (Davis, 1974; Witte, Pinto, Ansseau, and Verbanck, 2003; Jacob, Waterman, Heath, True, Bucholz, Haber, Scherrer, and Qiang, 2003). Because research has been upholding the medical model, many treatment centers teach and conduct therapy by the disease concept.
It also has much clinical appeal because it gives both the treatment provider and client a definite starting point (Shaffer, 1991), and permits the treatment provider to develop a prescriptive treatment plan.

The adaptive model. The disease concept of alcoholism and addiction has dominated the public’s view of addiction and is often employed by 12-step programs and other treatment providers; however, it has fallen out of favor with some researchers (Alexander, 1987; Fingarette, 1991; Fingarette, 1988; Shaffer, 1985). Alexander (1987) proposed the adaptive model of addiction, which defines addiction at a failure to reach adult levels of integration. This failure drives the individual to find substitutes to provide meaning, social support, and organization.

Fingarette (1991) and Shaffer (1985) eschew the disease concept of alcoholism because it lacks a true medical definition. As a heuristic for clinical intervention and treatment, the disease concept serves a purpose; however, if its purpose is only to be an antidote for the guilt an individual feels over his/her substance use, then other models should be considered. Fingarette challenges Jellinek’s (1960) research since the data were drawn from a sample of Alcoholics Anonymous members who may not be representative of all heavy drinkers.

Research on the adaptive model of addiction proposes an alternative to the disease concept. However, the model does not account for physiological dependence or any of the biological bases of addiction.

Summary

These different concepts of addiction were created out of research; however, some have fallen out of professional acceptance, such as the moral/volitional model. Even
though these outdated concepts do not accurately describe the nature of addiction, individuals may hold beliefs related to these concepts. That is, research suggests that addiction does not result from weak morals, yet a person may believe that addicts lack moral fortitude.

*Addiction Belief Measures*

There are several measurement instruments to assess participants’ attitudes or beliefs about addiction (Schaler, 1995; Luke, Ribisl, Walton, and Davidson, 2002). Schaler’s Addiction Belief Scale assesses the beliefs among treatment providers, while the Addiction Belief Inventory (ABI) by Luke et al. is designed for the drug rehabilitation clients and the general public. Both surveys differentiate between the disease and adaptive models of addiction.

*Addiction Belief Inventory.* Because the current study does not assess treatment providers’ attitudes, it uses a variation of the 64-item ABI to assess the concepts of addiction between university and treatment center samples. The ABI consists of questions pertaining to eight subscales: inability to control usage, chronic disease, reliance on experts, responsibility for actions and substance use, responsibility for recovery, genetic basis, coping skill, moral weakness (Luke et al., 2002). Refer to Table 1 for a list of definitions. The researchers found that the ABI had high internal consistency as well as test-retest stability.

The ABI has been used in other studies on addiction beliefs (Jordan, Davidson, Herman, and BootsMiller, 2002; Agrawal, Neale, Prescott, and Kendler, 2004). Jordan et al. (2002) used the ABI to assess the addiction beliefs of patients with both single and dual diagnoses with mental disorders. The study by Agrawal et al. (2004) assessed the
comorbid use of cannabis and other illicit drugs and referenced the ABI and its evaluation of numerous concepts of addiction as an emphasis of the need for a biopsychosocial model of addiction.

**Purpose and Hypotheses**

The purpose of the current study is to identify the attitudes and beliefs about addiction among two differing populations—university students and treatment center clients. This identification may lead to new areas for education about the nature of addiction. Lemieux and Schroeder (2004) found that attitude change makes an important difference in therapeutic relationships and propose that other populations may also benefit from more knowledge on the disease nature of addiction.

The current study hypothesizes that non-substance abusers and abusers will report different attitudes towards addiction, as suggested by Doctor and Sklov (1973). It is hypothesized that students in the university sample will have beliefs on addiction suggesting that it is a personal choice, that the addict or alcoholic is responsible for his/her addiction and behavior. This is one of the oldest concepts of addiction, yet it is still present in the general population as suggested by Alexander (1987). University students are also expected to report that addiction is not a chronic disease. In this case, the university sample would be identified as a target area for future education on the disease aspects of addiction.

While it is possible that the treatment center sample will share some beliefs of addiction, several differences are likely to be reported. Treatment center participants are expected to report belief in an addict’s inability to control his/her usage. This is step one of most 12-step programs, and the treatment center clients are involved in these
programs. Luke et al. (2002) found that treatment center clients reported that addiction is a disease, and that addicts are responsible for their recovery. The same is hypothesized for the current study.

Method

Participants

*University sample.* Students at a small, private liberal arts university in the Midwest made up the university sample. The participants were selected by one of two methods. Some were drawn from the psychology subject pool and received credit for their General Psychology class; others were selected from senior seminar classes in a variety of academic disciplines. A total of 81 students agreed to participate, signed the informed consent forms, and completed the survey. This sample was comprised of 36 (44.4%) men and 45 (55.5%) women who were primarily white (87.7%). Ninety-eight percent of the students were between the ages of 17 and 22. There were 33 (40.7%) freshman, 13 (16.0%) sophomores, 12 (14.8%) juniors, and 22 (27.2%) seniors. No members of the university sample identified him/herself as an alcoholic or addict.

*Treatment Center sample.* A second sample of participants was recruited from the clientele of a governmentally funded detoxification and rehabilitation center in the same town as the university. Each participant had previously received a diagnosis of either substance abuse or substance dependence at the time of admission to treatment. A total of 14 clients agreed to participate out of a possible 24. They signed the informed consent forms, and completed the questionnaire. The sample included 7 (50%) males, 6 (42.9%) females, and one participant who did not report demographic data. The participants were primarily white (78.6%). Eighty-five percent of the clients were over
22 years old. All members (100%) of the treatment sample identified themselves as alcoholics or addicts.

**Measure**

A variation of the Addiction Belief Inventory (Luke et al., 2002) was administered to all participants. The inventory consisted of 30 items assessing addiction beliefs (Appendix A). Several demographic questions about sex, age, race, and education were also included. The survey contained questions about substance use treatment history as well as attendance at Alcoholics Anonymous/Narcotics Anonymous/Cocaine Anonymous (AA/NA/CA) group meetings.

The ABI uses a 5-point Likert scale format where 1 equals *strongly disagree*, and 5 equals *strongly agree* (Luke et al., 2002). The Inability to Control and Responsibility for Action subscales were reversed coded.

Each subscale in the ABI was analyzed for internal reliability using Cronbach’s alpha. Alpha scores are listed in Table 1. The Moral Weakness subscale had low reliability (.53), so item three of that subscale was removed. Its removal raised the reliability of the subscale to 0.61.

**Procedure**

*University sample.* The study was approved by the university’s institutional review board. Students met as a group for a one hour session in the evening. The group of participants was briefed on informed consent, and each participant signed the consent papers (Appendix B). The survey was then administered by the researcher or research assistant. After participants completed the survey, they placed it in an envelope to ensure
their anonymity; the researcher or assistants never collected the completed surveys directly from the participants.

Upon completing the survey, the participants then received a debriefing form that further explained the nature of the project and provided them with numbers to the university’s Counseling Center, the Crisis Team, and university security in case any part of the survey was stressful or upsetting to the participants (Appendix C).

_Treatment Center sample._ The study underwent a second review by the treatment center’s IRB and was approved. The clients who agreed to participate used one hour of their evening personal time to complete the survey. Informed consent was explained to the clients upon distribution of the forms; each participant then signed the forms. The researcher administered the surveys, and the collection was the same as the university sample. The clients also received a debriefing form with referrals to the Crisis Team and their primary counselors should any potentially upsetting issue arise.

Results

Means and standard deviations for each subscale were calculated for both the university and treatment center samples. The results are presented in Table 2. Significant correlations between the subscales are reported in Table 3, $p < 0.05$.

To compare the university sample’s responses to those of the treatment center sample, $t$ tests were completed. As predicted, significant differences were found in the Inability to Control, Chronic Disease, and Responsibility for Action subscales (Figure 1). On the inability to control subscale, the treatment center sample ($M=4.27, SD=0.78$) scored higher than the university sample ($M=3.42, SD=0.70$), $t(93)=-4.12, p<0.05$. 
A second significant difference was found on the Chronic Disease subscale. The treatment center sample \((M=4.27, SD=1.06)\) reported higher scores than the university sample \((M=3.54, SD=0.72)\), \(t(93)=-3.22, p<0.05\).

Students and treatment center clients reported significantly different responses on the Responsibility for Action subscale. The university sample \((M=4.17, SD=0.69)\) reported more agreement that addicts are responsible for their behaviors than the treatment center sample \((M=3.48, SD=1.05)\), \(t(93)=3.22, p<0.05\).

\(T\)-tests were also completed to identify any significant differences in subscale responses across gender. Significant differences were reported in the Chronic Disease, Genetic Basis, and Moral Weakness subscales (Figure 2).

Females \((M=3.84, SD=0.68)\) reported significantly higher scores than males \((M=3.46, SD=0.90)\) on the chronic disease subscale, \(t(92)=-2.32, p<0.05\). Females \((M=3.10, SD=0.91)\) also scored higher on the Genetic Basis subscale, reporting significantly higher agreement with the concept than males \((M=2.57, SD=0.74)\), \(t(92)=-3.07, p<0.05\).

The reverse was reported for the Moral Weakness subscale; males \((M=3.24, SD=0.69)\) scored higher than females \((M=2.95, SD=0.58)\), \(t(92)=2.24, p<0.05\). These results should be interpreted with caution because the reliability of the Moral Weakness subscale \((\alpha=0.53)\) was lower than ideal and was adjusted by eliminating one item on the subscale \((\alpha=0.61)\) prior to the \(t\)-tests.

Race was also examined as a demographic variable. Participants self-identified as Asian, Hispanic, Black/African American, White, or Other. Only one person identified as Other, so that participant’s responses were excluded from the test. A series of one-
way ANOVAs revealed significant differences for the Chronic Disease \( (F(3)=2.84, \ p<0.05) \) and Responsibility for Action \( (F(3)=3.17, \ p<0.05) \) subscales. Post-hoc Bonferroni tests did not reveal any significant differences between the four groups for the Chronic disease subscale. For the Responsibility for Action subscale, the post-hoc Bonferroni test revealed a significant difference between Black/African American \( (M=3.20, \ SD=0.30) \) and White \( (M=4.16, \ SD=0.77) \) participants’ responses, \( p<0.05 \).

**Discussion**

The present study examined the concepts of addiction held by university students and treatment center clients. The hypothesis that the two samples would report different beliefs for the Inability to Control, Chronic Disease, and Responsibility for Action scales was supported. Results suggested that university students tended to place the locus of control inside the addict him or herself, whereas treatment center clients externalized control.

Students reported that they believed addicts could control their substance usage, and they supported the idea that addicts could return to socially appropriate, controlled usage. The treatment center sample showed significantly less agreement with the Inability to Control subscale. By agreeing that “an addicted person can control [his/her] use,” students placed the locus of control within the addicted person.

Students disagreed with items suggesting that addiction is a chronic disease. By removing the disease concept from addiction, control is again placed within the addict. The treatment center sample reported significantly different results, suggesting the belief that addiction is a chronic, progressive disease without a cure. The disease concept keeps the locus of control outside the addict him or herself.
Students also reported that addicts should be held responsible for their actions while drunk or high, further supporting the idea that addicts do personally possess some control over their drug/alcohol problems. Treatment center clients disagreed that addicts are responsible for their actions because if an addict is unable to control his or her usage, then he or she is equally unable to control or take responsibility for his or her actions.

It is interesting to note that there was great variability within the treatment center responses on the Chronic Disease and Responsibility for Action subscales. For an item such as “To be healed, addicted persons have to stop using all substances,” the treatment center participants reported extreme responses, rather than responding as a cohesive group. This variability in scores could be attributed to different backgrounds, ages, experiences with one’s own addiction, length of time in treatment, etc.

Though it was hypothesized that the university student sample and treatment center sample would report different beliefs about reliance on experts for recovery and addiction as a moral weakness, the results did not show an obvious distinction. The two samples did not clearly agree or disagree on the Reliance on Experts, Responsibility for Recovery, Genetic Basis, Coping, and Moral Weakness subscales. The small size of the treatment center sample may have contributed to this. A larger sample size may have made it possible to detect small, yet significant, differences between the students and treatment center clients on these subscales.

Based on the results of this study, an inference can be made about the way non-substance abusing students and treatment center clients conceive of the locus of control in drug/alcohol addiction. Students’ responses suggested the belief that the capacity to control both substance usage and actions resides within the addict. This is a departure
from the disease concept of addiction as outlined by Jellinek (1960). Perhaps the university students’ frameworks were similar to Fingarette’s (1991) adaptive model. However, their scores on the Coping subscale were neutral, thereby suggesting that students do not strongly believe that substance use develops as an adaptive coping mechanism.

The treatment center clients tended to remove control over addiction from the individual suffering. This external locus of control coincides well with the disease concept of addiction (Jellinek, 1960). The disease concept describes addiction as uncontrollable and incurable. It also describes the impossibility of an addicted person ever returning to socially appropriate substance use. These beliefs are reflected in the responses of the treatment center clients.

It is important to note that the participants from the treatment center sample were enrolled in a drug/alcohol treatment program that educates its clients on the disease concept and uses lessons from 12-step groups, which also support the disease concept. In fact, the first step of Alcoholics Anonymous is to admit that one is powerless over the addiction. This mantra is present in much of the treatment center’s educational materials. Therefore, it is difficult to determine if the results are true reflections of the treatment center participants’ concepts of addiction, or if their responses were influenced by involvement in the treatment program. It would be interesting to examine how long each participant had been in treatment in order to see if there were any differences between those who had just been admitted and clients who were near completion of the program.

The results of this study are important because previous research did not examine the concepts of addiction between university students and treatment center clients. Much
research had been done on the concepts of treatment providers, addicted persons, and
dually diagnosed persons (Luke et al., 2002). It is important to continue in the direction
of this current study to truly understand the differences between these two populations.

While this study revealed significant differences between the concepts of
addiction held by university students and those of treatment center clients, several
limitations must be discussed including reliability, readability issues, and unmatched
samples.

The reliability scores of each subscale recorded in Table 1 show that the Moral
Weakness subscale fell below the commonly accepted alpha level. Even after
eliminating one item, the reliability of the scale was still low, thereby rendering it
difficult to determine how to interpret the results on this scale. Luke et al. (2002), the
developers of the ABI, chose to eliminate analyses on the Moral Weakness subscale due
to its low reliability. The current study analyzed the results from the Moral Weakness
subscale; however, there was no significant difference between the student and treatment
center samples. Whether this is a result of an unreliable scale or a true reflection of the
samples’ concepts is impossible to tell.

Luke et al. (2002) developed the ABI to be appropriate for adults with various
educational backgrounds. However, the informed consent sheet was aimed at adults with
a high school level reading ability. Therefore, those with low reading abilities or
illiteracy were systematically excluded from participation. This contributed to the low
sample size of treatment center clients since some persons could not read the informed
consent sheet. This issue was made known after the survey was administered and
collected, and there was no protocol in place for assisting with illiterate participants.
Another issue to consider is the fact that the two samples were very unmatched. This is partially a result of choosing to examine a treatment center sample. The agency's confidentiality policies and the nature of the turn-over of its clientele made it difficult to methodologically match the sample to that of the university students.

The main problem this posed was the large age differences between the samples. While all but one university student was between the ages of 17 and 22, only one treatment center participant was in this age range. Therefore, it was impossible to separate age from sample group, making any analyses of age meaningless. An analysis of age is extremely important because the significant differences between the two samples might be a result of maturity. Without this analysis, the results are confounded, and it is hard to attribute the differences to sample group with confidence.

This study represents an early step in examining the different concepts of addiction held by university student and treatment center client samples. Future research in this field should improve upon the reliability of all eight subscales by perhaps including one or two more accurate items to each scale. This would help ensure correct interpretation of significant results.

It may also be beneficial to investigate other populations. This study, as well as previous research by Luke et al. (2002), sampled drug/alcohol users from treatment agencies. By sampling from a treatment center, it becomes difficult to truly assess client concepts of addiction as opposed to the treatment center's viewpoint on addiction. To separate addicts' concepts from treatment program concepts, perhaps a sample of drug/alcohol abusers serving jail time should be examined.
In studying any of these populations, future research should attempt to match the samples by sample size, age, race, sex, educational attainment, etc. By matching the samples, it will be easier to attribute results to differences in sample groups as opposed to confounding variables.

Finally, should future research support the results of this study, it might suggest an aim for addiction education. Education on the disease concept of addiction for university students could make the greater recovery environment for addicts more conducive. Addiction education targeted at university students could also help them understand typical college substance using behaviors as well as identify warning signs of addiction.
References


Miller, W., & Kurtz, E. (1994). Models of alcoholism used in treatment: Contrasting AA and other perspectives with which it is often confused. *Journal of Studies on Alcohol, 55*(2), 159-166.


### Table 1

**Addiction Belief Inventory Subscale Definitions and Reliability**

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
<th>Reliability of Scale (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to control $^a$</td>
<td>Addicted persons cannot manage their substance use. They can never return to social usage.</td>
<td>.60</td>
</tr>
<tr>
<td>Chronic disease</td>
<td>Addiction is a chronic disease that has no cure. Abstinence is the only way to maintain sobriety.</td>
<td>.60</td>
</tr>
<tr>
<td>Reliance on experts</td>
<td>Addicted persons must seek help from professionals in order to reach recovery.</td>
<td>.60</td>
</tr>
<tr>
<td>Responsibility for actions $^a$</td>
<td>Addicted persons must accept responsibility for their actions and substance use.</td>
<td>.72</td>
</tr>
<tr>
<td>Responsibility for recovery</td>
<td>Addicted persons must be active, responsible agents in their own recovery.</td>
<td>.64</td>
</tr>
<tr>
<td>Genetic basis</td>
<td>There is a biological basis of addiction.</td>
<td>.65</td>
</tr>
<tr>
<td>Coping</td>
<td>Substance use helps an addict cope with stress.</td>
<td>.75</td>
</tr>
<tr>
<td>Moral weakness</td>
<td>Addicted persons choose to use drugs/alcohol, which is a sign of moral weakness.</td>
<td>.53</td>
</tr>
</tbody>
</table>

$^a$Reverse coded scale.
Table 2

*Addiction Belief Subscale Means and Standard Deviations*

<table>
<thead>
<tr>
<th></th>
<th>University Sample&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Treatment Center Sample&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to control</td>
<td>3.42(0.70)</td>
<td>4.27(0.78)</td>
</tr>
<tr>
<td>Chronic disease</td>
<td>3.54(0.72)</td>
<td>4.27(1.06)</td>
</tr>
<tr>
<td>Reliance on experts</td>
<td>3.40(0.79)</td>
<td>3.71(0.89)</td>
</tr>
<tr>
<td>Responsibility for actions</td>
<td>4.17(0.69)</td>
<td>3.48(1.05)</td>
</tr>
<tr>
<td>Responsibility for recovery</td>
<td>4.09(0.69)</td>
<td>4.45(0.87)</td>
</tr>
<tr>
<td>Genetic basis</td>
<td>2.80(0.86)</td>
<td>3.19(0.84)</td>
</tr>
<tr>
<td>Coping</td>
<td>3.47(0.55)</td>
<td>3.69(0.84)</td>
</tr>
<tr>
<td>Moral Weakness</td>
<td>3.06(0.62)</td>
<td>3.16(0.79)</td>
</tr>
</tbody>
</table>

<sup>a</sup>N=81.  <sup>b</sup>N=14

*Note:* * denotes a significant difference.
Table 3  
**Significant Correlations Between Subscales**

<table>
<thead>
<tr>
<th></th>
<th>Inability to Control</th>
<th>Chronic Disease</th>
<th>Reliance on Experts</th>
<th>Responsibility for Actions</th>
<th>Responsibility for Recovery</th>
<th>Genetic Basis</th>
<th>Coping</th>
<th>Moral Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to Control</td>
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<tr>
<td>Chronic Disease</td>
<td>$r = .525$</td>
<td>$r = .284$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reliance on Experts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$r = .252$</td>
<td>$r = .348$</td>
<td>$r = .312$</td>
<td></td>
</tr>
<tr>
<td>Responsibility for Actions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$r = .282$</td>
<td>$r = .253$</td>
<td></td>
</tr>
<tr>
<td>Responsibility for Recovery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Genetic Basis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$r = .218$</td>
<td>$r = .269$</td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Moral Weakness</td>
<td></td>
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</tr>
</tbody>
</table>

*Note:* Only significant correlations are reported for readability. $p < 0.05$ for all correlations.
Figure Captions

*Figure 1.* University and treatment center sample mean scores on the Inability to Control, Chronic Disease, and Responsibility for Actions subscales.

*Figure 2.* Male and female mean scores on the Chronic Disease, Genetic Basis, and Moral Weakness subscales.
Figure 1

University and Treatment Center Sample Mean Scores

<table>
<thead>
<tr>
<th></th>
<th>University Sample</th>
<th>Treatment Center Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to Control</td>
<td>3.42</td>
<td>4.27</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>3.54</td>
<td>4.27</td>
</tr>
<tr>
<td>Responsibility for Actions</td>
<td>4.17</td>
<td>3.48</td>
</tr>
</tbody>
</table>
Figure 2

Male and Female Mean Scores

<table>
<thead>
<tr>
<th>Chronic Disease</th>
<th>Genetic Basis</th>
<th>Moral Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>3.46</td>
<td>3.84</td>
<td></td>
</tr>
<tr>
<td>2.57</td>
<td>3.1</td>
<td>3.24</td>
</tr>
<tr>
<td>3.1</td>
<td>2.95</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A

Addiction Belief Inventory

Please Circle One

<table>
<thead>
<tr>
<th>Age</th>
<th>17-22</th>
<th>23-28</th>
<th>29-34</th>
<th>35-40</th>
<th>above 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>Asian</td>
<td>Black/African America</td>
<td>Pacific Islander</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Year</td>
<td>Freshman</td>
<td>Sophomore</td>
<td>Junior</td>
<td>Senior</td>
<td></td>
</tr>
<tr>
<td>I have an alcohol or drug use problem.</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have had previous substance abuse treatment.</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have attended AA/NA/CA* meetings in the past.</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Alcoholics Anonymous/Narcotics Anonymous/Cocaine Anonymous
Evaluate your agreement with the following statements by circling the appropriate number.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An addicted person can control his/her use.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2</td>
<td>Alcoholics/addicts are not responsible for things they did before they learned about their addictions.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3</td>
<td>Children of alcoholics/addicts who drink or use drugs will become alcoholics/addicts.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4</td>
<td>Alcoholism/drug abuse is a disease.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5</td>
<td>Relapse is a personal failure.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6</td>
<td>Only the alcoholics/addicts themselves can decide when to stop drinking/using drugs.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7</td>
<td>Alcoholics/addicts use because they cannot cope with life.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8</td>
<td>Participation in treatment programs can allow alcoholics/addicts to drink/use socially.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9</td>
<td>A recovering alcoholic/addict should rely on other experts for help and guidance.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10</td>
<td>Some people are alcoholics/addicts from birth.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11</td>
<td>Alcoholics/addicts are personally responsible for their addictions.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12</td>
<td>An alcoholic/addict must seek professional help for recovery.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>People use alcohol/drugs to feel better about themselves.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14</td>
<td>A drinking or drug problem can only get worse.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15</td>
<td>Alcoholics/addicts start drinking/using because they want to.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16</td>
<td>It is not an alcoholic/addict's fault that he/she drinks/uses.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17</td>
<td>Alcoholics/addicts use substances to escape from bad family situations.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>18</td>
<td>Recovery is a continuous process that never ends.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>19</td>
<td>Alcoholism/drug addiction is inherited.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>20</td>
<td>An addicted person uses alcohol/drugs to avoid personal problems.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>21</td>
<td>It is an alcoholic/addict's fault if he/she relapses.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>22</td>
<td>To be healed, addicted persons have to stop using all substances.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>23</td>
<td>An alcoholic/addict should not be held accountable for things they do while drunk/high.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>24</td>
<td>Ultimately, the alcoholic/addict is responsible to fix him/herself.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>25</td>
<td>Addicted persons are capable of drinking/using drugs in socially appropriate ways.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>26</td>
<td>Abusing alcohol/drugs is a sign of personal weakness.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>27</td>
<td>Alcoholics/addicts cannot solve their drinking/drug problem on their own.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>28</td>
<td>Alcoholics/addicts can learn to control their drinking/using.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>29</td>
<td>People use substances to lessen their depression.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>30</td>
<td>Alcoholics/addicts are responsible for their recovery.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
INFORMED CONSENT FOR PARTICIPATION IN RESEARCH

Title of Project: Concepts of Addiction: Assessing the Beliefs of Addiction in University and Treatment Center Populations

Principal Investigator: Krystle Balhan

You have been invited to participate in a research project. The process by which you decide whether or not to participate in the project is called informed consent. We will explain the research project to you, and you will have the opportunity to ask any questions you might have about it before you make your decision. If you decide to participate, you will sign this form and a copy will be given to you.

What is the project about?

The purpose of this project is to identify the attitudes towards addiction among members of a university population and a treatment center population. To collect this data, you will be asked to complete a version of the Addiction Belief Inventory (citation). In addition to these questions, you will be asked to answer several demographic questions concerning your age, sex, race, etc.

The data will be analyzed using standard statistical tests ($\chi^2$, $t$, $f$). All analyses will be completely anonymous.

The project will end in a full write-up including the results from the survey, which will be presented as group results. No individual answers will be included. The Principle Investigator will also participate in a defense of the project in which she will explain the entire study to a committee composed of the Project Advisor, Research Instructor, plus two other members. In this defense, individual answers and any personal identifying information will be excluded.

What are you asking me to agree to?

If you agree to participate today, you will be asked to: (a) sign this informed consent, (b) complete the survey.

The data will only be used for research purposes.

Below is a short summary of several things we want to make sure you understand and agree with. At the end you will be asked whether you agree or “consent” to all of them.
Consent to Participate in Survey

I understand that if I participate in the project I will be asked to complete the survey. I also understand that I have the right to refuse to answer any question, to skip any questions, and to drop out of the project whenever I want.

How will my information be protected?

The survey is completely anonymous; your name and identity will not be known to the researcher and research assistants. You will place your completed survey directly into a manila folder. Only after all surveys have been placed in the folder will the researcher come into contact with the completed forms.
We have also taken several steps to protect your information. These are: a) all staff have been briefed on the need for privacy and have signed a statement agreeing with the terms of this consent b) your identity and your completed survey will never be linked.

What are the risks of the project?

The risk to you is that your personal information may be disclosed to outside persons unconnected with the research. Accidental disclosure, though possible, is unlikely because of the steps that we take to protect the confidentiality of your information.

A second risk is that the questions on the survey may be upsetting and may cause moderate stress to you.

Are there any benefits to me or to others if I participate?

All participants may benefit from the knowledge that they are participating in a project to help people with substance use disorders. Society will benefit from a better understanding of the subject matter. Participation in this study may lead to a better understanding of attitudes on addiction as well as identify possible areas for addiction education.

How will my information be used?

Only the researcher, project advisor, and research assistant will see the completed surveys. A Thesis Defense Committee, consisting of 3 additional people, will read the final paper which will include the data gathered from your answers. However, the data will represent group answers, not individual responses.

Can I choose whether or not to participate in this project?

Yes. You are completely free to decline to participate in this project.
Whom do I call if I have questions or problems?

For questions about the research, contact the Project Advisor, Dr. James Dougan, at (309) 556-3415.

For counseling services, contact Illinois Wesleyan Counseling Services at (309) 556-3052 or the PATH Crisis Team at (309) 827-5351.

Project Assurance of Consent

This project has been explained to me. I have had the opportunity to ask questions concerning any and all aspects of the project. I am aware that I can refuse to answer any question without having to explain why. I am aware that I may choose not to participate or to withdraw from this project at any time without penalty. I acknowledge that no guarantee or assurance has been given by anyone as to the results to be obtained. I understand that if I do not sign this form, then I cannot participate in the project.

I hereby agree / do not ___ agree (check one) to participate in the above-described research project and to the use and disclosure of my information for research purposes. Should I withdraw from the project, I agree that any information obtained prior to my withdrawal may continue to be used to maintain the integrity of the research project.

I will be given a copy of this informed consent for my records.

Name of Research Participant (Please Print)

Signature of Research Participant __________________________ Date __________

Signature of Staff/Witness __________________________ Date __________
DEBRIEFING FOR PARTICIPATION IN ADDICTION ATTITUDES RESEARCH PROJECT

AIM OF THE RESEARCH

Drug and alcohol addiction is a growing problem as well as a growing research interest in the field of psychology. This project aims to contribute to the body of literature on addiction by providing insight into the attitudes university students and addicted persons have towards the nature of addiction. Specifically, we are interested in any attitudinal differences between the two groups. The results of this study may help to identify areas for possible addiction education. With hope, such educational interventions in either or both samples may improve attitudes, making them more conducive to continued recovery for addicted persons.

RESEARCH DESIGN

This is correlational research, which means you did not receive any experimental treatment. Instead, we will compare your answers to the answers of members of a different group. We will analyze your responses to see if they correlate, or show a relationship, to the responses of other participants.

OTHER RESEARCH IN THE FIELD

You can find more information about the development of the Addiction Belief Inventory in the following article:

For more information about attitudes on addiction in general, check out these books and articles:


If you still have research-related questions, contact Dr. James Dougan at 309-556-3415 or email him at jdougan@iwu.edu.
OTHER RESOURCES

If any part of this project has upset you, and you feel you need to talk to someone, contact the Illinois Wesleyan University Counseling Services at 309-556-3052.

If you have an urgent need to talk with a crisis counselor, contact Bloomington’s PATH Crisis Team at 309-827-5351.

Thank you very much for participating in this research project. Your time and assistance is much appreciated!