INTRODUCTION

Alcohol and drug abuse is a daunting public health problem that affects millions of individuals in the United States (Reiger et al.,1990). Reiger et al., (1990) identified substance abuse disorders as the largest category of mental disorders. Over the course of understanding these problems, individuals have viewed substance abuse in a variety of ways. Perhaps the most significant issue involved in the evolution of this understanding is the degree to which substance abuse is viewed as a disease, a moral deficit or a behavioral disorder.

Those who conceptualize substance abuse as a disease argue that it is an atypical physiological reaction to addictive substances (Jellinek 1946; Silkworth 1939; Sheehan & Owen 1999). This response causes the individual to lose control over consumption and experience a wide range of physical and psychosocial consequences. Others have conceptualized addictions as a complex cognitive-behavioral process that is influenced by genetics, environment, experience, psychopathology and personality, but ultimately is dictated by the reinforcing properties of the particular substance (Carroll, 1999). Although much less prevalent a view currently, it was once common to view substance abuse as a moral deficit and a lack of willpower (Sheehan & Owen 1999).

At this point substance abuse, in the layperson and even amongst many professionals, is viewed as a combination of all of these factors and no single model dominates; this is often termed a heterogeneous model. In the life of an individual with a substance abuse problem, it is probably more important how those around the individual view and respond to the problem than how theoreticians and researchers view the problem. That is, the attributions people make about why a person has a substance abuse problem are likely to be important predictors as to how individuals will respond to an individual with a substance abuse problem, and ultimately affect

the psychosocial functioning of the substance abusing individual. In fact, the attributions people make about individuals with other conditions do influence their emotional and behavioral reactions (Weiner, 1996).

Attribution Theory

One of the most fundamental questions human beings ask is 'why'. Heider (1958) explained this tendency in the presumption that people seek mastery and understanding because it is functional to know what caused an event, and perhaps more importantly, because the basic nature of any organism is to attempt to make sense out of one's environment and oneself. This so-called attribution theory is one of the more popular explanatory theories that explain human beings' perceptions of causality. One of the best and most empirically validated conceptualizations of attribution theory is Wiener's attribution-emotion model (Weiner, 1996; Weiner, Perry, & Magnusson, 1988).

Wiener's model emphasizes an observer's feelings of pity and anger in the determination of personal responsibility and causality of events. If the observer feels the person in the situation was responsible for the situation, more anger and less pity is evoked and the observer blames the person. If the person is deemed helpless in the situation, then the observer feels more pity and therefore attributes causality to situational factors (Weiner, 1993a, 1993b, 1995, 1996; Weiner, Perry, & Magnusson, 1988). The situations described in research can be any number of events or happenings, from academic success or failure, to poverty (Cozzarelli, Wilkinson, & Tagler, 2001, 2002), as well as victims of disease and illness (Weiner, Perry, & Magnusson, 1988) Weiner refers to these conditions as stigmas.

Stigmas and Attribution

Our use of the word stigma comes from the Greek practice of branding slaves who were caught trying to escape. The word given to such brandings was 'stigma' (Funk, 1950). From this history, the meaning of stigma has been extended to include any mark or sign of perceived or inferred conditions of deviance from a particular norm (Jones et al., 1984). Goffman (1963) stated that stigmas could include "abominations of the body…blemishes of individual character inferred from a known record of, for example, mental disorder, imprisonment, addiction...and tribal stigma of race, nation, and religion…" This means that a stigma could be any number of people or groups that are seen by most people as being different or outside the norm. Unfortunately, a stigma can imply a cause or be associated with an attribution (such as drug use or homosexuality being directly linked to AIDS), which leads to stereotyping.

According to attribution theory, the perceived cause of the stigma should impact the reactions toward the stigmatized person, as well as behavioral responses. As mentioned previously, the less perceived responsibility the person has for the stigma, the more pity is evoked and the person is held less liable, whereas the more perceived responsibility the person has for the stigma, the more anger is evoked and the person is held more liable. A significant amount of research has examined various stigmas and the attributions people tend to associate with them.

Several studies have been conducted in the area of poverty, most of which focuses on the attributions people make to explain the poverty of others (Feagin, 1972; Smith & Stone, 1989; Zucker & Weiner, 1993). The majority of researchers have found that Americans believe that there are multiple determinants of poverty, but that internal causes (lack of effort, laziness, low intelligence, etc.) are more important than external causes (victim of discrimination, low wages,

etc.). A recent study by Cozzarelli, Wilkinson, and Tagler (2002) demonstrated that participants endorsed internal attributions for the poverty of men and women more often and more strongly than external or cultural attributions.

Another common area of stigmatization studies, studies possibly relevant to substance abuse, are illness and disease. AIDS has become a huge interest in this research due to its prevalence and lethal outcome. Stigmatized people are perceived by others as dangerous and are often feared. Jones and colleagues (1984) outlined four possible explanations for such fear. First, the stigmatized person may remind the people of their own vulnerability. People may fear acquiring a courtesy stigma (a stigma given or assumed about a person close to someone with a stigma). The stigmatized may also tempt people to become involved in stigmatizing behaviors. Lastly, people may fear feeling obligated to help the stigmatized person. These can apply to any stigma, including HIV/AIDS infected people. In applying attribution theory, Weiner (1993a) argues that causal attributions are important in reactions to the stigmatized person. People may attribute more internal causes to people who were infected through drug use or sexual conduct than a person who was infected through a medical blood transfusion. The attribution of control contributes to this theory. The more control a person has over how they contract the virus, the less pity and more anger is felt by the observer and the more internal the attribution.

More recently researchers have extended Weiner's theory (Dijker & Koomen, 2003). These authors argued that it is important to understand four judgmental determinants beyond personal responsibility, pity and anger in order to better understand the attributions people make about others' illnesses. These four are: how serious the condition is, does the condition have a behavioral cause, was the condition a foreseeable effect of the behavioral cause and what is the valence of the behavior cause. By valence of behavioral cause, the writers are referring to the

positive or negative polarity of the reason the behavior occurs. For example, consider an individual with HIV. A negative valence of behavioral cause may be sexual promiscuity, whereas a positive valence may be becoming infected while saving the life of an infected person. For a particular condition, if there is a perceived behavioral cause, the foreseeability and valence of the cause will influence pity and anger. Degree of pity or anger, as in Weiner's model, will influence the degree of social rejection. Dijker and Koomen (2003) replicated an earlier study by Weiner (1988) in which he assessed for feelings of pity and anger and the attribution of responsibility for a variety of stigmas. Dijker and Koomen supplemented this study with measures of behavioral valence, seriousness, and anxiety. In a subsequent experiment they also manipulated the valence of behavioral cause, seriousness, and personal responsibility. They found support for their model and concluded that the four judgmental determinants they had proposed were important factors in the attribution process. This study did not specifically discuss results related to substance abuse.

Stigma and Substance Abuse

People who abuse alcohol and drugs can also be seen as stigmatized. With the common understandings that alcoholism is a condition (regardless of cause) from which no one recovers, and once one becomes an alcoholic or addict, one is always an alcoholic or addict, it seems reasonable to consider this group a stigmatized population. A study by Cash, Briddell, Gillen, and MacKinnon (1984) support this notion with their findings, which conclude that excessive drinkers are labeled as deviant, poorly adjusted, and in need of professional help.

Considering intoxicated actors without considering abuse status, research has shown that intoxicated actors are attributed less responsibility, blame, and personal responsibility for their actions than sober actors (Critchlow, 1985). In another study, situational or external factors were

more important when a wife abuser was intoxicated and committing a violent act (Richardson and Campbell, 1980). These studies suggest that alcohol use, in some situations, relieves responsibility from the actor and is more to blame than the person behaving badly. A similar study involving violence has shown the opposite reaction, with participants attributing more responsibility and fault when the actor is intoxicated (Aramburu & Leigh, 1991). Rivers, et al. (as cited in Weiner, 1995) found that adults blame alcoholics twice as much as the mentally ill for their stigmas, and a survey at Kent State University assessed the responsibility of the alcoholic for their condition and found that students found alcoholics at the top of the list among other conditions such as obesity, homosexuality, and mental illness.

Brickman et al. (1982) adds to these disparities by separating responsibility for the onset and/or offset of the problem. He defines a moral problem as one in which the individual is responsible for both the onset and offset of the problem. A medical model (or disease model) is one in which the individual is responsible for neither the onset or offset of the problem. If the individual is responsible for the onset, but not the offset, it is termed an "enlightenment model." One can think of this as the AA approach in which the individual must take responsibility for their history of drinking, but also admit that controlling their drinking is beyond their power. The "compensatory model" is one in which the individual is not responsible for the onset of their problem, but is responsible for its offset. This is often the stance taken when job stress or a negative life event occurs and one uses alcohol to cope. Once excessive drinking occurs, the person is supposed to cope with the problem and assume responsibility for the offset of the drinking behavior. Which model an individual will utilize and why remains a mystery.

Weiner (1995) acknowledges the "research disparities" regarding attributions towards intoxicated actors and proposes that this is due to changing cultural beliefs and perhaps the

perceived causes of drinking or drug use. To apply attribution theory here one would predict that aspects related to the cause of substance abuse will determine how the observer views the substance abuser in the situation; the more responsibility the observer perceives the substance abuser as having over their condition, the less pity they will feel towards them and the more likely the observer is to make an internal attribution and at least endorse some level of social rejection. Few, if any studies, have examined the degree to which this conceptualization of attribution and disease extends to substance abuse. Weiner et al. (1988) and Dijker & Koomen (2003) included a vignette with a "drug user," but did not report specific results about this condition; therefore, little is know about the extent to which drug and alcohol abuse follows the attributional pattern of other diseases.

The Role of Gender

Gender has proven to be a controversial factor in attribution studies. While many argue that there are some effects of gender, most research supports the idea that gender plays little if any role. Many of these studies view disciplinary outcomes as a function of supervisor and subordinate gender (Dobbins, Pence, Orban, & Sgro, 1983; Dobbins, 1985). The results of these studies have shown that men respond more severely to internal causes whereas women respond similarly to both internal and external causes. More internal attributions were made when the supervisor and subordinate were of opposite gender. Also, male supervisors responded more leniently with male subordinates than female subordinates. Interestingly, female supervisors did not respond with the same leniency toward female subordinates.

Studies have also been conducted that look at attributions of female alcohol abusers. Richardson and Campbell (1980) showed that intoxicated wives were attributed more blame in their husbands' suicides than sober wives. Richardson and Campbell blame this on a norm

violation, suggesting that females who were intoxicated were viewed as deviating from a traditional and acceptable "female" role. Mulford and Fitzgerald (1983) demonstrated lower acceptance of intoxicated females than intoxicated males, further supporting the norm violation theory. While this tendency may still exist, trends in alcohol consumption show an increase in female drinkers. Today, female drinkers may create less of a norm violation than female drinkers would have in 1983.

While these studies demonstrate differences between genders, they do so at a superficial level. Rarely do studies attempt to identify where in the attribution process these differences occur, or even why they occur. In most of the research, the causes of the behavior are given, so the tendency of one gender to attribute behavior more internally or externally has also not been assessed. These are important pieces of the attribution process and have not been examined in the context of stigmas to a significant degree.

The purpose of this study is to examine the effects of gender, valence of cause, and type of condition on feelings of pity, anger, and behavioral intentions. The intent is to extend Weiner's theory as well as recent adaptations (Dijker & Koomen 2003) to the condition of substance abuse. The following hypotheses will be tested:

1. A main effect of valence is predicted. The more negative the valence of the behavioral cause, the higher the feelings of anger and the lower or absence of feelings of pity will be experienced and reported. The more non-negative the valence of the behavioral cause, the higher the feelings of pity and the lower or absence of feelings of anger. There will be no significant difference between the valences in the drug and alcohol conditions.

2. An interaction between the valence of the behavioral cause and the condition is predicted. Measures taken concerning the alcohol or drug conditions with a non-negative valence

should be similar to those measures for diabetes and AIDS. In the condition where the drug and alcohol valences are negative, the measures will be significantly different from the measures for diabetes and AIDS. Participants should treat alcoholism and drug addiction as diseases rather than personal choices when the valence is non-negative, and more like stigmas when the valence is negative.

3. Although not a direct hypothesis, differences between genders' responses will also be examined to determine the presence and/or strength of any gender differences that may be present. It is suspected that females may report higher levels of pity and anger, and might also be more likely to offer help or provide a charitable donation.

4. Individual difference variables such as level of use, family history of substance use disorder, understanding of alcohol and drug abuse and personality will be related to pity, anger, help, and donation.

METHOD

Participants

Two hundred and eighty participants (207 females and 73 males) took part in this study. Two hundred and forty-four were Caucasian, thirteen were African American, and twenty-three were of other ethnicities. Participants were recruited from undergraduate psychology courses and received research credit or extra class credit for their participation.

Materials

This study utilized a series of vignettes depicting various conditions. Each condition had a male and female version, and a non-negative or negative valence. A non-negative valence was selected rather than a positive valence due to the unlikely nature of a positive valence for drug

addiction and alcoholism. The stigmas utilized were: alcoholism, drug addiction, AIDS, diabetes, and drug dealing. Vignettes can be seen in Appendix A. This resulted in a 2(target gender) X 2(valence) X 5 (stigma) design. Five separate orderings of the vignettes were constructed to control for possible order effects.

Participants responded to a series of questions following the reading of each vignette. Questions assessed the degree of seriousness, forseeability, anger, pity, anxiety and responsibility on Likert-type scales. Participants were also asked to estimate the likelihood they would give the person a small sum of money (a charitable donation) as well as personally assist them with a small problem. These questions were on a separate sheet of paper attached to each vignette and can be seen in Appendix B.

In addition to responding to the vignettes, participants completed a baseline assessment consisting of the following instruments:

Demographic Questionnaire (DQ): This instrument will assess standard demographic variables. *Understanding of Alcoholism Scale* (UAS; Moyers & Miller, 1993): This questionnaire assesses an individual's views of the causality and nature of alcoholism. The measure scores into four scales: disease model, psychosocial model, heterogeneity and moral model. *Understanding of Drug Use Scale* (UDS; adapted from UAS): This is an analogue measure of the above instrument, where the words "drug addiction" will be substituted for alcoholism. *Revised NEO Personality Inventory* (NEO-PI-R; Costa & McCrae, 1992): This measure assesses an individual on five personality factors: neuroticism, extroversion, openness, conscientiousness, and agreeableness. *Quantity and Frequency of Alcohol and Drug Use* (QFDA): This measure will assess recent quantity and frequency of substance use as well as family history. These questionnaires can be seen in Appendix C.

Procedure

Participants presented to the scheduled experiment room at a designated time. Informed consent forms were given to each participant and the study was explained. Participants were asked to read the consent form and sign it. Upon obtaining informed consent, participants received a packet that contained five vignettes and the dependent variable questionnaires. Upon completion of the vignettes, the participant turned in the packet and was given a packet containing the assessment instruments. When finished, the participant was given a credit slip and left the room.

RESULTS

Hypothesis One

Hypothesis one stated that a main effect of valence would result in a higher reported response of pity, help, and donation in the non-negative conditions as opposed to the negative conditions, and that anger rankings would be greater in the negative conditions than the non-negative conditions. To test this hypothesis, a series of univariate ANOVAs were calculated with target gender, gender of the participant, and valence as fixed factors and the ranks of pity, anger, help, and donate as dependent variables. Given this, there were five analyses per stigma. To correct for Type I error, a Bonferoni correction was utilized. Only results where $p < .01$ were deemed significant.

There was no significant effect of valence in the diabetes condition. There was a significant effect of valence in the alcohol condition for three of the four variables. Pity was higher in the non-negative valence condition as opposed to the negative valence condition, with $F(1,271)=72.33$, $p<.001$. Help was also higher in the non-negative valence with $F(1,271)=19.15$,

$p<.001$, as was donate, with $F(1,271)=16.66$, $p<.001$. Although anger was not significant in this condition, a trend was evident, with higher anger levels in the negative valence condition. There was a significant effect for valence in the drug dealer condition for three of the four variables. Pity was higher in the non-negative valence with $F(1,271)=138.05$, $p<.001$, as was help, with $F(1,272)=27.84$, $p<.001$, and donate, with $F(1,272)=66.16$, $p<.001$. Anger was not significant but a trend was evident, with higher anger levels in the negative valence condition, $F(1,271)=6.23$, $p=.013$. There was a significant effect of valence in the HIV condition for all four variables. Pity was significantly higher in the non-negative valence condition with $F(1,271)=94.91$, $p<.001$.Anger was significantly higher in the negative valence condition, with $F(1,271)=17.55$, $p<.001$. Help was higher in the non-negative condition with $F(1,271)=31.65$, $p<.001$, as was donate, with $F(1,271)=22.34$, $p<.001$. There was a significant effect of valence in the heroin condition, with pity being higher in the non-negative valence condition as opposed to the negative condition, $F(1,268)=7.99$, $p=.005$.

Table 1 shows means and standard errors for these variables.

Hypothesis Two

Hypothesis two predicted an interaction between the valence of the behavioral cause and the condition, in that the heroin and alcohol conditions would have responses similar to the disease conditions when the valence was non-negative, but would be significantly different when the valence was negative. To test this hypothesis, a series of mixed model ANOVAs were completed where target gender, participant gender and valence were between subject factors and rankings of pity, anger, help, and donate for a particular condition were the levels of the within subjects factor. To confirm the hypothesis for a particular judgment there would need to be a significant valence by within subject factor interaction.

Table 1

Means and Standard Errors for Conditions by Valence for Hypothesis One

	Alcohol		Diabetes		Drug Dealer		HIV		Heroin	
Variable	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Pity										
Negative	4.11*	.21	6.02	.18	2.24*	.19	5.00*	.20	3.46*	.23
Non-negative	6.68*	.22	6.31	.18	5.41*	.20	7.83*	.21	4.39*	.24
Anger										
Negative	2.72	.18	1.56	.12	3.65	.23	2.43*	.17	3.12	.22
Non-negative	2.23	.19	1.69	.12	2.83	.24	1.43*	.17	3.24	.24
Help										
Negative	5.85*	.20	7.34	.16	4.65*	.22	6.36*	.19	5.15	.23
Non-negative	7.12*	.21	7.35	.17	6.37*	.24	7.88*	.19	5.60	.25
Donate										
Negative	2.83*	.20	5.47	.23	2.21*	.21	4.79*	.23	2.34	.17
Non-negative	4.00*	.21	5.38	.24	4.66*	.22	6.35*	.24	2.62	.19

*p<.05

Pity

There was a significant interaction between pity and valence, using the Greenhouse-Geisser statistic of F(3.76,1000.67)=83.42, $p<.001$. Simple effects tests resulted in an F(3.73,555.59)=89.66, $p<.001$ in the negative valence and an F(3.35,412.08)=78.24, $p<.001$ in the non-negative valence. In the negative valence, pity for the alcohol condition was significantly different from pity in all other conditions.

Within subject contrasts were conducted with the following results. In the negative condition, pity was highest for the diseases, diabetes and HIV, followed by alcohol. Heroin was followed by drug dealing. Pity was lower for alcohol than diabetes, F(1,149)=55.69, $p<.001$, higher for alcohol than drug dealing, F(1,149)=127.66, $p<.001$, lower for alcohol than HIV, F(1,149)=15.78, $p<.001$, and higher for alcohol than heroin, F(1,149)=16.53, $p<.001$. In the non-negative condition, pity was highest for HIV (M=7.81 SE=.21) and not different between alcohol and diabetes. Pity for drug dealing was higher than heroin. Pity was significantly different between alcohol and drug dealing, with more pity for alcohol than drug dealing, F(1,123)=30.10, $p<.001$. Pity was significantly lower for alcohol than HIV, F(1,123)=58.70, $p<.001$, and higher for alcohol than heroin, F(1,123)=112.34, $p<.001$, but not significantly different between alcohol and diabetes.

Anger

There was a significant interaction between anger and valence, using the Greenhouse-Geisser statistic of F(3.67,973.34)=6.77, $p<.001$. Simple effects tests resulted in an F(3.66,541.37)=39.09, $p<.001$ in the negative valence and F(3.35,411.94)=40.62, $p<.001$ in the non-negative valence. In the negative condition, anger was highest for drug dealing, followed by heroin and alcohol. Alcohol was followed by HIV and diabetes. Anger was significantly higher

for alcohol than diabetes, F(1,148)=44.92, $p<.001$, and lower for alcohol than drug dealing, F(1,148)=143.06, $p<.001$, and was not significantly different between alcohol and HIV or heroin. In the non-negative condition, anger was highest for heroin, followed by drug dealing and alcohol. Anger was lower for diabetes, and lowest for HIV. Anger was significantly higher for alcohol than diabetes, F(1,123)=22.48, $p<.001$, and HIV, F(1,123)=40.92, $p<.001$. Anger was significantly lower for alcohol than drug dealing, F(1,123)=12.39, $p=.001$, and heroin, F(1,123)=20.87, $p<.001$.

Help

There was a significant interaction between willingness to help and valence, using the Greenhouse-Geisser measure of F(3.75,997.14)=9.78, $p<.001$. Simple effects tests showed that there were interactions between help and valence with an F(3.82,568.85)=63.43, $p<.001$ in the negative valence, and an F(3.40,418.63)=43.66, $p<.001$ in the non-negative valence. Within subject contrasts were conducted and showed the following results. In the negative condition, help was highest for diabetes, followed with a significant difference by HIV. Alcohol was next, followed by heroin, which were not significantly different. Drug dealing was ranked last and was significantly different from alcohol and the diseases. Help was significantly greater for diabetes than alcohol, F(1,149)=66.07, $p<.001$, for alcohol than drug dealing, F(1,149)=39.73, $p<.001$, for HIV than alcohol, F(1,149)=5.30, $p=.02$, and for alcohol than heroin, F(1,149)=15.80, $p<.001$. In the non-negative condition, help was highest for HIV, followed by diabetes and alcohol. Drug dealing was next and was followed by heroin, which was significantly different from alcohol and the diseases. There were significant differences between alcohol and diabetes, F(1,123)=5.12, $p=.025$, with more help for diabetes than alcohol. Help was also ranked higher for alcohol than

drug dealing, F(1,123)=13.25, $p<.001$, for HIV than alcohol, F(1,123)=28.05, $p<.001$, and for alcohol than heroin, F(1,123)=44.96, $p<.001$.

Donate

There was a significant interaction between willingness to give a donation and valence, using the Greenhouse-Geisser measure of F(3.45,918.42)=17.39, $p<.001$. Simple effects tests showed significant interactions between donate and valence with an F(3,447)=159.37, $p<.001$ in the negative valence and an F(3.55,436.31)=81.82, $p<.001$ in the non-negative valence. Within subject contrasts were conducted with the following results. In the negative condition, donate was highest for diabetes, followed by HIV. Significantly different from these was alcohol, heroin, and drug dealing, which were not significantly different from each other. Donate was significantly different between alcohol and diabetes, F(1,149)=162.65, $p<.001$, with donate being greater in the diabetes condition than the alcohol condition. There was also a higher likelihood to donate in the alcohol condition than drug dealing condition, F(1,149)=13.00, $p<.001$, HIV than alcohol, F(1,149)=121.46, $p<.001$, and alcohol than heroin, F(1,149)=20.85, $p<.001$. In the non-negative condition, donate was highest for HIV, followed by diabetes and drug dealing. These were followed by alcohol, which was significantly different from heroin, which was last. There was a higher donate ranking for diabetes than alcohol, F(1,123)=36.78, $p<.001$, for alcohol than drug dealing, F(1,123)=8.48, $p=.004$, for HIV than alcohol, F(1,123)=113.97, $p<.001$, and for alcohol than heroin, F(1,123)=48.74, $p<.001$. Means and standard errors for these tests are available in Table 2.

Hypothesis three

Hypothesis three stated that the participant's gender may predict responses. It

Table 2

Means and Standard Errors for Condition by Valence Interaction for Hypothesis Two

	Alcohol		Diabetes		Drug Dealer		HIV		Heroin	
Variable	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Pity										
Negative	4.13	.21	5.97	.18	2.22	.19	5.01	.20	3.41	.23
Non-neg	6.63	.22	6.28	.19	5.36	.20	7.81	.21	4.39	.24
Anger										
Negative	2.83	.17	1.64	.11	3.81	.22	2.58	.17	3.15	.20
Non-neg	2.48	.16	1.71	.11	3.15	.19	1.43	.12	3.43	.21
Help										
Negative	5.83	.21	7.33	.16	4.64	.23	6.37	.19	5.13	.24
Non-neg	7.10	.22	7.30	.17	6.33	.24	7.84	.20	5.60	.25
Donate										
Negative	2.80	.20	5.47	.23	2.21	.21	4.81	.23	2.24	.17
Non-neg	3.98	.21	5.33	.24	4.60	.22	6.32	.24	2.62	.18

Note. Significance levels are located within the text.

was hypothesized that females may respond to the vignettes with higher levels of pity and anger and be more willing to help or donate than males. To test this hypothesis, previous analyses were examined. In the diabetes condition, females were significantly more likely to help than males with $F(1,271)=5.13$, $p=.02$. In the drug dealer condition, females reported significantly higher levels of anger than males with $F(1,271)=8.91$, $p=.003$. In the HIV condition, females reported significantly higher levels of pity than males with $F(1,271)=6.27$, $p=.013$. Females were also significantly more likely than males to donate with $F(1,271)=5.53$, $p=.019$. In the alcohol condition, females reported significantly higher levels of anger than males with $F(1,271)=9.36$, $p=.002$. Interestingly, females were more likely to give a donation than males with $F(1,271)=6.20$, $p=.013$. Means and standard errors for these tests are available in Table 3.

Hypothesis four

Hypothesis four stated that differences in responses may be predicted by personality factors or differences between individuals on a variety of individual difference variables. To examine these possible relationships, stepwise regressions were calculated. Help and donation measures for each stigma were separately regressed on the understanding of alcoholism measures (for alcoholism), understanding of drug addiction measures (for heroin condition), personality scales of neuroticism, openness, agreeableness, conscientiousness, and extraversion, quantity and frequency of alcohol use in the past 30 days, a family history of alcohol or drug problems, church attendance, and political background.

Alcohol

For rankings of help giving, there was a significant regression model including

Table 3

Means and Standard Errors for Variables by Condition and Gender for Hypothesis Three

	Alcohol		Diabetes		Drug Dealer		HIV		Heroin	
Variable	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Pity										
Males	5.08	.26	5.99	.22	3.55	.24	6.03	.25	3.81	.29
Females	5.68	.16	6.27	.13	4.03	.14	6.79	.15	3.99	.17
Anger										
Males	2.01	.23	1.53	.15	2.75	.29	1.81	.21	2.88	.28
Females	2.89	.14	1.74	.09	3.75	.17	2.08	.12	3.42	.17
Help										
Males	6.44	.26	7.05	.20	5.60	.29	7.12	.23	5.39	.29
Females	6.49	.15	7.59	.12	5.36	.17	7.10	.14	5.33	.17
Donate										
Males	3.38	.25	5.07	.29	3.25	.26	5.16	.29	2.43	.29
Females	3.40	.15	5.73	.17	3.55	.16	5.97	.17	2.43	.13

Note. Significance levels are located within the text.

rankings of pity and anger, $F(2, 77) = 51.62$, $p < .001$. This model accounted for 27% of the variance (adj. $R^2 = .27$).

For rankings of donation, there was a significant model including pity rankings, a heterogeneous understanding of alcoholism, and neuroticism, $F(3, 276) = 22.25$, $p < .001$. This model accounted for 19% of the variance (adj. $R^2 = .19$). Table 4 shows standardized betas for these equations.

Heroin

For rankings of help giving, there was a significant regression model including rankings of pity, anger, and extraversion, $F(3,276)=33.51$, $p<.001$. This model accounted for 26% of the variance (adj. $R^2= .26$). For rankings of donation, there was a significant model that included pity, $F(1,278)=48.14$, $p<.001$. This model accounted for 15% of the variance (adj. $R^2= .15$). Table 5 shows standardized betas for these equations.

DISCUSSION

The goal of this study was to extend the attribution-emotion model of responsibility judgments to the stigmas of alcohol and drug dependence. This was done through manipulation of the valence of behavioral cause of the stigmas analyzed in this study. The overall pattern of results indicates that individuals differ significantly on variables within this model based on stigma, valence and gender. Individuals also view alcoholism and heroin dependence differently based on valence of behavioral cause. For some stigmas, personality variables and understanding of drug and alcoholism measures predicted prosocial behavior.

Table 4

Summary of Hierarchical Regression Analysis for Variables Predicting Helping and Donating Behaviors in the Alcohol Condition

Behavior	Variable	B	SE B	ß
Help	Step 1			
	Pity	.44	.05	.5**
	Step 2			
	Pity	.42	.05	.47**
	Anger	-.17	.06	-.15**
Donate	Step 1			
	Pity	.35	.05	.40**
	Step 2			
	Pity	.35	.05	.40**
	UAS_HT	.73	.28	.15**
	Step 3			
	Pity	.34	.05	.39**
	UAS_HT	.75	.27	.15**
	Neuroticism	.03	.02	.11*

Note. For Help, R^2 =.25 for Step 1; ΔR^2 =.02 for Step 2 (*p*s<.01). For Donate, R^2 =.16 for Step 1; ΔR^2 =.02 for Step 2 (*p*s<.01); ΔR^2 = .01 for Step 3 (p<.05).

*p<.05. **p<.01.

Table 5

Summary of Hierarchical Regression Analysis for Variables Predicting Helping and Donating Behaviors in the Heroin Condition

Behavior	Variable	B	SE B	ß
Help	Step 1			
	Pity	.46	.05	.45**
	Step 2			
	Pity	.43	.05	.43**
	Anger	-.20	.06	-.20**
	Step 3			
	Pity	.45	.05	.44**
	Anger	-.22	.05	-.21**
	Extraversion	.06	.02	.16**
Donate	Step 1			
	Pity	.29	.04	.38**

Note. For Help, R^2 =.20 for Step 1; ΔR^2 =.04 for Step 2; ΔR^2 = .02 for Step 3 (*p*s<.01). For Donate, R^2 =.15 for Step 1

**p<.01.

The Effects of Valence of Behavioral Cause

The results of this study supported the first hypothesis which proposed that a main effect of valence would result in a higher reported response of pity, help, and donation in the non-negative conditions as opposed to the negative conditions, and that anger rankings would be greater in the negative conditions than the non-negative conditions. Although this effect was not apparent in the diabetes condition, the valence was a significant variable in the four other conditions.

These results support Dijker and Koomen's (2003) contention that valence is an important factor in the attribution process, as well as the suggestion that this process can be applied to the stigmas of alcohol and drug addiction. Weiner's (1988) original work did not manipulate valence, although responsibility was manipulated. Manipulating responsibility is difficult if not impossible within the context of alcohol and drug abuse; however, manipulating valence appears to be valid with these two stigmas, especially alcohol. For alcohol, three of the four variables assessed showed valence differences. Anger was the only variable that was not valence dependent. For heroin, only pity was significant. This is likely due to the extreme nature of the behavior. Results indicate that heroin is considered a more serious drug than alcohol. Anger and helping behaviors remained constant across valences, and pity varied as a result of the nature of the vignette (the person was in severe pain versus college experimentation).

Alcoholism and Heroin Dependence as Diseases

The second hypothesis suggested that the heroin and alcohol conditions would have responses similar to the disease conditions when the valence was non-negative, but would be significantly different when the valence was negative. Students who read vignettes indicating the individual was less responsible for their illness would be more likely to report similar levels of

anger, pity, help, and donation for alcoholism and drug addiction as diabetes and HIV. The students who read vignettes where the individual was more responsible for their illness would be more likely to report significantly different levels of anger, pity, help, and donation for alcoholism and drug addiction than diabetes and HIV. The results show that this hypothesis was accurate with respect to pity, anger, help and donation in the negative valence condition, and for pity in the non-negative condition. Although significantly different, some order is apparent in the non-negative conditions. In help and donate, the diseases are immediately followed by the alcohol condition and more distantly by the heroin condition. This suggests that when the valence was negative, the drug conditions are being viewed more differently than the diseases than in the non-negative condition. It was also evident that alcohol dependence is more likely than heroin to be viewed as a disease.

From this it can be argued that individuals to some degree take into consideration multiple factors when deciding whether to think about alcoholism or drug dependence as diseases. When the reason for a person's condition can be attributed to a cause that is judged less negatively, then individuals make attributions that cannot be discriminated from attributions made about people with medical illnesses. This is true at least for feelings of pity and anger as well as for prosocial intentions.

The Effects of Gender

The results demonstrated support for hypothesis three, which stated that females would respond with greater levels of pity and anger, and also be more likely to help or donate. Females demonstrated more pity than males in the HIV condition, and more anger than males in the drug dealing and alcohol conditions. Females were also more likely than males to help in the diabetes condition, and more likely to donate in the HIV and alcohol conditions. The lack of any

significant difference in the heroin condition may further support the suggestion that heroin is viewed similarly by males and females as a more negative stigma than all others in this study.

The Effects of Individual Difference Variables

The final hypothesis in this study proposed that individual differences may have an effect on responses. In the alcohol condition, a heterogeneous understanding of alcoholism and level of neuroticism had an effect on the participants' willingness to give a donation. In the heroin condition, extraversion was a factor in the participants' decision to help. These results provide some evidence that individual differences may play a role in the desire to aid an individual who is dependent on drugs or alcohol. Given this, it is important to integrate such variables into the attribution emotion model. Future studies should implement advanced techniques such as structural equation modeling to specify the exact nature of the relationship between individual difference variables and these judgments.

Limitations

This study is not without minor limitations. The lack of a diverse sample is a limitation of this study. The vast majority of participants were females, and participants were overwhelmingly Caucasian. This study also utilized students, making generalizability a possible concern in that students this age have less life experience than the general population, and may have little to no experience with these stigmas. However, many individuals in this sample are likely have some experience with these stigmas; therefore, there is accuracy in these data.

It is also possible that the vignettes varied by the level of negativity in the negative condition, with some eliciting more anger than others. Future studies should attempt to correct this by better equating the level of negativity of the valence between vignettes. With these limitations in mind, this study provides evidence that alcohol and drug abuse are appropriate for

study within the context of the attribution emotion model and that a more specific understanding of the degree to which individuals view alcohol and drug dependence as diseases can be accomplished.