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**The Effects of Person-First Language on Attributions about
People with Substance Use Disorders**

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Abstract

The Effects of Person-First Language on Attributions about People with Substance Use Disorders

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Proponents of person-first language have called for using it as a stigma-reducing communication strategy when referring to individuals with substance use disorders. However, there has been lack of empirical evidence supporting its use. This research used an attributional model of stigma to investigate what effects person-first language may have on perceptions of people with substance use disorders. The first study suggests that, under certain circumstances, person-first language may influence levels of sympathy felt towards people with substance use disorders. However, it does not affect perceptions of controllability of or responsibility for having a substance use disorder, anger towards people with substance use disorders, or intention to help or punish people with substance use disorders. In the second study, participants did not use person-first language to describe a person with a substance use disorder. Participants who, instead, used identity-first language did not hold more stigmatizing views of people with substance use disorders than other participants. The findings suggest that person-first language may not be an effective strategy for reducing stigma towards people with substance use disorders.

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Chapter 1: Introduction

So when you see someone with an addiction, don't think of a drunk or a junkie or an addict or an abuser -- see a person; offer them help; give them kindness and compassion. And together, we can be part of a growing movement in the United States to change how we view people with addiction.

-Michael Botticelli, Addiction is a Disease. We Should Treat it Like One

Substance use is a serious public health issue for the United States. A recent national survey showed that approximately 20.1 million people in the U.S. who are 12 or older have a substance use disorder related to alcohol or drugs (Ahrnsbrak, Bose, Hedden, Lipari, & Park-Lee, 2016). Additionally, a national spotlight has been placed on the escalating rates of opioid and synthetic opioid misuse and overdose. In 2016, the number of deaths from opioid overdose was five times higher than in 1999 (Centers for Disease Control and Prevention, 2018). The trend of increased opioid overdose deaths continued in 2017, partly due to the increase in overdoses of synthetic opioids such as fentanyl (Scholl, 2019). Faced with a crisis of this magnitude, it is not surprising that many efforts are being made to address substance use in this country.

The epigraph above echoes the sentiment of one strategy to address the nation's substance use problem—examining the words we use to describe it and its victims, as well as how those words shape our perceptions. Botticelli (2018) suggested that shifting the language we use to talk about addiction to “person-first” or “people-first” language

has the potential to reduce stigma towards addiction. Although he and many others have asserted the benefits of such a shift on public attitudes, to date there has been only indirect evidence to support the claim. The present study sought to directly investigate the practical potential of person-first language on laypeople's attributions about people with substance use disorders.

Chapter 2: Review of Literature

PERSON-FIRST LANGUAGE

As the term implies, “person-first” language identifies someone as a person before referring to the condition she might be experiencing. Thus, instead of saying that someone is a diabetic, alcoholic, or schizophrenic, one would say that the person is *a person with* or *who has* diabetes, alcoholism, or schizophrenia. Furthermore, when making statements that refer to groups, person-first language prescribes using phrasing such as “people with alcoholism” rather than “alcoholics.” Proponents of person-first language argue that it is a more humanizing way of describing people because it does not equate them with a particular disease or disability, and instead emphasizes individual identities and experiences (American Psychological Association, 2018; Broyles et al., 2014).

There have been numerous calls for the use of person-first language over the years. For example, the American Psychological Association (2018) and Centers for Disease Control and Prevention (2017) recommend using person-first language to describe people who have mental and physical disabilities. Additionally, Bedell, Spaulding, So, and Sarrett, (2018) have urged that health professionals dealing with populations that are or have been incarcerated avoid “any terms that define a person by a place or standing within the criminal justice system,” such as “felon” or “inmate” (p. 1140). Also, the authors of a study conducted in Brazil that found that the term

“epileptic” elicited more negative attitudes and perceived stigma than “person with epilepsy” have argued that people should refrain from using the identity-first term (Fernandes, Barros, & Li, 2009).

The call for person-first language has also been extended to substance use specifically. In a memo to the executive branch, the director of the Office of National Drug Control Policy urged the adoption of person-first language when referring to people with substance use disorders (Boticelli, 2017). The editorial team of the journal *Substance Abuse* has noted that, “terms such as ‘alcoholics,’ ‘addicts,’ and even the more generic ‘users’ are terms that group, characterize, and label people by their illness, and in so doing, linguistically erase individual differences in experience” and urged abandoning their use in favor of person-first constructions (Broyles et al., 2014). There is also some evidence that person-first terms related to addiction are viewed more positively than identity-first terms by people in recovery, family members of people with substance use disorders, and professionals in the substance use disorder treatment field (Ashford, Brown, & Curtis, 2019).

Although person-first language appears to have broad support and is viewed more favorably by some, it is not without opposition. For instance, some people prefer identity-first language. For example, an autism advocate has expressed distaste for person-first language, saying “it is only when someone has decided that the characteristic being referred to is negative that suddenly people want to separate it from the person” (Sinclair, 2013, p. 2). Also, some experts have argued that universally applying person-first language fails to recognize diverse views on disability culture (Dunn & Andrews, 2015).

Specifically, they point to the “Minority Model” of disability, which recognizes disability as a social identity and note that using person-first language may undermine the identity of individuals who ascribe to this view of disability (Dunn & Andrews, 2015).

Additionally, there is some evidence that using person-first language may not be effective in reducing stigma. Lynch and Groom (1994) found that although participants preferred person-first language, being exposed to it did not affect evaluations of job applicants. Similarly, a recent study conducted in the UK was unable to replicate results from the Brazilian study on the terms “epileptic” and “person with epilepsy” (Noble & Marson, 2016). Furthermore, an analysis of scholarly writing on disability showed that person-first language is more commonly used to describe children with disabilities than those without. The author notes that this variance may actually contribute to stigma by accentuating an apparent difference between the two groups (Gernsbacher, 2017).

Regardless of what opinions exist about the appropriateness of using person-first language to describe people with addiction, there is a need for research investigating what impact, if any, using person-first language has on those exposed to it. Additionally, it is useful to investigate possible avenues through which any language effects occur and to get a better understanding how person-first language is currently used by laypeople. The current study sought to do that by testing the effects of person-first language within the context of an attributional model of stigma (Weiner, Perry, & Magnusson, 1988) and by determining how frequently participants spontaneously use person-first language to describe people with substance use disorders

STIGMA AND SUBSTANCE USE DISORDERS

Goffman (1963) described “stigma” as an attribute that causes a person to be “reduced in our minds from a whole and usual person to a tainted, discounted one” (p.3). He (1963) identified “blemishes of individual character,” which include addictions, as one of the primary types of stigmas (p. 4). In addition to Goffman’s typology of stigma, others have distinguished public stigma from internalized self-stigma. Public stigma refers to the effects of stereotypes that are endorsed by the public and self-stigma refers to effects of internalizing those stereotypes (Corrigan, Kuwabara, & O’Shaughnessy, 2009).

A considerable amount of research has shown that people with substance use disorders are stigmatized by others and that they experience internalized stigma as well. For instance, people desire a great amount of social distance from those with substance use disorders, indicating that they are uncomfortable with things like having someone with an addiction marry into their family (Barry et al., 2014; Kennedy-Hendricks et al., 2017). Additionally, people with substance use disorders are often seen as deserving blame for their disorder (Kennedy-Hendricks et al., 2017), to a higher degree than those with mental illness (Barry et al., 2014; Corrigan et al., 2009). When people with substance use disorders internalize stigma, they experience negative effects such as shame, lower self-esteem, and lower social functioning (Birtel et al., 2017; Can & Tanriverdi, 2015). Additionally, Matthews, Dwyer, and Snoek (2017), have argued that public stigma and self-stigma interact to produce a “looping effect,” where people with substance use disorders continue using substances in order to alleviate the negative

effects that result from internalizing public stigma. This process then feeds into public and self-stigma, perpetuating the problem. Similarly, another study has shown that the negative effects associated with perceived public stigma are mediated by internalized stigma, suggesting that these two concepts are highly related for people with substance use disorders (Birtel, Wood, & Kempa, 2017). These findings indicate that stigma is a significant factor affecting the lives of people with substance use disorders.

Stigma as a barrier to treatment

One particularly concerning aspect of stigma in this context is its potential to prevent people with substance use disorders from seeking professional help. For instance, Rapp et al. (2006) found that a sample from this population reported concerns about how friends and coworkers would perceive them if they sought help for the problem as a barrier to treatment. Browne et al. (2016) identified privacy as a perceived barrier to treatment for people in the rural South with substance use disorders. Issues of privacy related to stigma were also identified as a barrier to treatment in a qualitative study of self-identified drug users in Virginia (Notley et al., 2012). Additionally, a study examining the beliefs of at-risk drinkers found that many of them perceived that both community members and primary healthcare providers would judge someone seeking treatment for an alcohol use disorder (Fortney et al., 2004). Embarrassment and fear of what others would think were identified as reasons why individuals who acknowledged they had a need for treatment of an alcohol use disorder did not seek it (Grant, 1997). For people with comorbid substance use and mental health disorders, one common reason for

not seeking treatment was “fears about stigmatizing attitudes of neighbors and community” (Mojtabai et al., 2014, p. 4). Taking into account the degree of stigma directed toward people with substance use disorders and its negative impact on treatment-seeking behavior, it is logical to search for ways to reduce stigma.

ATTRIBUTIONS AND STIGMA

Attribution theory posits that humans make inferences about the causes of other’s actions and that those inferences then affect their own behavior toward others (Heider, 1958; Weiner, 1985). The theory has been applied to stigma (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003; Corrigan, 2000; Corrigan & Shapiro, 2010; Kelly & Westerhoff, 2010; Weiner, 1985, 1993, 2006; Weiner et al., 1988) and has specifically served as a theoretical framework for studies dealing with addiction terminology and stigma (Kelly, Dow, & Westerhoff, 2010; Kelly & Westerhoff, 2010).

Weiner (2006) demonstrated that attributions are relevant on a societal scale because they influence people’s responses to social issues such as mental illness and poverty. When the inferred cause of someone’s behavior is judged to be controllable by the individual, observers tend to attribute personal responsibility for the behavior to the individual. Personal responsibility is associated with negative emotions (e.g., anger) in observers, which then lead to behaviors like reprimanding or withholding assistance. Weiner et al. (1988) found that stigmas inferred to be caused by physiological processes (e.g., blindness) are generally perceived to be uncontrollable, but others inferred to be of psychological origin (e.g., addiction) are perceived to be controllable. Additionally, they

found that controllable stigmas lead to perceptions of less pity and liking, fewer judgments to help, and more anger.

Research has demonstrated that perceptions of a disorder's cause influence attributions of responsibility, affect, and behavior. Corrigan et al. (2003) found that when the onset of a mental illness was depicted as under an individual's control, it led to perceptions of personal responsibility, which in turn encouraged avoidance and unwillingness to help. Similarly, Goodyear, Haass-Koffler, and Chavanne (2018) found that a person described as taking opioids after being prescribed them by a physician, compared to one who instead accepted them from a friend, was associated with less personal responsibility for the addiction and less negative affect. These findings suggest that if using person-first language affects the degree to which individuals attribute personal responsibility for a substance use disorder to a person, it could in turn impact stigmatizing behavior towards people with substance use disorders.

LANGUAGE EFFECTS AND PERCEPTIONS OF ADDICTION

There has been some research indicating that the particular terms we use to describe people who have substance use disorders can influence others' perceptions of them. Kelly and colleagues (Kelly et al., 2010; Kelly & Westerhoff, 2010) found that members of the public and mental health clinicians rate people described as "substance abusers" as more responsible for their addiction and deserving of punitive action than others described as having a "substance use disorder" (Kelly et al., 2010; Kelly & Westerhoff, 2010). In a similar study, Goodyear, Haass-Koffler, and Chavanne (2018)

compared the term “addict” and the term “opioid use disorder.” They found that “addict” was associated with higher levels of negative affect and higher personal responsibility than “opioid use disorder.” These results indicate that choice of terminology can affect perceptions of people with substance use disorders.

Using the Go/No Association Task (GNAT), some researcher have observed that person-first language elicits different responses than identity-first language. Ashford, Brown, and Curtis (2018) found that the terms “addict”, “alcoholic”, and “opioid addict” were associated with “bad” significantly more than a person with a “substance use disorder” an “alcohol use disorder” or an “opioid use disorder” suggesting that person-first language may result in less stigma. A similar study showed that participants’ automatic associations with the term “person with a substance use disorder” were less negative than their associations with the term “substance abuser” (Ashford, Brown, & Curtis, 2018a).

However, not all research on language and stigma of addiction has produced such straightforward results. In addition to the GNAT study, Ashford et al. (2018) also conducted a vignette study which produced some conflicting results. They found that, compared to a control and a person with a “substance use disorder” participants desired significantly greater social distance from an “addict.” This result is consistent with the previous literature as well as assumptions about the benefits of person-first language. However, they found that both an “opioid addict” and “a person with an opioid use disorder” were associated with a greater desire for social distance than the control. Additionally, the social distance people desired from a “substance abuser” did not

significantly differ from a “person with a substance use disorder”; nor was the difference between an “alcoholic” and “person with an alcohol use disorder” significant. Based on these results, it is unclear if using person-first language will reliably reduce stigma.

Chapter 3: Rational

STUDY 1

The review of the literature shows that, in some cases, choice of terminology affects perceptions of people who have substance use disorders and that attributions about the causes of stigmatized conditions influence how observers respond to people with stigmatized conditions. However, there are gaps in the literature that need to be filled. The question of how person-first language functions within the full attributional model of stigma has not been addressed heretofore. A study of this nature is important because an attribution-based explanation would make a stronger case for using person-first language than simply saying that it reduces stigma because it does not equate the person with the condition. Ashford et al., (2018b) did find some evidence that person-first language is less stigmatizing compared to identity-first language, but their results do not provide insight into why. By failing to look at stigma as a process, many studies on this topic have missed an opportunity to elucidate how different terms cause different perceptions.

Additionally, there is a need for more systematic comparisons of person-first labels against their identity-first counterparts. To date, the research in this area has shown that certain phrases are associated with more negative attitudes than others, but it is not immediately clear if differences in attitudes are due to person-first language use. For example Ashford et al. (2018a) and Kelly and Westerhoff (2010) both compare the term “a substance abuser” to “having a substance use disorder,” but “substance abuser” is not the identity-first equivalent of “having a substance use disorder” and it is possible (perhaps even likely) that the negative connotation of the word “abuse” influenced their

findings. Similarly, Goodyear found that “drug addict” elicited more stigmatizing attitudes than “opioid use disorder,” but these are not equivalent terms either. Finally, “substance abusers” are seen as more responsible for their addiction and more deserving of punitive action than those described as having a “substance use disorder” but these are also not equivalent terms (Kelly et al., 2010; Kelly & Westerhoff, 2010). The current study attempted to fill this gap by comparing the commonly used terms “addict” and “alcoholic” as well as the more clinical “substance user” to their person-first counterparts. By systematically manipulating only the person-first or identity-first nature of the phrasing, this study had the potential to more definitively determine what effect person-first language has on stigma towards people with substance use disorders.

Previous research on attributions and stigma suggests that, in general, substance use disorders will be judged as controllable, which will lead to negative attitudes and stigmatizing behavior. And, although there is limited research that directly compares person-first and identity-first language, the research that does exist on different terms used to describe people with substance use disorders provides evidence that language choice does influence perceptions. Finally, the advocates of person-first language argue that it should affect perceptions and reduce stigma. Considered together, these findings and claims motivate the following hypotheses:

H1: The use of person-first language to describe a person with a substance use disorder will result in perceptions of lower a) controllability of the condition, b) personal responsibility for the condition, c) anger toward the person, d)

willingness to punish the person, and d) desired social distance from the person than identity-first language.

H2: The use of person-first language to describe a person with a substance use disorder will result in perceptions of higher a) sympathy for the person and b) willingness to help the person.

STUDY 2

Despite recommendations in professional publications and clinical settings, there is scant evidence to suggest that person-first language positively influence laypeople's perceptions of those with substance use disorders. Negative social support and public stigma are likely greater deterrents to seeking treatment than the way clinicians and academics write and speak, so in addition to testing the attributional model, it is also critical to get a better picture of how person-first language is used by the general public. Determining how frequently and by whom person-first language is used can inform its attributional value.

Research on spontaneous trait inferences indicates that when people are exposed to information about behavior that suggests a particular trait, they will infer that the person performing the behavior has that trait (Moskowitz, 1993; Uleman, Adil Saribay, & Gonzalez, 2008). There is also evidence that characteristics of the participants, including culture and level of education, affect the type of spontaneous inferences they make (Uleman et al., 2008). It is possible that giving participants information about a person who is enacting behavior consistent with having a substance use disorder will lead them

to infer that the person has one without being told. It is also possible that participants' characteristics will also influence how they make those inferences.

Study 2 sought to determine not just if people made spontaneous trait inferences when given information about someone with a substance use disorder, but what label they would use to express the inference. To investigate this process, the following research questions and hypotheses were tested:

RQ1: Do participants tend to use person-first or identity-first language when asked to describe someone whose behavior suggests they have a substance use disorder?

In a study of the psychological correlates of political conservatism, Jost, Glaser, Kruglanski, and Sulloway (2003) concluded that resistance to change and justification of inequality are central to conservatism. Other studies have shown that conservatives are less likely to support funding for substance use rehabilitation and harm reduction programs (Kulesza, Teachman, Wertz, Gasser, & Lindgren, 2015; Timberlake, Rasinski, & Lock, 2001). These results suggest that politically conservative individuals may be less interested in supporting efforts to reduce stigma towards people with substance use disorders and more resistant to changing their language and perceptions of people with substance use disorders than more liberal individuals. Based on this reasoning, it was hypothesized that:

H1: Politically conservative participants are more likely to use identity-first language and politically liberal people are more likely to use person first-language.

In addition to political orientation, there is reason to believe that familiarity with people who have substance use disorders influences one's attitudes toward this population, which, in turn, could affect the language one uses to describe them. Corrigan et al. (2003) found that greater familiarity with people who have substance use disorders led to increased pity and intention to help. These findings suggest that greater familiarity is associated with more pro-social behavioral intent towards people with substance use disorders. Thus, it was hypothesized that:

H2: People who are more familiar with substance use disorders are more likely to use person-first language.

Conversely, it was also hypothesized that people who desire more social distance from people with substance use disorders, and thus hold more negative attitudes towards them, would be less likely to use person-first language when describing a person who appears to have a substance use disorder. Formally:

H3: People who desire more social distance from people with substance use disorders are more likely to use identity-first language.

Chapter 4: Study 1

METHOD

Participants

In Study 1, the initial sample consisted of 627 participants recruited through Amazon's Mechanical Turk (MTurk). MTurk is an online platform that allows researchers and other "requestors" to post tasks, which "workers" complete for payment. Despite some of the platform's shortcomings, research suggests that data obtained from MTurk samples is generally reliable and valid (Paolacci & Chandler, 2014; Sheehan, 2018). To help insure quality data, a question was included that allowed participants to acknowledge that they did not complete the task attentively and still receive payment. Rouse (2015) found that including a question of this nature increased the reliability of an MTurk sample more than a traditional attention check or increasing payment. After removing participants who indicated that they were inattentive, the sample was reduced to 420 participants.

Participants predominantly identified as white (72.62 %, $n = 420$). The remainder of the sample who selected a race or ethnicity identified as Black or African American (10.0%), Hispanic or Latino (7.4%), Asian (5.7%), and American Indian or Alaska Native (1.4%). Seven participants selected "other" and five participants chose not to provide an answer. Participants who identified as female comprised the majority of the sample at 60%; participants who identified as male followed at 38.6%. The remainder of participants identified as another gender or chose not to answer the question. Approximately 41% of the participants reported completing a four-year degree and 25%

participants reported completing some college. Approximately 13% of participants reported completing high school or less and approximately 11% reported having a doctoral or professional degree. In order to accurately report the ages of participants, one participant who entered their age as “788” was excluded from the analysis. After removing that response, the mean age of participants was 38.6 ($n = 418$, $SD = 13.1$).

Procedure

Participants accessed an online experiment hosted on Qualtrics through MTurk. After providing informed consent, participants were randomly assigned to one of nine conditions defined by a 3 x 3 factorial design with label (identity-first, problem possession, person-first) and problem type (alcohol, opioids, substance) as between-participant factors. In each condition, participants read a short vignette about a person with a substance use disorder, which reflected DSM-V criteria for a diagnosis of a substance use disorder. After reading the vignettes, participants responded to items measuring perceptions of causal controllability and personal responsibility, affect, and behavioral intentions. In addition, participants responded to measures of desired social distance and familiarity with substance use disorders, as well as a semantic differential scale measuring endorsement of positively and negatively valenced words describing the person in the vignette. Finally, participants responded to basic demographic questions.

Stimulus materials

Nine vignettes were created for the purpose of the study. Each vignette contained information about a person named John who was exhibiting symptoms consistent with a

diagnosis of a substance use disorder according to the DSM-V (American Psychiatric Association, 2013). Each vignette stated that John was using a substance daily, was unable to stop using, had experienced withdrawal when attempting to stop, and was not performing well at work due to his substance use. The vignettes differed in terms of the problem ascribed to John (“alcohol use,” “opioid use,” or “substance use”) and the language used to describe the problem. The vignettes describing an alcohol problem described John as “an alcoholic,” someone who “has alcoholism,” or as “a person with alcoholism.” The opioid vignettes described John as either “an opioid addict,” someone who “has an opioid addiction,” or as “a person with an opioid addiction.” The final vignettes described John as either “a substance user,” a person who “has a substance use disorder” or “a person with a substance use disorder.” The vignettes used are presented in Appendix A.

Measures

The primary measures were based on Weiner et al (1988)’s work on attributions and stigma. Controllability, responsibility, sympathy, anger, willingness to help, and willingness to punish were measured using 5-point Likert-type items ranging from 1 (*a great deal*) to 5 (*none at all*), or 1 (*extremely likely*) to 5 (*extremely unlikely*) (Appendix B). The questions were: “How much control do you believe that John had over the cause of his condition?”, “How much personal responsibility does John have for his condition?”, “How much anger do you feel towards John?”, “How much sympathy to you feel towards John?”, “How likely would you be to help John in some way if you had the

chance?”, and “How likely would you be to punish John in some way if you had the chance?”

Social distance was measured using a modified version of Bogardus’ (1925) Social Distance scale. The scale consisted of 7 items that measured participants’ comfort with having people with substance use disorders participate in their social circle (e.g., “I would be willing to accept someone with a substance use disorder as a coworker.”) (Appendix C). Previously, Ashford et al. (2018) used the scale to measure social distance desired from people with substance use disorders. In the current study, the scale’s alpha coefficient was .85.

The semantic differential scale was adapted from Lavoie, Connolly, and Roesch's, (2006) study of perceptions of inmates with mental disorders. The scale is a combination of one used by Gerstein, Topp, and Correll, (1987) and Steadman and Coccozza (1977). Gerstien et al. (1987) reported an alpha coefficient of .94 on their scale and Steadman and Coccozza reported intercorrelations between items in their scale ranging from .33 to .40 for one factor and .37 to .54 for another factor when it was used to measure perceptions of “mental patients”. However, when used to measure perceptions of “criminally insane patients” the scale appeared to only measure one factor with intercorellations between items ranging from .63 to .82. Although Lavoie et al (2006) did not report an alpha coefficient, the items’ prior use in studies examining stigmatized groups and the previously reported reliability ratings on the individuals scales made the combined scale an appropriate choice for this research. After dropping one of the intial 18 items due to its irrelevance to the present study, the scale consisted of 17 items measured on a seven-point

scale (Appendix D). Each item was anchored by opposing words (moral-immoral) that could be used to describe a person with a substance use disorder. Based on the results of a reliability analysis, all items were retained ($\alpha = .91$).

Familiarity with substance use disorders was measured using a modified Levels of Contact Report, which consists of seven yes-or-no items (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999) (Appendix E). Corrigan et al. (2003) used the report to measure familiarity with people who have mental illnesses and obtained an alpha reliability score of .62. In the present study, an eighth item—"I am a person with a substance use disorder"—was added to the original scale. The modified scale used in the present study received an alpha reliability score of .73.

RESULTS

Preliminary tests

The results of Corrigan et al. (2003) suggest that familiarity with substance use disorders might moderate the effects of the manipulated variables on some of the outcome variables from this study. To explore this possibility, a series of simple linear regressions and a one-way analysis of variance (ANOVA) were conducted to determine whether or not familiarity needed to be controlled for in subsequent analyses. Results from the regressions show that familiarity was not a significant predictor of anger, control, sympathy, responsibility, or helping, but did predict desire to punish, $F(1, 413) = 7.118, p < .05, R^2 = .02$. However, given that the proportion of variance explained was quite small and the ANOVA indicated that the experimental groups did not significantly

differ in levels of familiarity, $F(2, 413) = 0.108$, $p = .89$, this variable was not considered further.

Main analyses

A series of two-way ANOVAs were conducted to test the first hypothesis. Hypothesis 1 predicted that the use of person-first language to describe a person with a substance use disorder will result in perceptions of lower a) controllability of the condition, b) personal responsibility for the condition, c) anger toward the person, d) willingness to punish the person, and e) desired social distance from the person than identity-first language. For H1a, there were no main effects of language, $F(2,411) = 1.60$, $p = .203$, or substance, $F(2,411) = 1.98$, $p = .140$, and no interaction effect of language and substance $F(4,411) < 1$ on perceptions of controllability. For H1b, there were no main effects of language $F(2,411)$ or substance ($F_s < 1$) and no interaction of language and substance $F(4,411) = 0.95$, $p = .435$ on perceptions of personal responsibility. For H1c, there were no main effects of language $F(2,411) = 1.168$, $p = .312$, or substance, $F(2,411) = 1.23$, $p = .292$, and no interaction effect of language and substance, $F(4,411) = 1.73$, $p = .143$, on anger towards the person with a substance use disorder. For H1d, there were no main effects of language $F(2,410) = 1.55$, $p = .213$ or substance $F(2,410) = .870$, $p = .420$ and no interaction effect of language and substance $F(4,410) = 0.36$, $p = .834$ on willingness to punish the person with a substance use disorder. Finally, for H1e, there were no main effects of language $F(2,408) = 1.81$, $p = .166$ or substance $F(2,408) = 1.59$, $p = .205$ and no interaction effect of language and substance $F(4,408) = 1.47$, $p = .210$ on desired

social distance from the person with a substance use disorder. These results did not provide support for H1 and suggest that person first language does not reduce perceptions of controllability, responsibility, anger, willingness to punish, or social distance.

Table 1.

Means for H1

	Identity-First			Person-First			Possession of Problem		
	ALC	OA	SUD	ALC	OA	SUD	ALC	OA	SUD
Controllability	2.83	3.00	2.69	2.73	3.28	2.92	3.23	3.15	2.93
Responsibility	2.47	2.22	2.00	2.18	2.32	2.36	2.29	2.31	2.35
Anger	4.09	4.1	4.128	3.85	4.3	4.28	4.06	3.73	4.20
Punish	3.79	3.76	3.9	4.00	4.11	4.08	3.83	3.83	4.20
Social Distance	4.98	4.04	3.85	4.55	5.11	4.86	5.02	4.39	4.43

Table 1. Means for H1

An a-priori power analysis using G*power was conducted to ensure that the sample size of this study provided enough power to detect a significant interaction. The results of the power analysis indicated that a sample size of 233 would provide sufficient power ($\beta = 0.85$) to detect an interaction with an effect size of $f = .243$, which is comparable to those obtained for the effects of language in another study which compared person-first and identity-first language (Ashford et al., 2018b). Since this study had a sample size larger than 233, it is reasonable to conclude that the null results are unlikely to be the result of insufficient statistical power and instead suggest using person-first language did not lead to differences in perceptions of this study's outcome variables.

H2 predicted that the use of person-first language to describe a person with a substance use disorder will result in perceptions of higher a) sympathy for the person and

b) willingness to help the person. Two-way ANOVAs were conducted in order to test this hypothesis. For H2a, there were no main effects of language or substance ($F_s < 1$) on sympathy for the person with a substance use disorder. However, there was a significant interaction effect of language and substance on sympathy, $F(4,411) = 4.29, p < .01$. For H2b, there were no main effects of language $F(2,410) = 1.82, p = .163$ or substance $F(2,410) = 1.52, p = .220$ and no interaction effect of language and substance $F(4,410) = 1.45, p = .218$ on intention to help.

Table 2.
Means for H2

	IF			PF			POS		
	ALC	OA	SUD	ALC	OA	SUD	ALC	OA	SUD
Sympathy	2.53	2.98	3.08*	3.08	2.77	2.46*	2.77	2.61	2.88
Help	2.55	2.38	2.56	2.45	1.98	2.08	2.38	2.07	2.25

Note. * signifies significantly different at $p < .05$

Table 2. Means for H2

Three one-way ANOVAs examined the simple main effects of language on sympathy within each substance group. For the alcohol $F(2,132) = 2.15, p = .121$ and opioid addiction $F(2,153) = 1.11, p = .332$ conditions, there were no mean differences in intention to help across language. For the substance use group, there was a significant difference in sympathy across language $F(2,126) = 3.66, p < .05$. Simple effects were explored using Tukey's Honest Significance Test, which showed that there was a statistically significant mean difference in levels of sympathy between person-first ($M = 3.08$) and identity-first ($M = 2.46$) language ($p < .05$), but not between possessive ($M = 2.88$) and identity-first ($p = .696$) or possessive and person-first ($p = .183$).

These findings provide partial support for H2. Using person first language did not lead to significant increases in intention to help in any of the problem conditions. However, there was some support for H2b. Participants in the substance use condition reported significantly greater sympathy for the person with a substance use disorder when they were exposed to person-first language than when they were exposed to identity-first language. This finding suggests, while it does not have a consistent effect, under certain circumstances, person-first language may illicit more sympathy from observers.

In order to further examine the attributional model, two linear regression models were created. The first model used controllability, responsibility, sympathy, and anger as predictors for willingness to punish. The second model used controllability, responsibility, sympathy, and anger as predictors for willingness to help. Overall, the first model significantly predicted willingness to punish, $F(4, 414) = 43.96, p < .01, R^2 = .30$. However, only sympathy ($t = -2.23, p < .05$) and anger ($t = 11.36, p < .001$) were significant predictors of willingness to punish. Punishing was associated with lower levels of sympathy ($b = -.102$) and higher levels of anger ($b = .522$). The second model was also significant overall, $F(4,414) = 29.99, p < .001, R^2 = .23$. However, only sympathy significantly predicted willingness to help ($b= 0.390, t = 9.30, p < .001$).

Since multicollinearity may have interfered with the model's capacity to detect unique contributions of the predictors, intercorrelations of the items were calculated (Table 3). The relatively large correlations coefficients for anger and punishing as well as sympathy and helping support the results of the multiple regressions, suggesting that feelings of sympathy and anger lead to intentions to help or punish.

Table 3.

<i>Correlation Matrix for Attributional Model Items</i>						
	Anger	Control	Sympathy	Responsibility	Help	Punish
Anger	1					
Control	.14	1				
Sympathy	-.21	-.35	1			
Responsibility	.08	.47	-.31	1		
Help	-.16	-.20	.47	-.16	1	
Punish	.52	.20	-.25	.16	-.19	1

Note. All correlations significant except between Sympathy and Control

Table 3: Correlation Matrix for Attributional Model Items

In addition to testing the attributional model, a two-way ANOVA examined whether language and substance affected responses on the semantic differential scale. The results indicated that there was no main effect of language $F(2,399) = 1.06, p = .349$, or substance $F(2,399) = 1.73, p = .178$, and no interaction effect, $F(4,399) = 1.29, p = .272$.

DISCUSSION

Unlike some previous research on language used to describe substance use disorders, this study did not find consistent evidence to support the idea that language choice affects stigma. In this study, language only had a significant effect on levels of sympathy in the substance use disorder condition. It is possible that this difference is due to the lack of overtly negative terminology like “substance abuser” that was included in many of the other studies of this nature. Perhaps, if previous studies had compared “substance abuser” with the phrase “person with a substance *abuse* disorder” they would have obtained results more similar to those in the present study. When examining person-first phrasing versus identity-first phrasing of the same types of terms, the effects of

language are not consistent. This suggests that while certain terms may elicit more negative responses, changing the phrasing may not. In other words, even though calling a person “an alcohol abuser” may lead to negative responses, calling them an “alcohol user” may yield no attributional differences from saying they “have an alcohol use disorder” or are “a person with an alcohol use disorder.” These results conflict with the arguments made in favor of blanketly implementing person-first language as a method of reducing stigma. Furthermore, this study indicates that the type of substance use disorder can interact with the effects of language. This finding also weakens the argument for universal adoption of person-first language, suggesting that more research should be done in order to determine which specific substance use disorders would be best explained using person-first language.

It is also notable that the ratings of controllability and responsibility were not significant predictors of helping or punishing in the regression models. It is possible that this is due to multicollinearity effects, but the intercorrelations indicate that responsibility and control are not strongly related to intent to punish, intent to help, or to affect, which would be expected according to the attributional model. These results may indicate that the attributional model is not effective in explaining stigma towards people with substance use disorders. However, it is also possible that the language manipulations did not produce large enough attributional effects for the statistical model to pick up. The overall mean of controllability was 2.99 and the overall mean of responsibility was 2.28. Neither of these means is far from the scale midpoint of 3, which may have made it difficult to detect relationships between these variables and other factors.

Additionally, the fact that the regression model showed that only affective predictors were significant may suggest that the effects of responsibility and controllability are mediated by affect and that attributions of responsibility and control are impactful only inasmuch as they lead to affective responses. This interpretation fits with Weiner and colleagues' theoretical model that states attributions should lead to affective responses (1988; 2006). However, in this study, attributions of control and responsibility were not highly correlated with affective responses, which further suggests that manipulating language may not have produced strong attributional effects.

Taken together, the results of this study provide modest support for using person-first language as a stigma-reducing strategy. When discussing substance use, using person-first language may increase the amount of sympathy that people feel for the person with the disorder. However, it does not appear that the increased sympathy results from attributions of responsibility or control.

Chapter 5: Study 2

Study 2 sought to provide additional insight into the practicality of using-person first language to describe people with substance use disorders by examining whether it was currently used by the public. It also sought to understand if political orientation, desired social distance from and familiarity with people with substance use disorders affected the way participants would describe a person who exhibited behavior associated with having a substance use disorder.

METHOD

Participants

Eighty-eight participants were recruited through MTurk. As in Study 1, participants were given the opportunity to state that their data should be excluded from the analyses due to their inattention or lack of care while completing the survey. After dropping those respondents, the sample size was 68. Of those participants, 45 identified as female and 21 identified as male. The mean age of participants was 38.96 ($SD = 11.81$). Approximately 70% of the participants identified as White, 6.8% identified as Asian, and approximately 4.4% identified as Black. Approximately 41% of the participants had a four-year degree, approximately 18% had some college, approximately 6.8% of participants had a two-year degree, approximately 6.8% of participants had a four-year degree, and approximately 8.8% were high school graduates. In regard to political beliefs, approximately one quarter of participants identified as moderate, approximately 24% identified as liberal, approximately 22% identified as conservative,

approximately 22% identified as very liberal, and approximately 7% identified as very conservative.

Procedure

After acknowledging informed consent, participants proceeded to an online Qualtrics-based survey. Participants were randomly sorted into two conditions—one group read a vignette about a person using alcohol and the other read about a person using drugs. After reading the vignette, participants were asked to imagine that the person they read about was a coworker and then write the exact words they would use to describe that person to another coworker or a friend. Next, participants responded to measures of social distance, familiarity with substance use disorders, a semantic differential scale, political identification, and basic demographic questions.

Stimulus materials

The stimulus materials used in this study (Appendix F) were nearly identical to those used in Study 1. However, the vignettes in this study did not label John's condition.

Measures

The measures of social distance ($\alpha = .82$), familiarity ($\alpha = .69$) and the semantic differential scale ($\alpha = .93$) used in Study 2 were identical to those used in study one. Given the reliability ratings, all items on the measures were retained.

RESULTS

Coding

The researcher coded the open-ended responses of the questionnaire for person-first and identity-first language. During the process, other codes were developed to account for the language use that did not qualify as either person-first or identity first. One of the additional codes was “possession of the problem,” which included language like “his drug use” and “John has a drug problem.” Another code was “past participle,” which included responses that described John’s problem using a past participle (e.g. “he is addicted to drugs”). Another code was created for verb phrases that were used to describe John (e.g., “John uses drugs”, “John is struggling with addiction”). The researcher also coded for responses that didn’t mention drug or alcohol use at all and for responses that used more than one type of language in their description.

Analysis

The first step in the analysis process was to determine the frequency with which each type of language was used. In this sample, no participants used person-first language. Seven participants used identity-first language, one person used identity-first and possessive language, and two people used identity-first language and verb phrases. Sixteen people used possessive language and three people used verb phrases and possessive language. Nine participants used verb phrases only. Two participants used past-participles only. Three people made other references to substance use that did not fit into the preceding categories and twenty-three people did not mention substance use at all. Additionally, one participant did not follow directions, providing an off-topic

response, and one participant’s grammar made it impossible to determine in which category their language should be placed. Frequencies are presented in the table below.

Table 4.
Language Frequencies

Language	Frequency	Percent of Total
No Mention	23	33.82
Possessive	16	23.53
Verb Phrase	9	13.24
Identity-First	7	10.29
Possessive and Verb Phrase	3	4.41
Other mention	3	4.41
Identity-First and Verb Phrase	2	2.94
Past Participle	2	2.94
Identity-First and Possessive	1	1.47

Table 4: Language Frequencies

RQ1 asked, “Do participants tend to use person-first or identity-first language when asked to describe someone whose behavior suggests they have a substance use disorder?” Based on the responses from this sample, it appears that identity-first language is used more frequently than person-first language. However, it should be noted that this finding does not suggest that identity-first language is especially common. Collapsing all categories containing identity first language only accounts for 6.8% of the responses. In contrast, nearly 30% of the responses contained possessive language and about 34% of the responses did not mention substance use. In fact, what is most notable about these results is that most participants chose to avoid specifically referencing substance use altogether.

Due to the small sample size and the lack of responses using person-first language, it was difficult to address the study's hypotheses. H1 predicted that politically conservative participants are more likely to use identity-first language and politically liberal people are more likely to use person first-language. However, even after limiting the political scale to three groups instead of five and only looking at instances of identity-first, possessive language, and no mention of substance use, the expected values were too small to meet the requirements for a Chi-squared test. Due to this limitation, it is not possible to determine if political orientation influences the tendency to use person-first and identity-first language.

Since no participants used person-first language, it was impossible to directly address H2, which predicted that people who are more familiar with substance use disorders are more likely to use person-first language. However, a one-way ANOVA, which compared differences in social distance for participants who used identity-first, possessive language, verb phrases, and did not mention substance use was conducted to explore any effects that familiarity may have had on the ways participants described the person in the vignette. The ANOVA indicated that there was no significant difference in mean levels of familiarity $F(3,50) = 1.620, p = .197$. A post-hoc power analysis using G*Power, indicated that the test had adequate power to detect a difference in means between conditions if a difference actually existed ($\beta = 0.94$).

Although it was also impossible to directly address H3, which predicted that people who desire more social distance from people with substance use disorders are more likely to use identity-first language, a one-way ANOVA was conducted to explore

any effects that social distance may have had on some of the ways that participants described the person in the vignette. The ANOVA compared mean differences in social distance for participants who used identity-first, possessive language, verb phrases and did not mention substance use. The ANOVA indicated that there were no mean differences in levels of social distance $F(3,50) = 0.27, p = .843$. However, a post-hoc power analysis using G*Power, indicated that the test had very low statistical power ($\beta = 0.39$), suggesting that the null finding should be interpreted cautiously.

Table 5.
Means for H2, Study 2

	IF	NO	POS	V
Familiarity	3.14	2.48	3.5	4
Social Distance	4.86	4.5	4.94	4.11

Table 5: Means for H2, Study 2

DISCUSSION

It is notable that no participants used person-first language in this study. This finding suggests that, despite a multitude of recommendations for its use, the general public is not currently inclined to use person-first language to describe people with substance use disorders. If advocates wish to use person-first language as a method for reducing stigma towards people with substance use disorders, they will have to make significant attempts at increasing the rate at which it gets used by the public. Additionally, practitioners should be cautious in continuing to use person-first language while it is not commonly used by the public. Since using person-first language appears to

be uncommon, using it may stand out and contribute to a sense of difference or “otherness” related to people with substance use disorders that could perpetuate stigma.

It is also interesting that a substantial number of participants chose not to reference substance use disorders in their descriptions of the person from the vignette. Some of these participants used vague terms to indicate that John had some type of problem and others did not reference a problem at all. Avoiding mentioning the problem could indicate that participants were concerned for John’s privacy and did not want to disclose his problem to someone else. On the surface, this effort seems good-natured. At the same time, it may indicate that discussing substance use issues is taboo, which would suggest that using any explicit label for a substance use disorder could lead to negative responses in observers.

Additionally, this study found that people who used identity-first language neither desired more social distance from nor were less familiar with people who had substance use disorders. This indicates that using what some have argued is more stigmatizing language may not be associated with holding stigmatizing views, which casts doubt on the claim that identity-first language will lead to greater stigma.

Chapter 6: Conclusion

These studies sought to determine whether using person-first language reduces stigma when compared to identity-first language and to learn about how it is used by the public. The primary goal of this research was to provide insight into whether or not the calls for using person-first language when discussing substance use disorders should be heeded by evaluating its effects within an attributional model of stigma. Another goal was to better understand how and by whom person-first and identity-first language are used. These studies do not provide substantial support for universally adopting person-first language. Instead, they suggest that person-first language may increase positive affect for certain conditions but not others. They also suggest that person first-language may not affect attributions of control and responsibility. Additionally, they suggest that person-first language is not commonly used, and that using identity-first language is not indicative of holding negative views about people with substance use disorders. Most importantly, they indicate that more research should seek to determine what types of language are able to reduce stigma and to identify the mechanisms through which those language effects may occur.

In Study 1, two regression models, one predicting intent to help and one predicting intent to punish, were significant and accounted for a substantial proportion of the variance. However, only two of the variables, anger and sympathy, were significant predictors of behavioral intent. Inter-correlations among the variables seemed to confirm that affective responses seem to be most important in predicting behavior. The fact that affect was a better predictor of behavior than ratings of responsibility or controllability

and that it was not highly correlated with those variables is somewhat surprising based on the theoretical underpinning of the attributional model and research in this area. Research that supports an attributional model of stigma has shown that affect is highly related to controllability and responsibility (Corrigan et al., 2003; Weiner et al., 1988). This study's divergence from that pattern suggests that the language manipulations did not produce attributional effects. Based on this, it does not appear that person-first language will reduce any attribution-based stigma towards people who have substance use disorders.

The results of the ANOVAs support the conclusion that person-first language will not reduce stigma in most cases. There was only one effect of language on any of the attribution variables; person-first language led to greater amounts of sympathy than identity-first language in people in the general substance use condition. Before advocating that person-first language should be applied to all labels for substance use disorders, more research should seek to identify if there are any positive effects of using person-first language to describe specific disorders.

Study 2 also undermines arguments for implementing person-first language across the board. No participants used person-first language to describe the person in the vignette and many of them did not mention substance use issues at all. Additionally, people who used identity-first language did not want more social distance from people with substance use disorders and were not less familiar with them. If identity-first language is more stigmatizing, one might expect that people who hold more negative views of people with substance use disorders would use it, but this was not the case. It was also not the case that people who held more positive views used person-first

language. In the future, it will be important to understand what people who hold negative and positive views about the population with substance use disorders do say when they talk about them. More steps need to be taken to understand what language is currently being used before prescribing changes.

To conclude, based on the reported findings, it appears that getting the public to use person-first language may be a large undertaking given that it is uncommon. Furthermore, that undertaking may not produce the intended effects. However, this conclusion does not suggest that the effort to understand the effects of language used to describe people with substance use disorders should be abandoned. Reducing stigma directed toward the population with substance use disorders is crucial, so advocates and researchers should continue looking for communication strategies that do so.

LIMITATIONS

There are several limitations of the reported studies that should be considered when interpreting the findings. A primary limitation is that an online experiment might not measure what people actually do and feel, only what they think they will do and feel. It is possible that being exposed to different types of language outside the confines of the online experiment would produce different responses than what was measured here. Furthermore, social desirability could have factored into how participants responded to the measures. Participants may have felt uncomfortable expressing any negative beliefs about the victims of an epidemic that has been given considerable media attention. Additionally, it is possible that participants in the second study felt that disclosing the

person's substance use disorder would be perceived as a transgression, motivating them avoid using language that they may have used outside the environment of this study.

Another significant limitation is Study 2's small sample size. Although it was striking that none of the participants used person first language, the finding should be interpreted with caution because of the sample's small size. Future research could seek to replicate the study with a larger, more nationally representative sample in order to strengthen the finding that identity-first language is more common in the general public than person-first language.

CONTRIBUTIONS AND FUTURE DIRECTIONS

Despite its limitations, this study contributes to the literature on addiction terminology and on attributions and stigma. Additionally, it shows that there are many other opportunities to undertake meaningful research in this area. One major contribution is that this study directly compared person-first language against identity-first language, which is necessary for understanding whether or not this type of phrasing is beneficial. Moving beyond testing differences between various terms to more systematic testing of linguistic choices is a step in the right direction for research examining language surrounding substance use disorders. Future studies like this one may be able to show, not just that some terms are better than others, but start to understand why certain terms are better than others.

Another contribution of this study is that it reinforces the idea that affect is an important factor in stigmatizing behavior and that language may produce affective

responses independent of attributions. Affect had the strongest relationship with intention to help and intention to punish in this study. Future research that focuses on how affective responses to people with substance use disorders are generated could be particularly useful in developing strategies to reduce stigma directed toward this population.

There is an opportunity to extend the findings of this research by applying it to people who have substance use disorders themselves. Even though this study suggests that person-first language will not always affect someone's perception of a person with a substance use disorder, it provides no insight into the effects that person-first language might have on people with substance use disorders. Perceived and self-stigma are associated with negative outcomes for people with substance use disorders, so it is important to understand if exposure to different types of language influences how people with substance use disorders think others are perceiving them and how they perceive themselves. Future research should seek to understand how person-first and identity-first language affect people with substance use disorders.

Undertaking these or any other lines of research related to these studies could improve our understanding of language's role in the stigma directed toward people with substance use disorders. As we learn more about how language influences stigma, we can develop better strategies for reducing it, hopefully attenuating its effects on the many people who are affected by substance use.

Appendices

APPENDIX A

Alcohol stimuli

John is an alcoholic. He drinks alcohol every day. Even though he's tried to get control over his alcohol use, he hasn't been able to stop. In fact, when he does stop drinking, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his alcohol use.

John has alcoholism. He drinks alcohol every day. Even though he's tried to get control over his alcohol use, he hasn't been able to stop. In fact, when he does stop drinking, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his alcohol use.

John is a person with alcoholism. He drinks alcohol every day. Even though he's tried to get control over his alcohol use, he hasn't been able to stop. In fact, when he does stop drinking, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his alcohol use.

Substance use stimuli

John is a substance user. He uses drugs every day. Even though he's tried to get control over his drug use, he hasn't been able to stop. In fact, when he does stop using drugs, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his drug use.

John has a substance use disorder. He uses drugs every day. Even though he's tried to get control over his drug use, he hasn't been able to stop. In fact, when he does stop using drugs, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his drug use.

John is a person with a substance use disorder. He uses drugs every day. Even though he's tried to get control over his drug use, he hasn't been able to stop. In fact, when he does stop using drugs, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his drug use.

Opioid stimuli

John is an opioid addict. He uses opioids every day. Even though he's tried to get control over his opioid use, he hasn't been able to stop. In fact, when he does stop using opioids,

he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his opioid use.

John has an opioid addiction. He uses opioids every day. Even though he's tried to get control over his opioid use, he hasn't been able to stop. In fact, when he does stop using opioids, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his opioid use.

John is a person with an opioid addiction. He uses opioids every day. Even though he's tried to get control over his opioids use, he hasn't been able to stop. In fact, when he does stop using opioids, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his opioid use.

APPENDIX B

How much anger do you feel towards John?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

How much control do you believe that John had over the cause of his condition?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

How much sympathy do you feel towards John?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

How much personal responsibility does John have for his condition?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

How likely would you be to help John in some way if you had the chance?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

How likely would you be to punish John in some way if you had the chance?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

APPENDIX C

I would be willing to accept someone with a substance use disorder as a close relative by marriage.

Yes
No

I would be willing to accept someone with a substance use disorder as my close personal friend.

Yes
No

I would be willing to accept someone with a substance use disorder as my neighbor.

Yes
No

I would be willing to accept someone with a substance use disorder as a coworker.

Yes
No

I would be willing to accept someone with a substance use disorder as a citizen of my country.

Yes
No

I would be willing to have someone with a substance use disorder as a visitor in my country.

Yes
No

I would exclude someone with a substance use disorder from my country. *

Yes
No

*This item was reverse coded

APPENDIX D

	1	2	3	4	5	6	7	
Safe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dangerous
Harmless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Harmful
Non-violent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Violent
Relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Tense
High self-control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Low self-control
Good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Bad
Predictable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Unpredictable
Understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Mysterious
Intelligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ignorant
Changeable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not Changeable
Non-aggressive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Aggressive
Strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Weak
Active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Passive
Non-manipulative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Manipulative
Rational	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Irrational
Confident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Afraid
Moral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Immoral

APPENDIX E

I have worked with a person who had a substance use disorder at my place of employment.

Yes

No

A friend of the family has a substance use disorder.

Yes

No

I have a relative who has a substance use disorder.

Yes

No

I live with a person who has a substance use disorder.

Yes

No

I am a person who has a substance use disorder.

Yes

No

APPENDIX F

John uses drugs every day. Even though he's tried to get control over his drug use, he hasn't been able to stop. In fact, when he does stop using drugs, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his drug use.

John drinks alcohol every day. Even though he's tried to get control over his alcohol use, he hasn't been able to stop. In fact, when he does stop drinking, he experiences symptoms of withdrawal. Recently, John's performance at work has been suffering because of his alcohol use.

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