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# Attitudes toward Substance Abuse Clients: An Empirical Study of Clinical Psychology Trainees

Chandra R. Mundon, Psy.D.<sup>a</sup>; Melissa L. Anderson, Ph.D.<sup>b</sup> & Lisa M. Najavits, Ph.D.<sup>c</sup>

**Abstract**—Despite the high prevalence of substance use disorder (SUD) and its frequent comorbidity with mental illness, individuals with SUD are less likely to receive effective SUD treatment from mental health practitioners than SUD counselors. Limited competence and interest in treating this clinical population are likely influenced by a lack of formal training in SUD treatment. Using a factorial survey-vignette design that included three clinical vignettes and a supplementary survey instrument, we investigated whether clinical psychology doctoral students differ in their level of negative emotional reactions toward clients with SUD versus major depressive disorder (MDD); whether they differ in their attributions for SUD versus MDD; and how their negative emotional reactions and attributions impact their interest in pursuing SUD clinical work. Participants were 155 clinical psychology graduate-level doctoral students (72% female). Participants endorsed more negative emotional reactions toward clients with SUD than toward clients with MDD. They were also more likely to identify poor willpower as the cause for SUD than for MDD. More than a third reported interest in working with SUD populations. Highest levels of interest were associated with prior professional and personal experience with SUD, four to six years of clinical experience, and postmodern theoretical orientation.

**Keywords**—clinical psychology training, stigma, substance abuse, substance use disorder

Approximately 22 million Americans meet diagnostic criteria for substance use disorder (SUD), a term that spans mild to severe levels of the problem (American Psychiatric Association 2013; Substance Abuse Mental Health Services Administration [SAMHSA] 2009). Despite the high prevalence of SUD and its frequent comorbidity with mental illness (Kessler et al. 2005; SAMHSA 2009), few psychologists specialize in SUD

treatment (Washton and Zweben 2008; Chiert, Gold, and Taylor 1994). In 2011, only 54 out of 10,210 licensed clinical psychologists listed in the American Psychological Association Member Directory reported that they specialized in SUD treatment (American Psychological Association 2011). Research also suggests that individuals with SUD are less likely to receive effective SUD treatment from mental health practitioners, but instead are redirected to specialized SUD treatment programs or SUD counselors (Miller and Brown 1997; Schneier et al. 2010).

Psychologists may be especially well-poised to treat SUD based on their generalist training, their use of psychological principles to modify behavior, their ability to treat comorbid mental health conditions, and their expertise in evidence-based treatments, like cognitive-behavioral therapy and motivational interviewing (Miller and Brown 1997). Unfortunately, psychologists' low levels of interest

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in SUD treatment are likely influenced by a lack of formal training in SUD treatment and assessment provided to clinical psychology doctoral students (Aanavi et al. 1999; American Psychological Association 2014; Cellucci and Vik 2001; Corbin et al. 2013; Madson et al. 2008; Miller and Brown 1997). In the absence of formal training, these students may be more likely to accept stigmatizing attitudes toward clients with SUD. These attitudes include perceiving clients as immoral, weak-willed, unintelligent, uneducated, dangerous, unmotivated, hopeless, and personally to blame for their condition (Ballon and Skinner 2008; Corrigan, Kuwabara, and O'Shaughnessy 2009).

The lack of graduate clinical training in SUD (Madson et al. 2008; Madson and Green 2012), compounded with the existing stigma toward individuals with SUD (McKim et al. 2014; Olsen and Sharfstein 2014; Servais and Saunders 2007), suggests that clinical psychology doctoral students are susceptible to negative reactions toward SUD clients. Using a factorial survey-vignette design that included three clinical vignettes and a supplementary survey instrument, the current study investigated the following questions about clinical psychology doctoral students (hereafter referred to as "trainees"):

- 1) Do they differ in their level of negative emotional reactions toward clients with SUD versus major depressive disorder (MDD)?
- 2) Do they differ in their explanations ("attributions") for SUD versus MDD?
- 3) How do their negative emotional reactions and attributions impact their interest in pursuing SUD clinical work?

Based on the literature described earlier, we hypothesized that trainees would endorse more negative emotional reactions toward a client with SUD than toward a client with MDD; that trainees would disproportionately attribute SUD to poor willpower rather than to a chemical imbalance; and that trainees' level of negative emotional reactions and attributions about SUD would be associated with low interest in future clinical work with SUD clients.

## METHOD

### Participants

Participants were 155 clinical psychology graduate-level doctoral students. Most resided in the San Francisco Bay area, although trainees from other states also participated. Participants were recruited using convenience and snowball sampling via advertisements at universities located in the San Francisco Bay Area, as well as online advertisements. See Table 1 for demographic characteristics.

### Procedure

Recruitment materials included a direct link to the study's online survey web page, which included a brief

**TABLE 1**  
**Demographic characteristics of the sample,  $n = 155$**

Characteristic	<i>n</i>	%
Gender		
Female	112	72.3
Male	38	24.5
Transgender	3	1.9
Other	2	1.3
Ethnicity		
African American/Black	7	4.7
Asian/Asian American	22	14.9
Caucasian/White	98	66.2
Hispanic/Latino	9	6.1
Mixed	5	3.4
Other	8	5.2
Sexual orientation		
Straight	106	68.4
Bisexual	19	12.3
Gay	10	6.5
Lesbian	7	4.5
Queer	12	7.7
Asexual	1	0.6
Age		
20s	78	50.0
30s	58	37.2
40s	14	9.0
50s	6	3.8
State of residence		
California	143	92.3
New York	5	3.2
Oregon	2	1.3
Other States	5	3.2
Year in graduate school		
1st	21	13.6
2nd	26	16.9
3rd	29	18.8
4th	40	26.0
5th	27	17.5
6th	5	3.2
≥7	6	3.9
Years of clinical experience		
<1	9	5.8
1	18	11.6
2–3	53	34.2
4–5	48	31.0
6–7	12	7.7
8–9	4	2.6
10–14	6	3.9
≥15	5	3.2
Primary theoretical orientation		
Behavioral	27	17.4
Humanistic/existential	7	4.5
Integrative/eclectic	51	32.9
Postmodern	12	7.7
Psychodynamic	58	37.4
Experience working with SUD clients (yes)	111	71.6
Personal or relational experience with SUD (yes)	119	76.8

description of the study, followed by informed consent. Respondents who met criteria for the study and completed informed consent were next presented with the study measures. All study procedures were approved by the Wright Institute Institutional Review Board.

Participants were directed to read three clinical vignettes. After each vignette, they were asked to respond to a series of measures, described in the following section. The vignettes used in this study were replicas of the clinical vignettes used in a seminal study by Link et al. (1999), which examined public perceptions of mental illness. With permission of the original authors, the vignettes were modified slightly for relevance to our study. Each vignette described John, a client who "has been in treatment with the trainee for the past six months." The client's name and gender were held constant across vignettes. However, the three vignettes varied in describing John as displaying either symptoms of current alcohol dependence, cocaine dependence, or MDD based on DSM-IV-TR criteria (American Psychiatric Association 2000). MDD was selected as a comparison condition due to the high prevalence and relative commonality of the disorder in both clinical settings and popular culture. The vignettes for alcohol dependence and MDD are included in the following:

*Alcohol dependence: During the last year, John has started to drink more than his usual amount of alcohol. In fact, he has noticed that he needs to drink twice as much as he used to in order to get the same effect. John has tried to cut down on his drinking, but can't. Each time John tries to cut down, he becomes very agitated, sweaty, and can't sleep, so he takes another drink. John's family has complained that he is often hungover and has become unreliable. John recently lost his job because he was not showing up to work. John has been in therapy with you for the past six months with spotty attendance.*

*MDD: For the past two weeks, John has been feeling really down. He wakes up in the morning with a flat, heavy feeling that sticks with him all day long. He isn't enjoying things the way he normally would. In fact, nothing gives him pleasure. Even when good things happen, they don't seem to make John happy. John trudges through his day, but it takes significant effort. The smallest tasks are difficult to accomplish. John finds it hard to concentrate on anything. He feels out of energy and out of steam. And even though John feels tired, when night comes, he can't go to sleep. John feels worthless and very discouraged. He recently lost his job because he was not showing up to work. John has experienced periods of feeling better, but then seems to slip back into feeling down. John has been in therapy with you for the past six months with spotty attendance.*

## Measures

### *Sociodemographics, SUD Experiences, and Clinical Interests Questionnaire*

This measure included various sociodemographic questions, as detailed in Table 1. Additionally, participants were asked about their interest in working with the following clinical populations: *substance abuse*; *severely mentally ill*; *children and adolescents*; *families*; *LGBTQ*; and *forensic*. We selected a range of clinical populations in addition to *substance abuse* so that participants would not be aware of the purpose of the study (i.e., to specifically ascertain their interest in working with SUD clients). Response options were: *not at all*; *would consider*; *would like to*.

After completing this questionnaire and reading the vignettes described above, participants were then asked to respond to the following two measures:

### *Rating of Emotional Attitudes to Clients by Treaters Scale*

The Ratings of Emotional Attitudes to Clients by Treaters (REACT) scale is a 40-item self-report survey that measures therapists' positive and negative emotional responses to clients with SUD (Najavits et al. 1995). This scale was used to investigate trainees' level of negative emotions toward the clients in the vignettes, including feeling "burned out," "overwhelmed," "frustrated," "threatened," "guilty," and so on. Respondents are asked to rate how they *currently* feel about the client on a five-point Likert scale (1 = *never*; 2 = *seldom*; 3 = *sometimes*; 4 = *often*; 5 = *very often*; plus "CS" = *can't say*). A study of the reliability and validity of the REACT reported high levels of internal consistency (Cronbach's alpha ranging from .80 to .82; Najavits et al. 1995). Factor analysis revealed four main factors: therapist in conflict with self; therapist focused on their own needs; positive connection; and therapist in conflict with the patient (Najavits et al. 1995). With regard to convergent validity, the REACT showed moderately strong correlations with The Helping Alliance Questionnaire and the California Psychotherapy Alliance Scale, ranging from .53 to .73 ( $p < .005$ ) (Najavits et al. 1995).

Only negative items were included in the current study, as these items most directly addressed the study hypotheses. Specifically, we did not include the positive REACT items as our goal was to address barriers to trainees' working with SUD patients, which is captured by exploring the negative items. To create this scale, Cronbach's alpha was computed for the 24 REACT items that indicate negative emotional reactions toward clients. For the alcohol dependence vignette, alpha was .92; for the MDD vignette, alpha was .91; for the cocaine dependence vignette, alpha was .93 ( $n = 155$ ). Given the high internal consistency among the 24 negative REACT items, they were averaged into one scale and used as the dependent variable.

Several additional modifications were made for the purposes of the current study. The *can't say* option was removed to reduce the impact of missing data on the current analyses. The scale instructions and item text were modified so that respondents would answer the items in a hypothetical context referring to the vignette client. For example, rather than being asked to "fill out below how you currently feel about your patient, overall," respondents were asked, "How do you imagine you would feel working with this client?" Items in the past tense were modified to future tense so that respondents could answer items referring to the hypothetical vignette client. For example, "Thought about the patient outside of sessions" was modified to "Thinking about the client outside of sessions."

### **Perceived Causes of Vignette Conditions**

The Perceived Causes of Vignette Conditions (PCVC) survey was developed by Link et al. (1999) as part of a study on public conceptions of mental illness, including SUD. The PCVC is administered after the presentation of a clinical vignette, and asks respondents how likely it is that the client's condition is caused by each item. The PCVC has six items: *chemical imbalance in the brain; poor willpower; family upbringing; stressful life circumstances; genetic or inherited problem; and God's will*. Items are rated on a three-point scale: 1 = *unlikely*; 2 = *somewhat likely*; 3 = *very likely*. The PCVC has been used in previous studies of public conceptions of mental illness, disordered gambling, and alcohol dependence (Horch and Hodgins 2008; Link et al. 1999; Pescosolido et al. 2010).

One modification was made for this study. The *God's will* item was removed based on concerns that this item would not be relevant to the target population; i.e., clinical psychology doctoral students who receive secular training about the biopsychosocial determinants of mental illness and behavioral health problems.

### **Data Analysis**

To compare trainees' level of negative emotional reactions toward clients with SUD versus MDD, we conducted a repeated measures analysis of covariance (ANCOVA). The independent variable was clinical diagnosis (alcohol dependence, cocaine dependence, or MDD) as portrayed in each of the three clinical vignettes. The dependent variable was scored on a scale comprised of the negative items of the REACT, scored per the original scale scoring (described previously in the Measures section). Covariates selected for the analysis were those demographic variables that evidenced significant differences across scores on the negative REACT scale: gender and year in graduate school (data not shown).

To compare trainees' attributions for SUD versus MDD, repeated measure ANOVAs were conducted to determine the most frequently endorsed attributions for each of the clinical diagnoses. The independent variable

was clinical diagnosis (alcohol dependence, cocaine dependence, or MDD). The dependent variables were the scores of the five attribution items of the PCVC. Additionally, Friedman's rank test was used to determine the most likely attributions assigned across diagnoses. The Friedman's rank test is the non-parametric alternative to repeated measure ANOVA and can be used to test for differences between groups when the dependent variable being measured is ordinal (in this case, the rank order of the five attribution items on the PCVC).

To investigate how trainees' level of negative emotional reactions and attributions affected their interest in pursuing clinical work on SUD, we conducted hierarchical regression analysis. Independent variables were: negative emotions subscale of the REACT scale for the alcohol dependence vignette (score on the cocaine dependence vignette was not included due to the high correlation with the score on the alcohol dependence vignette); PCVC scores for the alcohol dependence and cocaine dependence vignettes; and, from the sociodemographics and SUD experiences scale, years of clinical experience (dummy coded with 0–2 years as referent group); theoretical orientation (dummy coded with *behavioral orientation* as referent group); personal or relational experience with SUD; and prior experience working with SUD clients. The dependent variable was self-reported interest in working with SUD clients. Independent variables were entered into the regression in three steps. Step 1 included negative REACT score only. Step 2 added a block of demographic variables of interest: years of clinical experience, theoretical orientation, personal or relational experience with SUD, and prior experience working with SUD clients. Step 3 added PCVC scores. Order of entry into the model was determined based on our primary hypothesis—that trainees' negative reactions would influence their interest in working with SUD clients. In Steps 2 and 3, we subsequently entered variables that might account for part of the variance in the relationship between negative reactions and interest in working with SUD clients. Variables significant at  $p \leq .05$  were retained in the final regression model.

## **RESULTS**

Intercorrelations between the REACT scale, PCVC, and clinical interests questionnaire are located in Table 2.

### **Negative Emotional Reactions toward SUD and MDD**

We hypothesized that trainees would endorse more negative emotional reactions toward a client with SUD than toward a client with MDD. Results of repeated measures ANCOVA supported this hypothesis. The negative REACT subscale was higher for the alcohol and cocaine dependence vignettes ( $M = 2.83$ ,  $SD = 0.48$ ;  $M = 2.84$ ;  $SD = 0.50$ ) than the MDD vignette ( $M = 2.67$ ,  $SD = 0.43$ ),

**TABLE 2**  
Two-tailed Pearson correlation matrix for negative REACT scores, PCVC scores, and clinical interest

	PCVC Scores					Interest in working with SUD clients
	Chemical imbalance	Poor willpower	Family upbringing	Stressful life circumstances	Genetic or inherited condition	
Negative REACT scores, Alcohol dependence	.147	-.006	.153	.084	.107	-.162
	$p = .069$	$p = .937$	$p = .058$	$p = .297$	$p = .185$	$p = .022$
Negative REACT scores, Cocaine dependence	.099	.066	.133	.010	.152	-.112
	$p = .218$	$p = .415$	$p = .098$	$p = .906$	$p = .060$	$p = .441$
Negative REACT scores, Major depressive disorder	.035	.127	.209	.084	.113	-.012
	$p = .662$	$p = .117$	$p = .009$	$p = .299$	$p = .163$	$p = .082$

**TABLE 3**  
Repeated measures ANOVAs of trainees' attributions for alcohol dependence, cocaine dependence, and major depressive disorder

Attribution	Diagnosis			<i>df</i>	<i>F</i>	<i>p</i>
	Alcohol dependence	Cocaine dependence	Major depressive disorder			
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>			
Stressful life circumstances	2.64 (0.51) <sup>a</sup>	2.52 (0.55) <sup>b</sup>	2.57 (0.51) <sup>a</sup>	2	3.39	.035
Family upbringing	2.42 (0.53) <sup>a</sup>	2.41 (0.53) <sup>a</sup>	2.29 (0.54) <sup>b</sup>	2	4.93	.008
Genetic/inherited condition	2.23 (0.59)	2.23 (0.61)	2.29 (0.52)	2	0.90	.410
Chemical imbalance	2.00 (0.64) <sup>b</sup>	2.06 (0.63)	2.23 (0.62) <sup>a</sup>	2	12.22	<.001
Poor willpower	1.46 (0.60) <sup>a</sup>	1.52 (0.62) <sup>a</sup>	1.27 (0.50) <sup>b</sup>	2	16.37	<.001

*Note.* Post-hoc contrasts in repeated measures ANOVAs showed that attributions for the condition were rated most likely for group marked <sup>a</sup> and least likely for group marked <sup>b</sup>.

$F(2, 155) = 6.86, p \leq .001$ . Gender and year in graduate school were included in the analysis as covariates. Across diagnoses, women had higher negative REACT scores compared to men and transgender individuals,  $F(2, 155) = 4.46, p = .013$ . First-year graduate students had lower negative REACT scores compared to those in their second year and above,  $F(5, 155) = 4.07, p = .002$ .

#### Attributions for SUD and MDD

We hypothesized that trainees would differ in their attributions for SUD versus MDD, and that they would disproportionately attribute SUD to poor willpower rather than to a chemical imbalance. This hypothesis was partially supported. Results are provided in Table 3.

Post-hoc analyses showed that trainees were more likely to cite poor willpower as the cause for alcohol and cocaine dependence than for MDD. Additionally, they were

more likely to cite chemical imbalance as the cause for MDD than for alcohol or cocaine dependence. However, compared to other attributions, poor willpower and chemical imbalance were selected as the least likely causes across disorders. Results of Friedman's rank tests indicated that trainees ranked stressful life circumstances as the most likely cause of SUD and MDD ( $M = 2.58, SD = 0.52$ ), followed by family upbringing ( $M = 2.37, SD = 0.54$ ), genetic or inherited condition ( $M = 2.25, SD = 0.58$ ), chemical imbalance ( $M = 2.09, SD = 0.64$ ), and poor willpower ( $M = 1.42, SD = 0.58$ ).

#### Interest in Working with SUD Clients

Overall, 37.4% of trainees reported that they *would like to work* with SUD clients; 54.8% reported that they *would consider* working with this population; and 7.7% reported being *not at all* interested. We hypothesized that

**TABLE 4**  
**Stepwise hierarchical regression analysis of trainees' interest in working with SUD clients**

Model	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>p</i>
<i>Step 1</i>				
Negative REACT score (alcohol dependence) <sup>a</sup>	-0.21	0.10	-0.16	0.04
<i>Step 2</i>				
Negative REACT score (alcohol dependence) <sup>a</sup>	-0.15	0.10	-0.11	0.13
Previous work with SUD clients	0.21	0.11	0.16	0.04
Personal or relational experience with SUD	0.28	0.11	0.20	0.01
Years of clinical experience (0-1 as referent)				
2-3	0.05	0.14	0.04	0.74
4-6	0.30	0.14	0.23	0.03
7+	-0.06	0.16	-0.04	0.72
Theoretical orientation (behavioral as referent)				
Psychodynamic	-0.03	0.13	-0.03	0.79
Integrative	0.13	0.14	0.10	0.33
Humanistic	0.22	0.24	0.08	0.35
Postmodern	0.47	0.20	0.21	0.02

<sup>a</sup>Score on the cocaine dependence vignette was not included due to the high correlation with the score on the alcohol dependence vignette.

trainees' endorsement of negative emotional reactions and attributions about SUD would be associated with low interest in future work with SUD clients. This hypothesis was not supported by results of hierarchical linear regression (see Table 4).

In Step 1, negative REACT score was inversely related to trainees' reported interest in working with SUD clients. However, when professional/personal variables were entered in Step 2, negative REACT was no longer significant. Seventeen percent of the variance of interest in working with SUD clients was explained by professional/personal variables: previous work with SUD clients, personal or relational experience with SUD, four to six years of clinical experience, and a postmodern theoretical orientation. PCVC scores were added to the regression model in Step 3, but did not significantly alter the model tested in Step 2.

## DISCUSSION

The current study investigated 155 clinical psychology doctoral students' negative emotional reactions toward clients with SUD versus MDD; their attributions for SUD versus MDD; and how these negative emotional reactions and attributions affected their interest in working with

SUD clients. Trainees endorsed more negative emotional reactions toward clients with SUD than toward clients with MDD. There were no significant differences in their negative emotional reactions between clients with alcohol dependence and cocaine dependence. Consistent with current literature on SUD stigma among mental health clinicians (McKim et al. 2014; Olsen and Sharfstein 2014; Servais and Saunders 2007), these findings suggest that SUD clients are subject to a form of stigma that is distinct from the stigma experienced by clients with MDD. Indeed, clients with SUD often evoke less compassion and more negative reactions than clients with other disorders (Link et al. 1999; Najavits et al. 1995; Servais and Saunders 2007). Although first-year trainees endorsed the fewest negative reactions toward SUD clients, trainees in their fourth to sixth year of training expressed the most interest in working with SUD clients. This suggests that trainees may develop more positive attitudes once they receive training and clinical experience with SUD later in their graduate career.

Results also indicated that trainees were more likely to identify poor willpower as the cause for SUD than for MDD. Similarly, they were more likely to identify chemical imbalance as the cause for MDD than for SUD. These findings are consistent with the SUD stigma literature, which shows that both general population and clinician samples are more likely to associate SUD with personal failing, but less likely to do so for MDD (Hatgis, Friedmann, and Wiener 2008; Link et al. 1999; Nordt, Rossler, and Lauber 2006; Palm 2004). However, counter to our hypothesis, poor willpower was the least likely attribute selected by trainees to describe the causes of SUD. Rather, stressful life circumstances, family upbringing, and genetic/inherited conditions were cited as the most likely causes of both SUD and MDD. One possible reason for this finding is that, regardless of their attitudes toward SUD clients, psychology trainees are well exposed to biological and environmental conceptualizations of mental illness during their graduate training and readily apply these conceptualizations to SUD.

Additionally, we hypothesized that trainees' negative reactions toward SUD clients and attributions about SUD would be associated with low interest in future work with SUD clients. This hypothesis was not supported. More than half of the sample reported willingness to work with SUD clients. More than a third reported interest in working with this population. Although negative reactions initially appeared related to low interest in working with SUD clients, this association was no longer significant after controlling for various professional/personal variables. Professional/personal variables were more strongly associated with interest in working with SUD clients than negative reactions: respondents' prior professional and personal experience with SUD; 4-6 years of clinical experience; and postmodern theoretical orientation.

This suggests that trainees who hold stigmatizing attitudes toward SUD clients may benefit from a training curriculum that requires them to interact with individuals with SUD—both professionally and in the community—and that such exposure can lead to a genuine interest in working with SUD clients in the future. Such personal experience or familiarity with SUD may lead to increased understanding and empathy toward clients with SUD. Personal experience with a particular disorder has been shown to predict more positive and prosocial attitudes toward that disorder; moreover, mental health professionals who are themselves in recovery from SUD often hold more positive and hopeful views of SUD clients (Angermeyer and Matschinger 1996; Najavits 2000; Najavits et al. 1995; Sadow and Ryder 2008; Skorina, Bissell, and De Soto 1990). This positive outlook may, in turn, promote a greater sense of projected job satisfaction in working with SUD clients. Also, trainees may benefit from resources designed to provide guidance to therapists on how to treat SUD in the context of office-based and/or private practice settings, in which therapists do not have a system of care surrounding them for guidance on this population (see Washton and Zweben 2008).

Another noteworthy finding was the association between trainees' reported theoretical orientation and interest in working with SUD clients. Trainees who identified themselves as postmodern (i.e., narrative, multicultural, systems, and feminist) expressed more interest in working with SUD clients than their psychodynamic, humanistic, or behavioral-oriented peers. This finding aligns with the results of Najavits et al. (1995), who reported that psychodynamic and behavioral therapists endorsed more negative attitudes toward SUD clients than therapists of other orientations. This finding may be due to postmodern theorists' emphasis on the deconstruction and depersonalization of pathology (Gergen 2001), resulting in less pathologizing and more hopeful conceptualizations of SUD clients.

Certain methodological limitations should be considered when interpreting these findings. First, the sample was comprised mostly of trainees in the San Francisco Bay

Area. Second, we used convenience and snowball sampling rather than a random sampling method. Thus, the current results may be region-specific and caution should be exercised in generalizing results to clinical psychology doctoral students elsewhere. To correct for these limitations, future research should replicate the aims of the current study within a random sample of graduate students recruited from clinical and counseling psychology doctoral programs across the U.S. Third, trainees' self-reported attitudes may have been affected by social desirability bias, which would result in the underreporting of negative reactions towards clients with SUD. Fourth, we did not investigate factors related to trainees' graduate coursework and clinical training about SUD. Although we hypothesize that limited SUD training may account for trainees' attitudes toward SUD clients, this hypothesis was not directly tested as part of the current investigation.

Despite these limitations, this is the first study that we know of to explore clinical psychology doctoral students' attitudes toward clients with SUD. Our study is also notable for its use of validated instrument and ethnic diversity of respondents. Results suggest that clinical psychology doctoral students may benefit from the inclusion of experiential training components in SUD curricula, requiring trainees to interact with individuals with SUD in both professional and community contexts. Just as trainees who are developing competence within a specific cultural group are encouraged to attend cultural events and interact with members of that group, trainees developing competence in SUD should be encouraged to attend 12-step open meetings, SMART Recovery, and other open meetings where they can directly learn about SUD. Without such exposure, negative reactions toward SUD clients may remain and perpetuate disinterest in working with this underserved clinical population.

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