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Short communication

The relationship between self-compassion and the risk for substance use disorder

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ABSTRACT

Objective: This study explored the relationship between substance use disorder risk and self-compassion and posits a model for how the two are related through the mitigation of suffering.
Method: Study participants were recruited using social media to complete an online survey that included a basic socio-demographic survey and two validated instruments, the Self-Compassion Survey and the National Institute on Drug Abuse (NIDA) Alcohol Smoking and Substance Involvement Screening Test (ASSIST), which screens for substance use disorder (SUD) risk. Established cut scores for ASSIST were used to divide participants into low, moderate and high-risk groups.
Results: Participants (n = 477) were 31 years old on average, almost evenly split by gender, mostly non-Hispanic white, slightly more likely to be single and to hold an Associate's degree or higher. Overall, 89% of participants reported using drugs and/or alcohol in their lifetime. SUD risk was distributed between low risk (52%), moderate risk (37%) and a smaller percentage of high risk (11%). Self-compassion was inversely related to SUD risk. The low risk group had a higher mean self-compassion score ($M = 2.86, SD = 0.75$) than the people who were high risk ($M = 2.25, SD = 0.61$) ($t(298) = 5.58\ p < 0.0001$). Bivariate Pearson correlations showed strong associations between high risk and all self-compassion subscales, as well as low risk and five of the subscales.
Conclusions: This study suggests SUD risk has an inverse relationship to self-compassion. Raising self-compassion may be a useful addition to substance use disorder prevention and treatment interventions.

1. Introduction

Substance Use Disorder (SUD) is the recurrent use of alcohol and/or drugs that causes clinically and functionally significant impairments. SUD results in negative outcomes, such as difficulty meeting responsibilities, health problems, and general suffering (A.P.A., 2013). With over 20 million adults diagnosed with active SUD in 2014 (Center for Behavioral Health Statistics and Quality, 2016), SUD costs the US $700 billion dollars annually in judicial expenses, lost productivity, and healthcare (CDC, 2014). Only 11% of SUD sufferers receive any treatment (NIDA, 2011), and of those who do, 40%–60% experience relapse (NIH, 2012). There is a clear need to improve our current system of care around SUD.

A promising addition to prevention and treatment of SUD may be self-compassion (SC). SC is the ability to extend compassion to one's self, particularly during an instance of suffering. It can be framed as a set of coping skills in response to suffering, which can be measured and raised through training (Neff and Germer, 2013). SC has been shown to improve the success rate of health behavioral interventions, such as those for smoking reduction (Kelly et al., 2009) and related disorders such as Binge Eating Disorder (Kelly and Carter, 2015).

Several preliminary studies suggest a correlation between SC and SUD. Problematic alcohol use was associated with low levels of SC in a small survey study of individuals entering a publicly funded drug and alcohol service (Brooks et al., 2012). The probability of alcohol problems in college females was increased through childhood emotional abuse via low levels of SC (Miron et al., 2014). Some studies also showed a relationship between risk factors for developing SUD and SC. Low SC was correlated with risk factors for SUD. Vettese et al. (2011) found that self-compassion predicted emotion dysregulation, which is a risk factor for developing SUD (Weiss et al., 2015). Other risk factors for developing SUD, such as anxiety and depression, were also negatively correlated with SC (Smith and Book, 2008; Green et al., 2012; Neff and Dahm, 2014). These studies suggest that SC is correlated with SUD and

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SUD risk factors.

This pilot study was designed to explore SC and SUD risk as measured by the NIDA ASSIST. It had the following two objectives: 1) to examine whether SC is associated with SUD risk through a survey study and 2) to examine the subscales of SC to determine if any are particularly influential in this association.

2. Materials and methods

2.1. Recruitment

The sample was recruited through social media sites, internet forums, and e-mail listservs. The survey was distributed online and utilized chain sampling. Participants were excluded if they were under 18 years old and if they were not fluent in English. All procedures in this pilot study received approval from the University of Texas Health Science Center San Antonio Institutional Review Board, including informed consent. Eligible participants were invited to complete self-report assessments for self-compassion (Self-Compassion Scale), drug use (NIDA-ASSIST), and a basic socio-demographic questionnaire.

2.2. Study sample

Of the 899 individuals who started the survey, 477 (53.1%) completed it. Of those who completed the survey, 64% came from the internet message board, Reddit (*n = 308*), and 28% from Facebook (*n = 133*). The rest of the sample was recruited from other social media websites, e-mail, or "word of mouth." Participants were 31 years old, on average (range 18–72, *SD = 11.88*), with a nearly even split by gender (55% female). Race was distributed as 86% white, 7% Asian and less than 1% African American, with 6% reporting as other or unidentified. Ethnicity was predominantly non-Hispanic (92%). A minority of respondents was married (23%) or living with a partner (11%), while the majority reported having never been married (55%). Finally, the majority of the sample (64%) had an Associate's degree or higher.

2.3. Measures

2.3.1. The self-compassion scale

A psychometrically validated tool was used to measure self-compassion along with its three components: self-kindness, mindfulness, and common humanity, and its three inverse elements: self-judgment, isolation, and over-identification. The range for the SC scale is 1–5 with 5 being the highest level of self-compassion, 1 being the lowest and 3 being an average score. (Neff, 2003; Neff, 2015).

2.3.2. The Alcohol Smoking and Substance Involvement Screening Test (ASSIST)

Developed originally by the World Health Organization (WHO, 2002), and modified by National Institute for Drug Abuse (NIDA), the ASSIST evaluates substance use risk. Newcombe et al. (2005) found the ASSIST to be a valid screening test for psychoactive substance use in individuals who may use more than one substance and have varying levels of use. The ASSIST was used to evaluate SUD risk for alcohol, marijuana, and opioid analgesics for the three months prior to survey completion. Data collection was limited to these three drugs because all three drugs are commonly abused (Center for Behavioral Health Statistics and Quality, 2016); deaths from opioid overdoses continue to increase sharply (Rudd et al., 2016). The published cuts scores were utilized to divide respondents into three risk groups: low risk, 0–3 for marijuana, and opioid analgesics, 0–11 for alcohol use; moderate risk, 4–26 for marijuana and opioid analgesics, 12–26 for alcohol use; and high risk, ≥27 for all substances (WHO, 2002).

2.4. Statistical analysis

Data were analyzed using SAS 9.4. Distributions of outcome measures were observed, and frequencies, scatter plots and correlations were examined. To ensure a normal distribution, a logarithmic transformation of SUD risk was used. An ANOVA model was used to determine if there was a significant difference between the means of self-compassion across SUD risk groups. Finally, *t*-tests were used to test mean differences of self-compassion across SUD risk groups.

3. Results

The mean SC score for the full sample was found to be *2.7*, SD = *0.7*, with a range of 1–4.8. For the components for self-compassion, the mean score for mindfulness was highest (3.2, *SD = 0.8*), followed by common humanity (2.9, *SD = 0.9*) and self-kindness (2.7, *SD = 0.9*). Overall, 89% (*n = 429*) reported using drugs or alcohol in the three months prior to survey completion. Average SUD risk was 14.89 (*SD = 15.82),* indicating moderate risk. While 11% (n = 54) of participants were categorized as high SUD risk, the majority of participants were at low (52%, n = 247) or moderate risk (37%, n = 176). High risk correlated strongly with SC and its six subscales, low risk also showed significant correlations with all subscales except common humanity. Moderate risk only correlated with the SC subscales for isolation and self-judgment (Table 1).

An ANOVA model was fit to examine the significance of differences between SUD risk groups and SC in a more stringent test (Fig. 1). The one-way ANOVA test determined there was a statistically significant difference in SC between groups (F 2,476) = 17.65, p < 0.001). Tukey's post hoc tests indicated there were significant mean differences between all groups with an alpha level of 0.01.

T-tests indicated significant differences in SC scores between the high and low SUD risk groups (t = 5.58, < 0.0001). The low risk group had a higher SC score (*M = 2.86, SD = 0.75*) than the participants who were moderate risk (M = 2.6, *SD = 0.70*), or high risk (*M = 2.25, SD = 0.61*).

4. Discussion

This pilot study represents a step towards understanding the relationship between SUD and SC. Our results indicate that SUD risk is inversely associated with SC, such that individuals low in SC may have a higher SUD risk. Our findings are consistent with research that shows SC may be associated with SUD and SUD risk factors (Brooks et al., 2012; Vettese et al., 2011).

Suffering is a universal experience. According to Self-Medication Theory, people may use substances to relieve suffering (Khantzian

Table 1
Pearson correlation between self-compassion and its subscales correlated with SUD risk. Subscales are listed in pairs. Correlations are significant except where indicated otherwise (ns-not significant).

Self-Compassion Subscales by Substance Use Disorder Risk			
	Low Risk	*Moderate Risk*	*High risk*
	Correlation (Significance)	Correlation (Significance)	Correlation (Significance)
Self-Compassion	0.22 (< 0.0001)	−0.08(0.07)ns	−0.22 (< 0.0001)
Self-kindness	0.16 (0.0005)	−0.047 (0.31)ns	−0.18 (< 0.0001)
Common humanity	0.07 (0.14)ns	0.009 (0.84)ns	−0.12 (0.0077)
Mindfulness	0.15 (0.008)	−0.029 (0.53)ns	−0.20 (< 0.001)
Self-judgment	−0.23 (< 0.0001)	0.12 (0.01)	0.19 (< 0.001)
Isolation	−0.24 (< 0.0001)	0.13 (0.0042)	0.17 (0.002)
Over-identification	−0.20 (< 0.001)	0.08 (0.0822)ns	0.19 (< 0.001)