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On the importance of distinguishing shame from guilt: Relations to problematic alcohol and drug use

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Abstract

Previous research has demonstrated that shame-proneness (the tendency to feel bad about the self) relates to a variety of life problems, whereas guilt-proneness (the tendency to feel bad about a specific behavior) is more likely to be adaptive. The current analyses sought to clarify the relations of shame-proneness and guilt-proneness to substance use problems in three samples with differing levels of alcohol and drug problem severity: college undergraduates (Study 1 N =235, Study 2 N =249) and jail inmates (Study 3 N =332). Across samples, shame-proneness was generally positively correlated with substance use problems, whereas guilt-proneness was inversely related (or unrelated) to substance use problems. Results suggest that shame and guilt should be considered separately in the prevention and treatment of substance misuse.

Keywords

Shame; Guilt; Alcohol abuse; Drug abuse; Jail inmates

An important consideration of any successful treatment is determining useful and effective focal points for intervention. Many of the known correlates of substance abuse fall into the category of "static" characteristics such as genetic predisposition, early temperament, and enduring personality traits such as novelty-seeking (Hesselbrock, Hesselbrock, & Epstein, 1999). Although these factors are important for understanding the development and prevention of substance abuse, static factors do not represent a point of intervention once an individual has developed a substance-related problem. Dynamic factors, including social environment, peer influences, and emotional correlates of substance abuse such as anxiety and depression, are more likely targets for treatment intervention. Among the emotional factors implicated in substance use problems, the tendency to experience shame is mentioned often, typically in conjunction with discussions of treatment (e.g., Fossum & Mason, 1986; Potter-Efron, 2002). For example, Fossum and Mason (1986) propose that "addiction and shame are inseparable" (p. xiii) and contend that confronting shame in the context of a supportive therapeutic relationship is vital to the process of recovery. There is little empirical evidence, however, to support the presumed relationship between shameproneness and drug or alcohol problems.

In everyday language, the terms "shame" and "guilt" often are used interchangeably to describe emotions that are considered to be detrimental and best avoided. However, much research has demonstrated that shame and guilt are distinct emotions with different

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implications for motivation and adjustment (see Tangney & Dearing, 2002). As defined by Helen Block Lewis (1971), shame involves a global negative feeling about the *self* in response to some misdeed or shortcoming, whereas guilt is a negative feeling about the specific *event*, rather than about the self. For example, a shame-prone individual who is reprimanded for being late to work after a night of heavy drinking might be likely to think, "I'm such a loser; I just can't get it together," whereas a guilt-prone individual would more likely think, "I feel badly for showing up late. I inconvenienced my coworkers." Feelings of shame can be painful and debilitating, affecting one's core sense of self (Lewis, 1971; Lindsay-Hartz, de Rivera, & Mascolo, 1995), and may invoke a self-defeating cycle of negative affect and substance abuse as the individual struggles to dampen this painful feeling with drugs or alcohol. In comparison, feelings of guilt, although painful, are less disabling than shame and are likely to motivate the individual in a positive direction toward reparation or change (Baumeister, Stillwell, & Heatherton, 1995).

Using this critical self/behavior distinction between shame and guilt, research has shown that shame-prone individuals are vulnerable to a variety of difficulties, including psychological problems (Tangney, Burggraf, & Wagner, 1995), difficulties with anger (Hoglund & Nicholas, 1995), and low self-esteem (Woien, Ernst, Patock-Peckham, & Nagoshi, 2003). Because the focus of shame is on the defective self, this painful emotion also has the effect of impairing empathy, which can result in a host of interpersonal difficulties (Leith & Baumeister, 1998).

In contrast to shame-proneness, proneness to shame-free guilt is positively correlated with adaptive characteristics, such as enhanced empathy (Leith & Baumeister, 1998) and constructive responses to anger (Tangney, 1995), and generally is unrelated to psychological symptoms (Tangney et al., 1995). As compared to their less guilt-prone peers, guilt-prone individuals are inclined to take responsibility for their actions, rather than to deflect blame onto others or onto elements of the situation (Tangney, Wagner, Fletcher, & Gramzow, 1992). Because feelings of guilt often lead to attempts at reparation and atonement, guilt-proneness helps to foster healthy interpersonal relationships (Tangney, 1995).

Due to the differing implications of shame versus guilt, it is crucial to capture the distinction between these two emotions when examining the dynamics of shame and guilt in relation to addictive disorders. Except for two studies (Meehan et al., 1996; O'Connor, Berry, Inaba, Weiss, & Morrison, 1994), the few extant studies of the relations of self-conscious emotions to addictive disorders have failed to adequately assess shame and guilt as distinct emotions (Cook, 1988; Evans, Schill, & Monroe, 1978; Schill & Althoff, 1975; Wiechelt & Sales, 2001) or only report the relations of guilt (not shame) to substance use problems (Quiles, Kinnunen, & Bybee, 2002).

The shame and guilt scales of the Test of Self-Conscious Affect (TOSCA; Tangney, Wagner, & Gramzow, 1989), a measure explicitly designed to assess and differentiate shame and guilt-proneness, were used in two studies of adults in early recovery from drug and alcohol addiction (Meehan et al., 1996; O'Connor et al., 1994). In both studies, individuals in early recovery had lower mean scores on guilt-proneness and higher mean scores on shame-proneness, as compared to individuals in community samples. Interpretation of these results is difficult, however, because little information was provided on the demographic composition of the samples. Given that the addiction samples were recruited from newly recovering substance abusers whereas the comparison sample was comprised of adult parents of fifth graders (see Tangney & Dearing, 2002), it is likely that there were substantial differences on variables known to correlate with substance abuse, moral emotional style, or both. Specifically, participants in both of the addiction studies were recovering from severe illicit substance abuse and were likely struggling with a lack of

social support and financial difficulties. Further, substance abuse programs may implicitly or explicitly address clients' problematic shame in the context of treatment. These differences were likely to make the participants in these studies considerably different from participants in the comparison sample. Thus, it is impossible to know whether group differences in proneness to shame and guilt were a function of substance use, the process of recovery, or other unmeasured confounding variables. Rather than relying on a comparison of largely unknown groups of convenience, a correlational approach focusing on within-group variance would provide a stronger test of the relationship of substance abuse to shame and guilt.

In the current paper we sought to clarify the relations of shame-proneness and guilt-proneness to addictive behaviors in three studies drawing from two very different populations—college students and incarcerated jail inmates. Using samples with low and high levels of substance use problems allowed us to assess the correlations with shame and guilt for both extremes of the substance use spectrum. We also employed measures explicitly designed to assess and distinguish between shame and guilt, thus circumventing the interpretational ambiguities of many previous studies. We hypothesized that across all three samples, shame-proneness would be positively correlated with alcohol and drug problems and guilt-proneness would be inversely related to alcohol and drug problems.

1. Study 1

1.1. Method

1.1.1. Participants—Study participants were 235 college undergraduates at a large east coast public university who received course credit towards a research requirement in exchange for their participation. The students were on average 20.18 years old (SD = 5.14), about three-quarters were women (75.3%), and the sample was quite diverse in terms of racial/ethnic composition: 48.5% Caucasian, 11.1% African American, 18.7% Asian, 6.4% Latino, 5.5% Middle Eastern, and 9.8% "Other" or missing.

1.1.2. Measures

1.1.2.1. Alcohol and drug problems: The Alcohol Dependence (Scale B; 46 items) and Drug Dependence (Scale T; 58 items) scales of the Millon Clinical Multiaxial Inventory-II (MCMI-II; Millon, 1987) were used to assess alcohol and drug problems. Although the MCMI is intended for use with clinical populations, it has been used successfully to detect alcohol and substance abuse in college students (Jaffe & Archer, 1987). Raw scores on the MCMI are converted to base rate (BR) scores (based on population prevalence data to optimize diagnostic classification) using a gender-specific conversion table. A BR score of 60 is at the median, whereas BR scores of 75 and above are indicative of symptoms of an alcohol (Scale B) or drug (Scale T) abuse or dependence diagnosis (Millon, 1987). Internal consistency reliability in the current study was $\alpha = .80$ for the alcohol scale and $\alpha = .85$ for the drug scale.

1.1.2.2. Shame and guilt: Shame-proneness and guilt-proneness were measured using the 15-item, scenario-based Test of Self-Conscious Affect (TOSCA; Tangney et al., 1989). Response options for the TOSCA range from 1="not likely" to 5="very likely." Internal reliability was $\alpha = .73$ for shame and $\alpha = .68$ for guilt.

1.2. Results

Participants' mean TOSCA scores were 2.94 (SD = .58; range 1.1 - 4.3) for shame and 3.84 (SD = .46; range 1.8 - 4.8) for guilt. Students' mean and mean base rate MCMI scores for alcohol and drug problems are shown in Table 1. The rate of problems in college students

was significantly different from the standardization sample mean (i.e., 60) for alcohol, t(233) = -9.6, p < .001, but not for drugs, t(233) = -1.7, p > .05. These scores indicate that alcohol problems in these college students are below scores for an outpatient clinical population with a range of diagnoses (as would be expected), based on population prevalence data, but that drug problems did not differ significantly from a clinical population. Using the recommended base rate cutoff score of 75 on the B and T scales (Millon, 1987), 7.3% of participants had symptoms of an alcohol problem and 15.4% had symptoms of a drug problem. In order to retain power, however, continuous scores of alcohol and drug problems are used in the following correlations.

Examining the bivariate correlations (see Table 1), shame was positively correlated with alcohol problems, but unrelated to drug problems. In contrast, guilt was negatively related to both alcohol and drug problems. Consistent with prior studies (e.g., Tangney, 1994), there was a moderate intercorrelation between shame and guilt (r = .46, p < .001), attributable to the fact that shame and guilt both involve negative internal attributions and often arise in similar situations. Because of this shared variance, it is more informative to view the relations of shame and guilt to other constructs in terms of semi-partial correlations, factoring guilt out of shame and vice-versa. Once this is done, shame-proneness shows a significant positive relation to drug problems and a stronger positive relation to alcohol problems. The negative relations of guilt-proneness to alcohol and drug problems also become more pronounced (Table 1).1

2. Study 2

2.1. Method

2.1.1. Participants—Study participants were 249 college undergraduates at a large east coast public university who received course credit towards a research requirement in exchange for their participation. The students were on average 20.11 years old (SD = 4.30), and 81.9% were women. The racial/ethnic composition of the sample was: 57.0% Caucasian, 10.8% African American, 12.4% Asian, 6.4% Latino, 3.6% Middle Eastern, and 9.6% "Other" or missing.

2.1.2. Measures

2.1.2.1. Alcohol and drug problems: The Alcohol Dependence (Scale B; 15 items) and Drug Dependence (Scale T; 14 items) scales of the Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1994) were used to assess alcohol and drug problems. The items of the MCMI-III were revised from the MCMI-II version to more closely reflect the DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for alcohol and drug dependence (Millon & Millon, 1997). Raw score to base rate conversions are as described in Study 1. Internal reliability in this study was α = .66 for the alcohol scale and α = .68 for the drug scale.

2.1.2.2. Shame and guilt: Shame-proneness and guilt-proneness were measured using the TOSCA, Version 2 (TOSCA-2; Tangney, Ferguson, Wagner, Crowley, & Gramzow, 1996). For the scales used in the current analyses, the TOSCA-2 (16 items) differs from the TOSCA by the addition of two new scenarios and the deletion of one gender-biased scenario (Tangney et al., 1996). Internal reliability in this study was α =.77 for shame and α =.75 for guilt.

 $^{^{1}}$ To test for gender differences in how shame- and guilt-proneness relate to alcohol and drug problems we used Fisher's r to z transformation to compare the semi-partial correlation coefficients in all three studies. Only one of the coefficients was found to be significant, a result we would expect by chance alone; thus, subsequent correlational analyses are collapsed across gender.

2.2. Results

Participants' mean TOSCA scores were 2.97 (SD = .58; range 1.2-4.4) for shame and 4.05 (SD = .47; range 2.3-5.0) for guilt. Participants' mean base rate scores on the MCMI are shown in Table 2. Scores for alcohol and drug problems were significantly below the clinical standardization sample mean (i.e., 60). Using the recommended base rate cutoff score (Millon, 1994), 8.4% of college student participants had symptoms of an alcohol problem and 4.4% had symptoms of a drug problem. Once again the continuous scores are used in the correlations.

As predicted, shame-proneness was positively related to alcohol and drug problems (a positive trend for drugs) while guilt-proneness was negatively related to both, based on the semi-partial correlations (see Table 2).

3. Study 3

3.1. Method

3.1.1. Participants—Study participants were 332 pre- and post-trial inmates in a metropolitan area jail. The targeted sample was inmates who would serve at least 4 months in jail, approximated by selecting inmates who had been charged with at least one felony, and for whom bail was at least \$7000. Inmate participants in Study 3 were on average 31.4 years old (*SD* =9.6), mostly men (90%), and diverse in terms of racial/ethnic composition: 34.0% Caucasian, 45.9% African American, 3.3% Asian, 9.6% Latino, .7% Middle Eastern, and 5.9% "Other" or "Mixed."

3.1.2. Measures

3.1.2.1. Drug and alcohol problems: Drug and alcohol use and dependency were assessed using Simpson and Knight's (1998) Texas Christian University Correctional: Residential Treatment Form, Initial Assessment (TCU-CRTF). Specifically, participants reported the frequency of their alcohol, marijuana, and cocaine use during the year prior to incarceration (0="never" to 8="more than once a day"). In addition, three substance dependence scales were created to assess dependency on alcohol (17 items), marijuana (8 items), and cocaine (13 items) in the year prior to incarceration. Item responses ranged from 0="never" to 4="7 or more times. "Each scale was composed of items that assess each of the DSM-IV (American Psychiatric Association, 1994) substance dependence domains (e.g., for the domain of tolerance participants answered the question "How often did you find that your usual number of drinks had much less effect on you or that you had to drink more in order to get the effect you wanted?"). For domains with multiple items, responses were averaged and a total score was computed by taking the mean across the seven domains (six in the case of marijuana because withdrawal is not considered part of the criteria). An additional index was created to assess polydrug use, defined as the number of different illegal substances used in the year prior to incarceration from a list of 9 substances. Alcohol and drug problems also were assessed by the Alcohol Problems (12 items) and Drug Problems (12 items) scales from the Personality Assessment Inventory (PAI; Morey, 1991). Items on the PAI are endorsed on a four-point scale (0="false," 1="sometimes true," 2="mainly true," 3="very true").

3.1.2.2. Shame and guilt: Shame-proneness (6 items) and guilt-proneness (13 items) were measured using the TOSCA-Socially Deviant Populations (TOSCA-SD; Hanson & Tangney, 1996). This version of the TOSCA was designed specifically for use with incarcerated individuals and other "socially deviant" groups. Specifically, the TOSCA-SD contains language, situations, and contexts that are more likely to be experienced by these populations, as compared to items on the other TOSCAs, which are targeted toward

individuals in the community. Because of the idiosyncratic tendency of incarcerated individuals to respond to avoidance items in a manner that indicates avoidance of *punishment* rather than avoidance of *shame*, Hanson (1996) suggests the use of a shame subscale composed of only the negative self-appraisal items (eliminating avoidance items) as the most valid index of shame-proneness in an offender population. Thus, the six negative appraisal items were used to calculate the shame scale in the current analyses. Internal reliability was $\alpha = .63$ for shame and $\alpha = .80$ for guilt.

3.2. Results

Participants' mean TOSCA scores were $2.42~(SD=.78; {\rm range 1.0-5.0})$ for shame and $4.21~(SD=.58; {\rm range 1.6-5.0})$ for guilt. As compared to college students, inmate scores for alcohol and drug use were at the opposite end of the spectrum, with a large proportion of inmates demonstrating high frequency of substance use and substance use problems (see Table 3). In the inmate sample, 82% of participants reported using alcohol in the year prior to incarceration, 50% reported using alcohol once or more a week, and 16% reported daily use. Fifty-six percent of inmates reported using marijuana in the year before being incarcerated; 30% reported using marijuana once or more a week, and 15% reported daily use. For cocaine, 41% used in the year prior to incarceration, 25% reported using once or more a week, and 9% used daily. Based on criteria described in the PAI manual (Morey, 1991), which was based on a census-matched standardization sample, 29% of the inmate sample would meet abuse criteria for alcohol and 47% for drugs.

Bivariate and semi-partial correlations are presented in Table 3. Inmate shame-proneness was positively associated with all measures of alcohol and drug problems and use, with the exception of frequency of alcohol use and frequency of marijuana use. The findings for guilt were less consistent. Specifically, frequency of marijuana use, marijuana dependence, and polydrug use were negatively related to guilt-proneness, and a negative trend was demonstrated for the relation of alcohol dependence to guilt-proneness. However, alcohol and drug problems measured by the PAI, and alcohol use, cocaine use, and cocaine dependence each failed to correlate significantly with guilt-proneness.2

4. Discussion

Results of the current studies provide evidence for a positive link between shame-proneness and problematic alcohol and drug use in two very different groups of people—undergraduates and jail inmates. In contrast, proneness to "shame-free" guilt was generally inversely related to problems with alcohol and drugs (particularly marijuana). This investigation attempted to circumvent some of the methodological difficulties of other studies by using within-group comparisons and assessment measures designed to distinguish between shame and guilt. The hypothesized findings were consistent when assessing personality and behavioral characteristics associated with alcohol and drug problems (using the MCMI and PAI), direct participant reports of frequency of cocaine and polysubstance use, and symptoms indicative of DSM-IV alcohol and drug dependence. The three studies presented here demonstrate that the hypothesized relationships (in particular those involving shame-proneness) are present in samples with low and very high levels of substance use problems, and are fairly consistent across different measures of substance abuse. There were relatively few departures from this overall pattern of results. In the inmate sample, where we distinguished between frequency of use and dependence, shame-proneness was most

²To evaluate the potential that socially desirable responding (i.e., "faking good") distorted measurement of shame and substance use or abuse, we examined the correlations in all three studies after excluding individuals who scored high on measures of social desirability. These analyses demonstrated an almost identical pattern of results to those presented, ruling out a social desirability response bias.

strongly associated with drug and alcohol *dependence* scores. *Frequency* of alcohol and *frequency* of marijuana use (less indicative of pathology) were unrelated to shame. Because the studies were correlational in nature, causal inferences cannot be made based on these findings alone. However, it seems that shame-proneness specifically relates to alcohol and substance use *problems*, as opposed to predicting *frequency of use*. In contrast, it appears that guilt-proneness may have a protective effect against the development of problematic alcohol or substance use patterns (i.e., in college students), and in regulating the "normative" use of illicit substances (i.e., marijuana in jail inmates). We believe that the driving force of guilt may not be sufficient to serve this protective effect against use of other "hard," highly addictive drugs (i.e., cocaine).

These findings are consistent with other studies, which show shame to be associated with problematic outcomes (Hoglund & Nicholas, 1995; Leith & Baumeister, 1998; Tangney et al., 1992) and guilt to be a healthier emotional response style (Baumeister, Stillwell, & Heatherton, 1994; Quiles & Bybee, 1997). Our results also are in agreement with previous studies of adults in early recovery following treatment for substance abuse problems (Meehan et al., 1996; O'Connor et al., 1994). The findings in the current analyses are robust across samples representing the low and the high end of alcohol and substance use problems, and it seems likely that the findings would pertain to a wide spectrum of populations and substance-related problems.

In accord with the notion that coping with negative emotions is a motivator for drinking (see, for example, Cooper, Frone, Russell, & Mudar, 1995), it is possible that shame-prone individuals use alcohol or drugs as a strategy for coping with painful feelings of shame. Some research suggests that individuals who use alcohol to cope with negative emotions consume more alcohol, have more alcohol-related problems (Holahan, Moos, Holahan, Cronkite, & Randall, 2001), and are at higher risk for developing alcohol dependence (Carpenter & Hasin, 1999). Coping with negative emotion also has been shown to be associated with increased drug use (Stewart, Karp, Pihl, & Peterson, 1997). For shame-prone individuals, alcohol- or drug-related problems and the life problems that accompany substance misuse likely result in additional painful feelings of shame. This synergistic relationship between shame and substance problems may result in a vicious cycle. Thus, although the relationships are modest, the findings from these three studies suggest that shame- and guilt-proneness have important implications regarding the misuse of alcohol and drugs. Further, the results suggest a useful point of intervention for the treatment of substance use problems, namely enhancing guilt-proneness and decreasing shameproneness.

4.1. Treatment implications and future directions

Regardless of the causal direction, shame-proneness seems to be related to substance use problems. Thus, even if shame is not the cause of problematic substance use, the other problems that go hand in hand with shame-proneness (e.g., problems with anger, interpersonal difficulties, etc.) would be sufficient justification for implementation of shame reduction interventions in the context of substance abuse treatment. We believe that successful shame reduction interventions also would be likely to result in better treatment outcomes. To our knowledge, there are no extant empirical studies of treatment protocols for reducing shame-proneness (or enhancing guilt-proneness).

Some addictions professionals have proposed strategies for addressing shame during the process of alcohol and drug treatment. For example, Fossum and Mason (1986) emphasize the need to address problematic shame in the context of underlying family dynamics. Similarly, Potter-Efron (2002) discusses how therapists can help clients identify the role that alcohol and drugs have played in their attempts to maintain social connections and proposes

ways to help clients acknowledge and be realistic about their addiction without shameful self-devaluation. Further, Potter-Efron recommends helping clients recognize how they may have used alcohol and drugs in an attempt to avoid painful feelings of shame.3 Cognitive behavioral strategies also are widely used in the treatment of alcohol and drug problems (Carroll, 1999), and the cognitive behavioral literature indicates that distorted cognitions can be changed in the context of therapy (e.g., Bryant, Moulds, Guthrie, Dang, & Nixon, 2003). Thus, cognitive behavioral techniques hold promise for helping clients learn to shift maladaptive shame reactions toward more adaptive guilt responses. All of these suggestions seem reasonable based on what is known about shame and substance use, but would benefit from empirical validation.

Shame and guilt may have important implications in terms of treatment-seeking for substance abuse problems. In particular, it would be useful to determine whether individuals who seek treatment for alcohol and substance use differ from those with a similar level of problems but who do not seek help. In addition, longitudinal studies of the development of substance use disorders would shed light on whether shame-proneness is a risk factor for drug and alcohol problems, as well as elucidate whether the propensity to experience guilt is a protective factor against problematic alcohol and drug use.

In closing, treatment for substance-related problems involves working to change the dynamic factors in the individual's life that contribute to substance abuse. The findings of the current analyses suggest that the tendency to experience shame may be one such dynamic factor. Thus, using the techniques described above to reduce shame-proneness and increase guilt-proneness may be a promising avenue for intervention in substance abusing populations.

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³Potter-Efron also suggests using strategies for reduction of chronic, ruminative guilt (also known as maladaptive guilt) in the context of addictions treatment. However, recent research has indicated that maladaptive guilt is likely a form of guilt that has become fused with shame, and that it is the shame component that is problematic (see Tangney & Dearing, 2002). Thus, consistent with the findings of the current analyses, it seems that *increasing* one's level of guilt-proneness should be encouraged in the context of substance use treatment.

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Table 1

Study 1 relations of shame-proneness and guilt-proneness to alcohol and drug problems

Problems	Mean	as	Bivariate	Bivariate correlations Part correlations	Part cor	relations
			Shame	Guilt	Shame Guilt	Guilt
Alcohol (MCMI-II) 18.28 (45.78) 8.76 (22.71) 21**	18.28 (45.78)	8.76 (22.71)	.21**	13*	.31***	.31***27***
Drug (MCMI-II)	27.87 (57.66)	27.87 (57.66) 12.46 (20.99) .06	90.	20	.17*	26

N =235. Values in parentheses indicate base rate score values. MCMI=Millon Clinical Multiaxial Inventory.

p < .05;** p < .01;** p < .01;*** p < .001.

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Table 2

Study 2 relations of shame-proneness and guilt-proneness to alcohol and drug problems

Problems	Mean	as	Bivariate	Bivariate correlations	Part cor	Part correlations
			Shame Guilt	Guilt	Shame Guilt	Guilt
Alcohol (MCMI-III) 3.72 (50.86) 2.93 (23.57) .06	3.72 (50.86)	2.93 (23.57)	90.	***24		28
Drug (MCMI-III)	3.60 (52.10)	3.60 (52.10) 2.87 (20.82) .02	.02	** 61.–	.127	21 **

N=249. Values in parentheses indicate base rate score values. MCMI=Millon Clinical Multiaxial Inventory.

p < .05;** p < .01;** p < .01;*** p < .001;

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Table 3

Study 3 relations of shame-proneness and guilt-proneness to alcohol and drug use and problems

Problems/use	Mean	as	Bivariate o	Bivariate correlations	Part cor	Part correlations
			Shame	Guilt	Shame	Guilt
Alcohol						
PAI alcohol problems	11.40	10.02	.12*	04	.13*	07
TCU-CRTF-frequency of use	3.41	2.45	02	03	01	03
TCU-CRTF-dependence	.80	1.05	.17**	90'-	.18**	107
Drug						
PAI drug problems	14.63	9.91	.21***	04	.22***	09
TCU-CRTF-frequency of use Cocaine	1.78	2.57	.17**	.00	.16**	00
Marijuana	2.36	2.78	08	19	04	18
Polydrug	1.95	1.99	*11:	13*	.14**	16 **
TCU-CRTF-Dependence Cocaine	.91	1.43	.21***	.00	.20***	01
Marijuana	.63	1.05	.14*	14 **	.18**	18

N=307-332. PAI=Personality Assessment Inventory; TCU-CRTF=Texas Christian University Correctional: Residential Treatment Form, Initial Assessment.

p < .01;

*** n < .001:

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