

# The Relationship Between Shame and Substance Addiction and Group Interventions Based Thereon

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## Abstract

Shame is a concealed core negative emotion that plays a significant role in substance addiction and withdrawal processes. The concept of shame is complex, with diverse measurement methodologies, and its impact on substance use is moderated by factors such as individual gender, emotional states, cultural background, and perceived controllability of self-image. Group interventions for substance addiction that center on shame include Alcoholics Anonymous, Narcotics Anonymous, Acceptance and Commitment Therapy, and cognitive-behavioral group therapy. Within the Chinese cultural context, shame-based group intervention models for substance addiction warrant further research and exploration.

## Full Text

### Introduction

Negative emotions play a significant role in the development and maintenance of substance addiction (Baker et al., 2004; Cooper et al., 1995; Witkiewitz & Marlatt, 2004), with shame being one of the most critical negative emotions (Dearing et al., 2005; Luoma & Platt, 2015; Wiechelt, 2007). Research on the impact of shame on individuals with substance addiction suggests that shame may manifest in more complex ways and operate through more intricate mechanisms (Luoma et al., 2019).

Currently, studies focusing on the relationship between shame and substance addiction remain limited. This paper reviews existing literature to explore the connection between shame and substance addiction, as well as the potential roles shame may play in the addiction process, supplementing with research on alcohol addiction or polysubstance use where relevant. Finally, this article examines

relevant studies on group interventions for substance addiction, analyzes content related to shame, and proposes directions for future research.

### **The Concept of Shame**

Shame is a complex concept. On one hand, it is an internal emotion that can be activated, forming part of the innate emotional system (Cook, 1996). On the other hand, it is a moral emotion acquired through socialization (Tangney & Dearing, 2002). Shame serves social functions but can also create difficulties when maladaptive (Cibich et al., 2016; Keltner, 1995; Keltner et al., 1997). Shame involves negative evaluation of the self, signifying feelings of being devalued when observed and judged by others (Dearing et al., 2005; Gilbert, 1998; Lewis, 1971). Shame signals failure in competition or violation of social morality, thereby warning individuals that their sense of social belonging is threatened, to avoid complete loss of social connection (Leach & Cidam, 2015). Thus, transiently activated shame helps individuals monitor their behavior, recognize their limitations, or become aware of being treated disrespectfully (Kaufman, 1996; Wiechelt, 2007). However, when shame is chronically or inappropriately activated, individuals experience intense psychological pain, feeling internally that the self is fragile and bad, and externally that they have lost social belonging, feeling isolated and disconnected from others. This triggers social withdrawal and avoidance, further reducing help-seeking willingness and available social support.

Current research on shame primarily focuses on two aspects. The first is shame proneness, which describes when shame is activated—that is, how likely an individual is to experience shame rather than guilt, externalization, or no feeling when an uncomfortable situation occurs. This is a general, trait-like tendency toward shame that may contribute to the development of problematic substance use (Luoma et al., 2019). The Test of Self-Conscious Affect is commonly used to measure shame proneness (Dearing et al., 2005; Hequembourg & Dearing, 2013; O’ Connor et al., 1994; Strömsten et al., 2009; Tangney et al., 2016).

The second aspect is shame experience, which includes physiological reactions, thoughts, secondary emotions, behavioral consequences, and may directly trigger or maintain drug use (Luoma et al., 2019). The Internalized Shame Scale (ISS) is a primary measurement method for shame experience, dividing shame into four dimensions: deficiency and defectiveness, embarrassment and exposure, vulnerability and loss of control, and emptiness and isolation (Cook, 1988; Luoma et al., 2012; Luoma et al., 2017; Luoma et al., 2018).

Another measurement method for shame experience is the Compass of Shame Scale (CoSS, Elison et al., 2006), which assesses individuals’ shame-related emotional and behavioral response patterns. This measurement is based on Nathanson’s (1992) “Compass of Shame” theory, which posits that shame is a key emotion. Because shame itself is shameful, it tends to be hidden (Kaufman, 1989), its occurrence and development are easily overlooked, and it readily

transforms into other emotions (such as depression, anger) for expression. The “Compass of Shame” reveals that individuals develop schemas to ignore, diminish, or replace shame to avoid directly confronting it. In this model, shame occupies the core position, with the compass including two dimensions: hide-attack and self-other. Shame-related behaviors include: attacking others, attacking self, withdrawal, and avoidance. Webb (2003, 2010) further developed the Compass of Shame based on Nathanson (1987), renaming “withdrawal” and “avoidance” as “hiding from others” and “hiding from self,” constituting four social behaviors: attack, depression, detachment, and addiction, along with four avoidance-related emotions: fear, anger, frustration, and disgust, as shown in Figure 1 [Figure 1: see original paper].

Based on this theory, when shame is activated, some individuals’ coping scripts include hiding from self, which subsequently generates addiction. Figure 1 illustrates the Shame-Avoidance Behavior Compass and Masked Emotions (Webb, 2010, developed from Nathanson’s 1992 model).

In addition to the above measurement methods, shame can also be assessed using the State Shame and Guilt Scale (SSGS, Marschall et al., 1994), Personal Feelings Questionnaire-2 (PFQ-2, Harder & Zalma, 1990), and Other as Shamer Scale (OSS, Goss et al., 1994; Matos et al., 2015). Furthermore, researchers have developed various domain-specific shame questionnaires, such as the Objectified Body Consciousness Scale body shame subscale (OBCS-BS, McKinley & Hyde, 1996) and Intimate Partner Aggression-related Shame Scale (IPARS, Weiss et al., 2016). Notably, current research on the relationship between shame and substance addiction employs inconsistent shame scales, creating difficulties in clarifying this relationship.

### **The Relationship Between Shame and Substance Addiction**

Numerous studies support the relationship between shame and other psychological disorders, including depression (Kim et al., 2011), anxiety (Fergus et al., 2010; Schoenleber et al., 2014), eating disorders (Berg et al., 2013; Manjrekar et al., 2013), substance addiction (Mohr et al., 2008; Wiechelt & Sales, 2001), personality disorders (Gratz et al., 2010; Schoenleber & Berenbaum, 2010; 2012), and self-directed and other-directed aggression and violence (Brown et al., 2009; Bryan et al., 2013; Harper, 2005; Hundt & Holohan, 2012; Schoenleber et al., 2014).

When shame is chronically and inappropriately activated, individuals feel that the self is fragile and incapable of coping with difficulties. The social withdrawal triggered by shame further reduces available social support, making drugs the primary means to address current predicaments, thereby generating cravings and use. Individuals with substance use problems often report growing up in family systems with addiction issues or other abnormalities (Bradshaw, 2005; Fossum & Mason, 1986). Such family interactions are closely linked to shame and may increase shame levels in children raised in these environments (Fossum

& Mason, 1986). Additionally, attachment issues are connected to internalized shame, with children raised in neglectful, abusive, or rejecting environments being more likely to internalize shame (Cook, 1991), and shame-prone children being more likely to abuse substances later in life (Tangney & Dearing, 2002).

As previously mentioned, the complexity of the shame concept means different studies examine different facets of shame in relation to substance addiction, and the diversity of shame measurement scales further complicates this issue. Moreover, substance addiction itself presents complex problems, with different studies using varying indicators of addiction severity, contributing to the complexity of the shame-substance addiction relationship. Beyond direct mortality from frequent, high-dose use, individuals with substance addiction experience higher rates of psychiatric symptoms including depression and anxiety, greater interpersonal difficulties, and more legal problems (Akindipe et al., 2014; McKetin et al., 2016; McKetin et al., 2011; Seth et al., 2018). Currently, substance addiction severity indicators primarily fall into two categories: (1) frequency and amount of use, and (2) problems resulting from use.

Research findings on the correlation between shame and substance use frequency/amount are mixed. Luoma et al. (2012) found that among individuals with substance addiction receiving Acceptance and Commitment Therapy (ACT), slower decreases in shame led to less use of substances such as methamphetamine and marijuana. Dearing et al. (2005) also found that among incarcerated individuals, higher shame was associated with greater cocaine or polysubstance use, though no such correlation was found for marijuana users. However, Tangney et al. (2011) found no direct significant association between shame and marijuana, cocaine, opioid, or polysubstance use in their study of incarcerated individuals. More surprisingly, a follow-up study of incarcerated individuals found that those with higher shame proneness in prison used fewer drugs after release (Tangney et al., 2016). These inconsistent results prevent confirmation of whether shame is associated with substance use frequency and amount, and the scarcity of standalone studies examining shame and drug use frequency/amount also makes it difficult for researchers to conduct meta-analyses comparing effect sizes of shame in drug use.

Despite the complex findings regarding shame and substance use frequency/amount, the connection between shame and problems resulting from substance use is clearer. Multiple studies have found that individuals with higher shame experience more severe substance use-related problems, including more depressive symptoms, anxiety symptoms, aggressive attitudes, lower self-esteem, higher impulsivity, poor family relationships, compulsive sexual behavior, and serious criminal histories (Brem et al., 2017; Dearing et al., 2005; Li et al., 2013; Tangney et al., 2011). A meta-analysis of the relationship between shame and problems resulting from substance use disorders found a significant positive correlation between shame and substance use problems (Luoma et al., 2019).

Overall, the relationship between shame and substance addiction is complex,

with choices regarding shame concepts, measurement scales, and substance addiction indicators all influencing research outcomes. Additionally, the presence of mediating and moderating variables further complicates the relationship between shame and substance addiction.

### **Mediating and Moderating Variables in the Relationship Between Shame and Substance Addiction**

Although current research has not definitively established whether shame leads to increased drug use and problematic consequences, studies of drug users and drinkers suggest these complex associations may stem from intricate mediating and moderating variables within the influence pathways.

Whether an individual's failure or social image is perceived as repairable represents a primary moderating variable in the relationship between shame and constructive approaches to failure (Leach & Cidam, 2015). When individuals with substance addiction experience shame following personal failure or damaged social image (including lapses, interpersonal conflicts, work mistakes, etc.), if they feel permitted by others to make amends and repair the damage, substance use may not become their primary coping choice, thereby weakening the connection between shame and substance use. This is also related to cultural differences in shame: Western cultures tend to devalue shame, and shame is associated with more negative outcomes (Goetz & Keltner, 2007; Sheikh, 2014). However, in Asian cultures, shame has weaker associations with blame, anger, and aggression, and in collectivist contexts that value interpersonal connections, shame can also lead to more positive remedial behaviors (Bear et al., 2009; Fung, 1999; Wong & Tsai, 2007). Currently, only one domestic study has examined the relationship between shame and substance addiction, finding that individuals with higher shame were more likely to use drugs (Zhang et al., 2020), though more research is needed to supplement or verify these results.

Gender has also been identified as a moderating variable in the shame-substance addiction relationship. A meta-analysis found that studies with higher proportions of women and sexual minorities showed stronger associations between shame and substance use problems (Luoma et al., 2019). This suggests different influence patterns between shame and substance use problems across genders, potentially requiring differentiated interventions. Research shows that positive emotions can moderate the relationship between shame and drinking: when positive emotions are low, higher shame typically correlates with more drinking, but when positive emotions are high, the relationship between shame and drinking becomes non-significant (Mohr et al., 2008). Additionally, research indicates that shame proneness rather than shame experience is associated with negative drinking consequences, primarily affecting the frequency and amount of solitary drinking rather than social drinking (Luoma et al., 2018).

Another study including drug users explored shame itself as a moderating variable affecting the relationship between childhood trauma and substance use

(Holl et al., 2017). The study included three participant groups: individuals with substance use disorders who experienced childhood abuse or neglect (T-SUD), healthy individuals who experienced childhood abuse or neglect but had no substance use disorders or other psychiatric diagnoses (T-HC), and healthy individuals with no childhood abuse/neglect and no substance use or other psychiatric disorders (nonT-HC). Results showed that the T-SUD group had significantly higher shame than the T-HC group, which in turn had significantly higher shame than the nonT-HC group. The T-SUD group used large amounts of alcohol or drugs even with low shame, while the other two groups used only small amounts of substances (primarily alcohol) when experiencing low shame. Additionally, the T-HC group showed significantly increased substance use under high shame conditions. Therefore, shame levels may influence the relationship between childhood trauma and substance use, but since childhood trauma itself may lead to stronger shame, whether shame functions as a mediator or moderator in this relationship remains unclear.

In summary, shame's influence on substance use is moderated by the extent to which individuals believe their social image can be repaired, as well as by gender, positive emotions, shame type, whether substances are used alone, and cultural background. Shame itself may also mediate or moderate the impact of early trauma on substance use. Therefore, we propose that interventions reducing shame, enhancing self-acceptance, and increasing positive emotions and social support systems in individuals with substance addiction may reduce substance use frequency and relapse rates. Additionally, influenced by cultural differences, shame's impact patterns on substance addiction in China may differ from Western countries, requiring localized exploration and adaptation of substance addiction interventions.

### **Group Interventions for Shame in Substance Addiction**

For over 70 years, group interventions have been the primary modality for substance addiction treatment (Flores & Brook, 2011), with many group interventions mentioning the need to address shame. For example, substance addiction counseling groups, interpersonal group psychotherapy, and expressive arts therapy designs all emphasize creating a safe and inclusive environment to process members' shame (Dailey et al., 1999; Flores, 2001; Milliken, 2008; Snyder, 2014). However, only a few studies have directly examined the effectiveness of group intervention models on shame.

Founded in 1935, Alcoholics Anonymous (AA) is the longest-standing self-help group for substance addiction, which helps members maintain sobriety by reducing shame. AA creates a safe, friendly environment where individuals with alcohol addiction can confront their flawed selves, thereby reducing self-avoidance and substance use (Ramsey, 1988). AA has established multiple traditions to ensure anonymity, including group autonomy, controlling external influences (money, prestige, etc.), avoiding public controversy, and maintaining personal anonymity in media exposure. These traditions provide members with a sense of

security—that they will not be exposed—reducing the likelihood of being judged. AA also emphasizes warmth, friendship, and mutual support among members, which together with anonymity reduces shame and the tendency to avoid the self. According to Ramsey (1988), AA members confront and repair the shamed self through 12 steps. Similarly, Young (1991) discussed how new AA members break their patterns of hiding, avoiding, and not processing shameful experiences by witnessing more experienced members share their own shame experiences. Empirical research has found that higher AA participation levels and longer participation duration correlate with lower shame experience levels, and members who completed Steps 5 and 9 of the 12-step program had significantly lower shame experience levels than those who completed Steps 4 and 8. That is, as AA participation progresses, members' shame experience levels significantly decrease, and lower shame experience levels positively correlate with duration of sobriety (Newcombe, 2015). While AA primarily serves individuals with alcohol addiction, Narcotics Anonymous (NA), developed based on AA, provides a friendly environment for mutual support among individuals with drug addiction. In some qualitative studies, members mentioned that acknowledging and admitting their powerlessness and traumatic experiences—shameful feelings—helped them maintain sobriety (Gueta et al., 2021; Sanders, 2011).

Acceptance and Commitment Therapy (ACT) can be used in group interventions for substance addiction and is currently one of the more extensively studied therapies directly examining group interventions, shame, and substance addiction (Luoma et al., 2008; Luoma et al., 2012; Gul & Aqeel, 2002). ACT primarily targets self-stigmatization in individuals with substance addiction, including shame, evaluative thoughts, and fear of stigmatization. Through experiential and didactic processes involving psychological acceptance, cognitive defusion, and contact with important values, ACT helps participants learn to respond to shameful or stigmatizing thoughts and behaviors in ways that do not hinder recovery. Participants are encouraged to discover their life goals and values, linking expected goal achievement to values rather than unconscious thoughts and feelings. The final goal of the destigmatization process is to establish a positive agenda of interpersonal connection and mutual acceptance. Luoma et al. (2008) found that ACT can reduce shame experience but had no significant effect on confidence in not using addictive substances after treatment. Subsequent research found that after receiving ACT, shame in individuals with substance addiction decreased slowly, and at 4-month follow-up, they used fewer substances such as methamphetamine and marijuana compared to those receiving treatment as usual (Luoma et al., 2012). More recent research found that compared to standard treatment, ACT significantly reduced shame, improved overall health, and enhanced quality of life, but did not mention effects on substance addiction itself (Gul & Aqeel, 2020).

An integrated group intervention based on cognitive-behavioral principles also targeted shame in female compulsory drug rehabilitation center residents and measured participants' relapse tendency. Results showed that shame intervention could effectively reduce shame, increase self-efficacy, and decrease relapse

tendency (Zhang et al., 2020). However, this intervention program has only been tested in a single study and has not developed a complete intervention manual, requiring further research to examine its generalizability.

Research has identified gender as a moderating variable in the shame-substance addiction relationship, showing that higher proportions of women correlate with stronger associations between shame and substance use problems (Luoma et al., 2019). This suggests different influence patterns between shame and substance addiction across genders, requiring differentiated interventions. A qualitative study of women's experiences in single-gender versus mixed-gender groups showed that women in mixed-gender groups clearly felt themselves as "the minority," and that social expectations and traditional gender roles impose stronger restrictions on women's substance use, making substance addiction appear more shameful (Greenfield et al., 2013). Therefore, in all-female substance addiction intervention groups, members can more easily process shame related to being female, which may facilitate recovery. Building on attention to women's specific substance addiction characteristics, researchers developed the Women's Recovery Group (WRG), a 12-week, cognitive-behaviorally based group meeting for 90 minutes weekly, covering 12 topics including harm of drugs to women's health, women's relationships and repair, shame and guilt, etc. Researchers found that women in WRG showed more significant substance use improvement at 6-month follow-up compared to those in mixed-gender Group Drug Counseling (GDC) (Greenfield et al., 2007), though another study found no significant differences in improvement between the two groups (Greenfield et al., 2014). However, these studies did not quantitatively examine the relationship between shame and substance addiction, so we cannot determine whether differential shame intervention effects led to the different outcomes.

Few studies have explored differences between men's and women's shame during the intervention process. One intervention study adapted the WRG for men, and in member interviews, male participants reported that the absence of women allowed them to hide less and discuss more deeply compared to mixed-gender AA groups (Sugarman et al., 2019). Previous research seems to have assumed that even mixed-gender substance addiction groups were primarily designed for men, and that women's specific experiences—especially shame-related experiences—required attention. However, this study suggests that men also have specific shameful experiences they wish to hide in mixed-gender groups, indicating that shame experiences across genders deserve attention in interventions.

In groups, members can express shame without being blamed, making shame no longer an experience that must be hidden, thereby reducing further self-avoidance, increasing confidence in social image reparability, and opening pathways to recovery. Research has begun exploring gender-specific shame requiring intervention, and researchers have started examining whether shame interventions can reduce substance use in China's unique compulsory drug rehabilitation settings. However, current research remains limited and findings are inconsistent, requiring more studies to supplement understanding of how relevant factors

influence the relationship between shame and substance addiction.

### Conclusion and Future Directions

Shame likely plays an important role in substance addiction. Shame itself may mediate or moderate the relationship between early trauma and substance addiction onset, while shame's impact on substance use is moderated by gender, emotional state, cultural context, whether substances are used alone, etc. Group interventions represent an important approach to substance addiction treatment, with AA, NA, ACT, and CBT conducting intervention studies based on the shame-substance use relationship. These approaches reduce shame through multiple traditions ensuring anonymity, providing safe and friendly environments, and through processes of psychological acceptance, cognitive defusion, and contact with important values, thereby reducing self-stigmatization, enhancing self-efficacy, and decreasing relapse rates.

However, the relationship between shame and substance addiction remains inconclusive. A key reason is the scarcity of research directly examining drug use. Additionally, different shame types and measurement methods, such as shame experience versus shame proneness, may have different effects on drug use, further complicating findings. The shame-drug use influence model may also contain complex mediating and moderating variables, with shame itself potentially functioning as either a mediator or moderator affecting drug use. These issues require further research to clarify and more clearly guide intervention directions.

Existing group intervention programs all mention shame intervention and its impact on substance use improvement, but the specific role of shame in group interventions requires further clarification. Moreover, relevant research primarily derives from Western samples, while shame has cultural specificity. Therefore, future development of localized substance addiction intervention research is essential.

Given that shame is an easily hidden important negative emotion with multiple dimensions and concepts, plays a significant role in substance addiction development though current research shows inconsistent findings, existing group interventions for substance addiction all involve shame intervention but the specific mechanisms remain unclear, and shame has cultural specificity, future research should further define shame concepts, explore mechanisms of shame's role in substance addiction development within Chinese culture, develop group intervention models for substance addiction based on shame, and conduct process and outcome studies.

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