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Longitudinal Relationship between Forgiveness of Self and Forgiveness of Others among Individuals with Alcohol Use Disorders

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Abstract

Previous research has suggested that forgiveness of self and forgiveness of others might function differently over the course of addiction recovery. However, we know little about the longitudinal process of these dimensions of forgiveness for individuals addressing alcohol-use disorders. Increased knowledge would inform the content and sequencing of intervention strategies. Three hundred and sixty-four individuals managing alcohol dependence participated in a 30-month longitudinal study, reporting their capacity to forgive self and to forgive others every 6 months. Findings indicated that a) participants were more forgiving of others than themselves, b) both types of forgiveness increased over time, c) forgiveness of self increased more rapidly than forgiveness of others, and d) while increases in both types of forgiveness predicted increases in the other type, the effect of forgiveness of others on forgiveness of self was twice as strong as the reverse effect. Implications for facilitating forgiveness in treatment are discussed.

Keywords

forgiveness of self; forgiveness of others; alcohol use disorders; spirituality

Often it was while working on this Step with our sponsors or spiritual advisers that we first felt truly able to forgive others, no matter how deeply we felt they had wronged us. Our moral inventory had persuaded us that all-round forgiveness was desirable, but it was only when we resolutely tackled Step Five that we inwardly

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knew we'd be able to receive forgiveness and give it, too. (AA World Services, 1953, pp. 57–58)

If we are now about to ask forgiveness for ourselves, why shouldn't we start out by forgiving them, one and all? (AA World Services, 1953, p. 78)

Under very trying conditions I have had, again and again, to forgive others – also myself. Have you recently tried this? (Wilson, 1946, cited in (Wilson, 1967, p. 268)

Too little self-forgiveness and too little prayer – well, this combination adds up to slips. (Wilson, 1960, cited in (Wilson, 1967, p. 99)

Alcoholics Anonymous' Co-founder Bill Wilson addresses addiction, recovery, and forgiveness in these passages. Here Wilson frames forgiveness as a desired asset; a way to cope under difficult circumstances; a beneficial outcome of step work; and something that, if absent, could cause relapse. In these ways Wilson portrays forgiveness as an accompaniment to sustainable recovery. Researchers have studied the association between forgiveness and a range of outcomes related to addictive behavior and its resolution (for reviews, see (Webb, Hirsch, & Toussaint, 2011; Webb, Toussaint, & Hirsch, in press; Webb & Jeter, 2015). Some studies have focused on forgiveness and recovery. For example, in a subset of the data employed in the current study, forgiveness was observed to increase linearly 6 to 30 months after an episode of abstinence-based alcohol-use disorder treatment (Krentzman, 2016).

Why would we observe a linear rise in forgiveness after treatment? Active addiction is attended by negative consequences (Miller, Tonigan, & Longabaugh, 1995) and associated transgressions against the self and others (Worthington, Scherer, & Cooke, 2006) that cause conflict, negative emotion, injustice, and symptoms of depression and anxiety. The confluence of these negative emotions have been termed “unforgiveness” (Worthington et al., 2006). As sober behavior replaces addictive behavior, negative consequences of drinking abate, reducing negative emotion, resentment, and “unforgiveness” toward others and toward one's self. Forgiveness during recovery might also occur secondary to AA step work, as described by Wilson in the quote above (1953) and as articulated in steps 8 and 9: “Made a list of all persons we had harmed, and became willing to make amends to them all” and “Made direct amends to such people wherever possible, except when to do so would injure them or others” (AA World Services, 1953, p. 77 and 83).

While the association between forgiveness and addiction recovery has been made in self-help circles and in research studies, the ways in which different dimensions of forgiveness function over the course of recovery is less well understood. For example, forgiveness of others and forgiveness of self are each relevant to recovery. Forgiveness of *others* is defined as a “motivationally and volitionally unique coping mechanism, [a] process of reframing and neutralizing negative responses to offensive experiences” which may or may not be accompanied by positive emotions such as love or attachment (Webb, Phillips, Bumgarner, & Conway-Williams, 2013, p. 236). It is the “willingness to abandon one's right to resentment, condemnation, and subtle revenge toward an offender who acts unjustly, while fostering the undeserved qualities of compassion, generosity, and even love....” (Enright & The Human Development Study Group, 1996, p. 108). In this definition we see the ways in

which forgiveness can neutralize negative emotion, a known trigger for relapse to active addiction (Marlatt, 1996; Marlatt & Gordon, 1980).

Forgiveness of self is similar to forgiveness of others in that “Both are processes that unfold over time. Both involve an objective wrong. In both cases, forgiveness is freely given.... Both ... are distinct from condoning, excusing, or forgetting a transgression” (Tangney, Boone, & Dearing, 2005, p. 144). However, forgiveness of self additionally requires personal acknowledgment of and accountability for wrong-doing including an element of self-acceptance, a “fundamental, constructive shift in one’s relationship to, reconciliation with, and acceptance of the self through human-connectedness and commitment to change” (Webb, Bumgarner, Conway-Williams, & Dangel, 2016, p. 10). Further, self-forgiveness is associated with acceptance of the past and increasing kindness toward one’s self. It involves:

...a set of motivational changes whereby one becomes decreasingly motivated to avoid stimuli associated with the offense, decreasingly motivated to retaliate against the self (e.g., punish the self, engage in self-destructive behaviors, etc.), and increasingly motivated to act benevolently toward the self (Hall & Fincham, 2005, p. 622).

Both constructs reframe and neutralize a negative experience; both relinquish negative emotion. In both, the urge to retaliate and condemn is dropped. Both embody a sense of compassion, generosity, and love. While the two constructs share similar ground, as mentioned, forgiveness of self additionally embodies a sense of personal responsibility, accountability, self-acceptance, and self-compassion. Its emphasis on the abatement of self-hatred and self-contempt replaced with kind self-acceptance can be seen as a balm for the rough road which can be part of the addiction recovery journey. This may be why, after reviewing 21 studies of forgiveness and alcohol, scholars concluded that “multiple dimensions of forgiveness are meaningful and perhaps essential in addressing problematic substance use. ...of the dimensions measured, forgiveness of self may be the most important....” (Webb & Jeter, 2015, p. 149).

Some studies report that forgiveness of self and forgiveness of others function similarly with respect to drinking and recovery. For example, a cross-sectional study of college students in Appalachia reported that forgiveness of self, forgiveness of others, and feeling forgiven by God were significantly and negatively correlated with symptoms of alcohol use disorders and negative consequences of drinking at the bivariate level (Webb & Brewer, 2010). In a study of individuals entering treatment for alcohol use disorders, forgiveness of self and forgiveness of others were significantly and negatively associated with concurrent drinking at baseline but were not associated with drinking 6 months later at the bivariate level (Webb, Robinson, Brower, & Zucker, 2006). At the multivariable level, where analyses included demographic covariates and three dimensions of forgiveness (self, other, and by God), no dimension of baseline forgiveness was associated with drinking at 6-month follow-up. No dimension of forgiveness at 6-month follow-up was associated with drinking at 6-month follow-up. Both forgiveness of self at baseline and forgiveness of others at baseline were associated with fewer drinking consequences at baseline. However, for other drinking variables at baseline, differences emerged: forgiveness of self was associated with

significantly fewer drinks per drinking day and significantly fewer heavy drinking days while forgiveness of others was associated with more percent days abstinent.

Additional studies report that forgiveness of others and forgiveness of self function differently in addiction recovery. Robinson and colleagues (2011) employed three different forgiveness measures in their study of the impact of spirituality on drinking: (1) the Mauger forgiveness of self subscale, (2) the Mauger forgiveness of others subscale (Mauger et al., 1992), and (3) the three-item “Forgiveness-Short Form” instrument (Fetzer Institute, 2003). The Fetzer instrument includes one item assessing forgiveness of self, one item assessing forgiveness of others, and one item assessing forgiveness from God, together constituting a general forgiveness score. In the same dataset employed in the current study, increases from baseline to 6 months in the Fetzer measure were associated with greater days since last drink and fewer percent heavy drinking days at the 9-month follow up. However, when forgiveness of others and forgiveness of self were examined as separate constructs using the Mauger subscales, differences in each subscale’s relationship to subsequent drinking emerged. Increases in forgiveness of self between baseline and 6 months were associated with less drinking according to four drinking indicators at 9 months (greater percent days abstinent, greater days since last drink, fewer percent heavy drinking days, and fewer drinks per drinking day). Forgiveness of others operated quite differently. Contrary to hypotheses, forgiveness of others was significantly associated with *fewer* percent days abstinent and was not associated significantly with the other three drinking outcomes.

Recovery behavior encompasses more than changes in drinking. A study which examined the effect of drinking behavior and Alcoholics Anonymous involvement on spirituality found that drinking and AA were associated with different dimensions of subsequent forgiveness. Lower levels of drinking at 6 months were significantly associated with greater levels of *forgiveness of self* from 6–30 months. Greater AA involvement was significantly associated with greater levels of *forgiveness of others* from 6–30 months (Krentzman, Strobbe, Harris, Jester, & Robinson, 2016). Taken together, these studies suggest that forgiveness of self and forgiveness of others operate differently in the recovery landscape despite their conceptual similarities.

The relationship between forgiveness of self and forgiveness of others and how they change over the course of recovery are important to understand in greater depth for several reasons. The ways in which adverse consequences (Miller et al., 1995), transgressions, and unforgiveness (Worthington et al., 2006) resolve is of central importance to improved understanding of addictive behavior and recovery from it. Empirical support for this phenomenon will strengthen the evidence base.

Second, advanced knowledge of the relationship between forgiveness of others and forgiveness of self among individuals with alcohol-use disorders will inform treatment efforts. Forgiveness-based interventions have been developed for or adapted for use with individuals with addictions. Cultivating forgiveness toward others is hypothesized to resolve feelings of anger that may cause relapse (Lin, Mack, Enright, Krahn, & Baskin, 2004; Worthington et al., 2006). Cultivating forgiveness toward one’s self is hypothesized to resolve feelings of guilt, shame, and self-condemnation that may cause relapse (Scherer,

Worthington, Hook, & Campana, 2011; Webb et al., in press). But without specific knowledge of how forgiveness of others and forgiveness of self influence each other and change over time, it will be difficult to determine what type of forgiveness intervention might be most productive. If we knew which dimension preceded the other, the information would inform the sequencing of current forgiveness therapies as well as development of innovative forgiveness interventions (Enright & The Human Development Study Group, 1996; Webb, Hirsch, & Toussaint, 2015).

Conceptual Framework

The focus of the current study is a longitudinal investigation of the levels and rate of change of forgiveness of self and forgiveness of others over 30 months and the relationship of these constructs to each other over time in a sample of individuals with alcohol use disorders whose drinking decreased significantly during this time period. The broad conceptual framework for the current study is depicted in Figure 1.

Hypotheses regarding levels of forgiveness of others and forgiveness of self

Enright et al. (1996), Worthington (2006), and Webb and colleagues (2010; 2006) have stated that forgiveness of self might be harder to achieve than forgiveness of others. Enright and colleagues thought that when the referent of forgiveness is one's self and not another entity, the concept is more abstract and thus less achievable. Enright and colleagues further stated that most people are harder on themselves than on others, making it easier to forgive others than to forgive one's self.

Three empirical studies of individuals with problem drinking support Enright et al.'s claim that self forgiveness is harder to achieve than other types of forgiveness. In a sample of adults diagnosed with alcohol-use disorders who were entering treatment, Webb and colleagues (2006) reported lower forgiveness of self than forgiveness of others ($p < .01$) using single-item measures from the "Forgiveness-Short Form" instrument (Fetzer Institute, 2003). In a sample of college student drinkers with hazardous or harmful drinking patterns, Webb and Brewer (2010) reported significantly lower forgiveness of self compared with feeling forgiven by God ($p < .001$); in this same study, forgiveness of self was lower than forgiveness of others, a relationship that approached significance ($p < .10$). Again, constructs were measured using single-items from the "Forgiveness-Short Form" instrument (Fetzer Institute, 2003). In a sample of men and women enrolled in treatment for alcohol-use disorders in Poland, Charzy ska (2015) reported lower scores for forgiveness of self than forgiveness of others ($p < .001$). She measured forgiveness using the Polish version of Toussaint and colleagues' (2015) forgiveness indices. It is important to note that in these three studies taken together, forgiveness of self was rated lower than other dimensions of forgiveness using two different instruments. We hypothesize that in the current study, using yet a third instrument for measuring forgiveness (Mauger et al., 1992), levels of forgiveness of self would be lower than levels of forgiveness of others.

Exploratory questions regarding the relationship between dimensions of forgiveness

Enright and colleagues (1996) suggested that forgiveness of self, forgiveness of others, and forgiveness from others can converge and occur simultaneously, rather than in a prescribed sequence. However, Enright did propose the following causal pathway: “Receiving forgiveness may spark the act of self-forgiveness. Self-forgiveness, when understood and practiced, may encourage forgiving others in the future” (p. 120). Empirical support for the causal sequencing of forgiveness of self and forgiveness of others is limited. Hodgson and Wertheim’s (2007) cross-sectional study suggests that forgiveness of self was associated with forgiveness of others and was hypothesized to precede it, although this association was only observed in the significant other’s report of the research participant’s behavior. In the research participant’s self-report data, forgiveness of self and forgiveness of others were not significantly associated. On the other hand, if forgiveness of others is easier than forgiveness of self, it might occur first. The theoretical and empirical status of the literature make it difficult to hypothesize the causal sequencing between forgiveness of self and forgiveness of others. Therefore, we pursue this question as exploratory in the current study. However, we do hypothesize that the relationship between the two constructs will be cyclical because forgiveness of self and forgiveness of others share many conceptual similarities.

Research Questions

The current study addresses a set of questions to further the understanding of forgiveness constructs over time and how they relate to one another in a large sample of individuals with alcohol use disorders who have stopped drinking or significantly reduced their drinking. Over a 30-month follow-up period, (1) which construct is rated higher, forgiveness of others or forgiveness of self? We hypothesize that forgiveness of self will be rated lower than forgiveness of others. (2) Is there significant change in forgiveness over 30 months, and if so, to what magnitude and in what direction? We have evidence that both constructs increase significantly during this period (Krentzman, 2016). However, we do not know whether they increase at similar rates. (3) How is each dimension of forgiveness associated with the other dimension assessed six months later? Since the theory and research to date has been mixed on this topic, we pursue this question without a priori hypotheses.

Material and Methods

This is a secondary data analysis of The Life Transitions Study, a prospective, longitudinal panel study in which 364 individuals with alcohol dependence were followed for 30 months. Respondents were assessed in person every six months for spirituality, drinking, and other psychosocial indicators; respondents were reimbursed for these assessments. Drinking was measured using the TimeLine FollowBack instrument, which uses a calendar-based system to recall daily drinking behavior (Sobell, Brown, Leo, & Sobell, 1996; Sobell & Sobell, 1992). From these data, it is possible to calculate average drinks per drinking day (a measure of drinking intensity) and average percent days abstinent (a measure of drinking frequency) in the past 90 days.

Recruitment took place just after treatment initiation at an abstinence-based outpatient program housed within a university medical center (n = 157, 43.1%), an abstinence-based

outpatient program housed within a Veterans Administration medical center (n = 80, 22.0%), a program which promoted a healthy relationship with alcohol and permitted moderation of drinking as well as abstinence as treatment goals (n = 34, 9.3%), and individuals in the general community who were not in treatment at baseline (n = 93, 25.5%). All respondents met criteria for alcohol dependence at baseline, and, on average, drinking reduced significantly at each site over the course of the study period (baseline to the 30-month follow-up, see Figure 2). For participants recruited from the university site, average drinks per drinking day decreased from 8.8 to 3.1 ($t(106) = 7.99, p < .001$) and average percent days abstinent increased from 61.1% to 87.9% ($t(106) = 8.40, p < .001$). For participants in the Veterans Administration site, average drinks per drinking day decreased from 11.7 to 3.7 ($t(54) = 5.38, p < .001$) and average percent days abstinent increased from 70.6% to 87.7% ($t(54) = 3.68, p < .01$). For participants recruited from the site that permitted reduced drinking as a treatment goal, average drinks per drinking day significantly decreased from 4.5 to 2.6 ($t(27) = 2.94, p < .01$) and average percent days abstinent increased from 35.0% to 54.7% ($t(27) = 2.89, p < .01$). While individuals recruited from this community-based sample were not in treatment at baseline, all of these individuals reported at least one previous treatment episode (average previous treatment episodes 6.3, $SD=15.5$) and 67.7% reported having had experience with AA. Over the course of the subsequent 30 months, 5.3% of the community sample reported at least one day of residential substance use disorder treatment, 14.2% reported at least one session of outpatient substance use disorder treatment, and 24.2% reported attending an AA meeting. For this site over 30 months, average drinks per drinking day decreased significantly from 7.8 to 4.4 ($t(76) = 4.06, p < .001$) and average percent days abstinent increased significantly from 44.5% to 64.4% ($t(76) = 5.33, p < .001$). In addition to treatment and support-group participation, improvement may also be due to natural recovery, that is, recovery that occurs without formal intervention (Bischof, Rumpf, & John, 2012). Taken together, the overall sample employed for the current study significantly reduced their drinking between baseline and the 30-month follow-up.

At the University and Veterans Administration sites, recruitment took place by review of the clinical record, and then prospective participants were approached. At the harm-reduction site, staff identified clients who met criteria for the study and then put them in touch with the research team. To recruit individuals in the community, newspaper advertisements were run. To be included in the study, respondents were required to be at least 18 years old, to have a diagnosis of alcohol dependence, to have drunk alcohol in the last 90 days, and to be literate in English. Respondents who were actively suicidal, homicidal, and/or psychotic were excluded. Of those recruited, most enrolled in the study (77.6%). Data were collected between 2004 and 2009 in the Midwestern U.S. Approval was obtained from the appropriate institutional review boards and informed consent was obtained in writing by respondents. More information about the study can be found in Robinson et al. (2011).

Sample Characteristics

Roughly one third of the sample was female (34.3%). Respondents were on average 44.0 ($SD=12.8$) years of age. The majority were European-American (81.9%). Just over one third (38.2%) were married or co-habiting, and over half (56.0%) were employed. About half (47.5%) had not been in treatment previously but those who had averaged 4.1 ($SD 8.1$)

previous treatment episodes. More than half (57.4%) met 6–7 criteria articulated in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), indicating severe alcohol dependence (American Psychiatric Association, 1994). Most (86.5%) had a family member with an alcohol problem. Respondents reported at baseline that they had been abstinent 56.1% (SD = 31.3%) of the previous 90 days and drank an average of 9.5 (SD = 8.2) drinks per drinking day.

Measures

Forgiveness of self and forgiveness of others were assessed with two subscales of the Behavior Assessment System instrument (Mauger et al., 1992). Each subscale employs 15 true/false items and was designed to assess “deficits in forgiveness behaviors” (p. 171). Items comprising the deficit in *forgiveness of others* subscale relate to “taking revenge, justifying retaliation and revenge, holding grudges, and seeing other people as apt to cause one hurt” (p. 174). The subscale reflects the inclination to be punitive toward others ($\alpha = .77, .76, .78, .78, .80, .81$, for each wave, baseline and every 6 months to 30 months). A sample item is “It is hard for me to forgive those who hurt me.” Items comprising the deficit in *forgiveness of self* subscale relate to “feelings of guilt over past acts, seeing oneself as sinful, and having a variety of negative attitudes toward yourself” (p. 174). Items on this subscale are associated with the inclination to be punitive toward one’s self ($\alpha = .84, .85, .84, .84, .85, .87$, for each wave, baseline and every 6 months to 30 months). A sample item is “I find it hard to forgive myself for some things I have done.” The scales were reverse-coded in the current study to represent the *presence* of forgiveness behaviors. Previous research reports adequate internal consistency and test-retest reliability, and evidence that that the two subscales represent distinct constructs (Mauger et al., 1992).

Statistical Methods

Forgiveness of self and forgiveness of others were assessed at baseline and every six months until the 30-month follow up, producing six waves of data. Multi-level procedures were employed to model forgiveness of self and forgiveness of others as time-varying predictors and outcomes in various ways in order to answer the three research questions.

To determine which construct was rated higher, means for forgiveness of others and forgiveness of self over time were plotted for the sample (Figure 3). By visual inspection, the levels of forgiveness of others appeared higher than forgiveness of self. To test this question statistically, forgiveness of self scores were subtracted from forgiveness of others scores, forming a difference score for each wave. Next, an unconditional means model was estimated. The unconditional means model calculated a grand mean for the difference score for all subjects over all waves, and tested whether this grand mean value was statistically different than zero. If the grand mean value were to be positive and statistically different from zero for this difference variable, it would indicate that, across time, forgiveness of others scores were significantly higher than forgiveness of self scores. To test for differences in rate of change between the two types of forgiveness, an unconditional growth model was estimated for the difference variable with the addition of time in the model. A significant and negative coefficient for time would indicate that differences between the two constructs were significantly decreasing over time.

To determine the magnitude and direction of change in forgiveness over 30 months, an unconditional means model (a model of the outcome variable without predictors) and an unconditional growth model (a model of the outcome variable with only time as the predictor) were estimated for each forgiveness construct from baseline to 30 months according to the procedure recommended by Singer and Willett (2003). Comparison of the reduction in the random effects of within person variance between the two models provides an estimate of the amount of variance attributable to time. The greater the variance attributable to time, the greater the evidence that change occurred over time. Examination of the coefficient for time in the unconditional growth models provides evidence for the magnitude, direction, and statistical significance of any observed change. The measurement tool used in the current study was designed to measure dispositional forgiveness, that is, trait rather than state forgiveness. Therefore we also examined autocorrelations to gain information about the stability of forgiveness of others and forgiveness of self over time. Autocorrelations were generated by calculating Pearson correlation coefficients of forgiveness of self at baseline and 6 months, 6 and 12 months, 12 and 18 months, 18 and 24 months, and 24 and 30 months and repeating the procedure with forgiveness of others using these same pairings.

To determine the relationship between each dimension of forgiveness with the other dimension of forgiveness six months later, the data were restructured so that the predictor (e.g., forgiveness of self) ranged from baseline to 24 months and the outcome (e.g., forgiveness of others) ranged from 6 months to 30 months, each constituting five waves of data. This restructuring of the data is a procedure described by Singer and Willett (2003) which produces a 6-month time lag so that baseline of one variable predicted 6 months of the other, 6 months predicted 12 months, 12 months predicted 18 months, 18 months predicted 24 months, and 24 months predicted 30 months. Next, time-varying forgiveness of others between 6–30 months was regressed on time-varying forgiveness of self between baseline and 24 months in a single model, and then the roles of predictor and outcome were reversed in a second multi-level model. In both models, relevant socio-economic and clinical covariates were included (baseline age, gender, employment, years of education, and average drinks per drinking day) to remove the influence of these covariates and focus on the relationship between the forgiveness variables. (Originally, covariates also included number of previous treatment episodes, marital status, race, and recruitment site; none of these factors were significant in either model, therefore they were excluded from the final analyses.) Multi-level modeling was employed using SPSS version 22's "MIXED" command; the method of estimation was restricted maximum likelihood.

Missing Data

Of the 364 individuals enrolled in the study, data were available for both forgiveness of self and forgiveness of others for 363 individuals at baseline (99.7% of the total sample), 314 (86.3%) at 6 months, 295 (81.0%) at 12 months, 285 (78.3%) at 18 months, 279 (76.6%) at 24 months, and 266 (73.1%) at 30 months. Multi-level modeling does not exclude an entire individual if one or more waves of data are missing from the outcome variable (Cnaan, Laird, & Slasor, 1997). However, if a case was missing at baseline ($n=1$) or present at baseline but missing from all subsequent waves ($n=33$), then the case would not be retained

(Woltman, Feldstain, MacKay, & Rocchi, 2012). Those included in the analyses (330) and those excluded (34) were compared and found to be similar on all baseline demographic and clinical variables.

Results

Differences in Levels of Forgiveness of Self and Forgiveness of Others

Levels of forgiveness of others were observed to be significantly higher than levels of forgiveness of self. These differences are illustrated in Figure 3. Forgiveness of self subtracted from forgiveness of others at each wave and rendered as a grand mean produced a positive and statistically significant intercept of 2.36 points ($SE=.18$, $p < .001$) indicating that on average across time, forgiveness of others was 2.36 points greater than forgiveness of self. The unconditional growth model showed that these differences grow significantly smaller as time passes. For every 6-month unit of time, the gap between forgiveness of others and forgiveness of self was reduced by .18 points ($p < .001$).

Change in Forgiveness over Time

Levels of forgiveness of self were observed to start lower but increase more rapidly than forgiveness of others. This pattern is illustrated in Figure 3. Time accounted for 20.2% and 12.8% of the variance within individuals for forgiveness of self and forgiveness of others, respectively. For both outcomes, change over time was positive and statistically significant. The rate of increase in forgiveness of self was double that of forgiveness of others. For every one unit increase in time, forgiveness of others increased by .15 points and forgiveness of self increased by .33 points. Autocorrelations for forgiveness of others for baseline to 6 months, 6–12 months, 12–18 months, 18–24 months, and 24–30 months were .70, .73, .75, .79, and .81, respectively. All pairings were significant at $p < .001$. Similar levels were seen for autocorrelations for forgiveness of self for the same longitudinal pairings; they were .70, .80, .78, .79, and .78, respectively. These were each statistically significant at $p < .001$. Both sets of autocorrelations suggest stability in the levels of the constructs within persons over time even as the sample as a whole was observed to be increasing in the levels of these constructs over 30 months.

The Association between Forgiveness Constructs with a Six-Month Lag

Each forgiveness construct significantly predicted higher levels of the other forgiveness construct assessed six months later. The effect of forgiveness of others on forgiveness of self was twice as strong as the effect of forgiveness of self on forgiveness of others. For every one unit increase in forgiveness of others, forgiveness of self increased by .21 points ($p < .001$) but for every one unit increase in forgiveness of self, forgiveness of others increased by .10 points ($p < .001$) (See Table 1). See Figures 4a and 4b for graphic depiction of these relationships.

Discussion

This study meaningfully extends the current literature on forgiveness. The current study found that forgiveness of self was rated lower than forgiveness of others over a 30-month

period for individuals with alcohol use disorders whose drinking decreased or was terminated during this time. Forgiveness of self has been rated lower than other dimensions of forgiveness in previous research which used different measurement instruments for forgiveness (Charzy ska, 2015; Webb & Brewer, 2010; Webb et al., 2006), suggesting that this is a robust phenomenon particularly within samples of individuals with problematic drinking. As Enright and colleagues (1996) proposed, this could be because, for many, forgiving one's self is more difficult than other aspects of forgiveness. As many have articulated, self forgiveness requires additional steps (e.g., taking personal responsibility, being accountable, and having compassion for one's self); this might be why forgiveness of self is more difficult (Webb et al., 2016).

In the current study, significant increases in forgiveness of others and forgiveness of self were observed. It is interesting that increases in forgiveness were observed to occur throughout 30 months of time. This suggests that the achievement of stable recovery is a gradual, dynamic, and ongoing process. It is an interesting contrast to the change in drinking behavior, which is mostly concentrated in the first six months and then is mostly stable thereafter.

The significant increases in forgiveness of others and forgiveness of self observed in the current study are especially interesting because Mauger's measure was designed to assess dispositional versus state forgiveness (Mauger et al., 1992; Tangney et al., 2005). Auto correlations ranged from .70 – .80 for forgiveness of self and .70 – .81 for forgiveness of others, suggesting stability in the construct in pairings that spanned 6 months' time. However, the constructs were observed to increase significantly in a trajectory over 30 months which included 6 waves of observation. Attaining and maintaining recovery is a difficult process and produces significant changes in a range of human behaviors that go beyond changes in drinking behavior alone. It could be that the changes associated with recovery are profound and able to shift even trait or dispositional tendencies. Additionally, scholars have challenged the state/trait divide when it comes to the construct of forgiveness, arguing that the divide is arbitrary and diminishes the depth of meaning implicit in the basic nature of forgiveness (Kim & Enright, 2016).

The results of the current study suggest that among people who are addressing their alcohol-use disorder by stopping or reducing their drinking, forgiveness increases. Further, the capacity to forgive others and the capacity to forgive one's self are associated in a cyclical fashion—they effect and influence each other. Enright and colleagues (1996) have stated that different types of forgiveness would inform and influence each other.

Diverging from Enright et al.'s (1996) hypothesis that being forgiven by others would lead to self-forgiveness which would lead to forgiveness of others, this study found that forgiveness of others was twice as strong a predictor of forgiveness of self than the reverse direction. Thus it appears that learning to forgive others may be critical to the development of the capacity to forgive oneself. These findings may become clinically important for clients who have persistent difficulty forgiving themselves for their own past offenses and for those individuals who relapse as the result of feelings of self-recrimination, guilt, or shame.

Limitations and Future Directions

The sample consisted of predominantly Euro-American people managing alcohol dependence, and the majority of participants had family members managing addiction as well. Findings should not be generalized outside the cultural group represented without further study. Being forgiven by God and being forgiven by others were not assessed and yet they are likely to be relevant for the study of addiction recovery: these concepts are referenced in 12-step literature (see AA World Services, 1953; see AA World Services, 1998; see AA World Services, 2001) and hypothesized by Enright and colleagues (1996) as possible precipitants of forgiveness of others and forgiveness of self. Although empirical evidence is growing in support of the forgiveness-alcohol association (Webb et al., 2011, in press; Webb & Jeter, 2015), this study does not directly address the impact of forgiveness on drinking outcomes. The current study is a naturalistic, longitudinal study. While findings have implications for cause and effect relationships, intervention studies would be necessary to determine if fostering forgiveness of others can be successfully used to facilitate forgiveness of self. Future work to answer this question and to explore the developmental pathways of forgiveness and their immediate effects on drinking would make worthwhile contributions. We now have evidence that AA involvement is associated with increases in forgiveness of others (Krentzman, Cranford, & Robinson, 2013), forgiveness of others influences forgiveness of self in the current study, and forgiveness of self is associated with beneficial drinking outcomes (Robinson et al., 2011). A path analysis to test this four-step pathway would be of interest.

Another limitation of the current study is use of the Mauger subscales to assess forgiveness of self and forgiveness of others (Mauger et al., 1992). The subscales contain a number of items that have strong face validity for the constructs of forgiveness of others and forgiveness of self (e.g., “It is hard for me to forgive those who hurt me” and “I find it hard to forgive myself for some things that I have done,” respectively). However, the subscales have been criticized for including items that fall outside of the construct of forgiveness (Tangney et al., 2005; Thompson & Snyder, 2003), such as revenge, retaliation, and reconciliation; concepts that are not precisely or necessarily related to forgiveness. However, in other ways, the fact that self forgiveness was rated lower using the Mauger instrument adds meaningfully to the evidence base because this finding has also been reported using two other forgiveness instruments (Charzy ska, 2015; Webb & Brewer, 2010; Webb et al., 2006). Future research should replicate the longitudinal and lagged relationships depicted in the current study employing measurement tools with higher construct validity.

Given the controversy surrounding the validity of the Mauger instrument, how would we interpret our results if the Mauger scale was interpreted as one that assesses revenge and retaliation, in addition to aspects of forgiveness? While the interpretation of our results would be the mirror image of what we have reported it is useful to frame the results from this alternative vantage point. Through this lens we have found that revenge, retaliation, and blame toward one’s self and toward others decrease significantly over time in recovery. Revenge, retaliation, and blame toward the self are felt more strongly but decrease more rapidly than revenge, retaliation, and blame of others. And finally, the less likely one is to harbor feelings of revenge, retaliation, and blame toward others, the less likely one is to

harbor these negative feelings toward one's self and vice versa, but releasing these feelings toward others more strongly predicts releasing these feelings toward one's self than the reverse sequence.

Conclusions

Findings indicated that a) participants were more forgiving of others than of themselves, b) both types of forgiveness increased over 30 months, a time period when drinking significantly decreased, c) forgiveness of self increased more rapidly than forgiveness of others, and d) while increases in each type of forgiveness predicted increases in the other type, the effect of forgiveness of others on forgiveness of self was twice as strong as the reverse effect. The finding that forgiving others precedes forgiving oneself is a novel contribution. At this point it is not clear if skill development in forgiving others is a necessary precursor to forgiving oneself only for those managing alcohol dependence, or for the population as a whole. For clinicians working with individuals in recovery from addiction, it might be useful to assess disposition to forgive self and others, and work toward improving capacity in both domains, as they inform one another, rather than focusing on either one exclusively. For individuals with a pattern of relapse related to self-recrimination, guilt, and shame, efforts to cultivate forgiveness of others may facilitate ability to forgive oneself.

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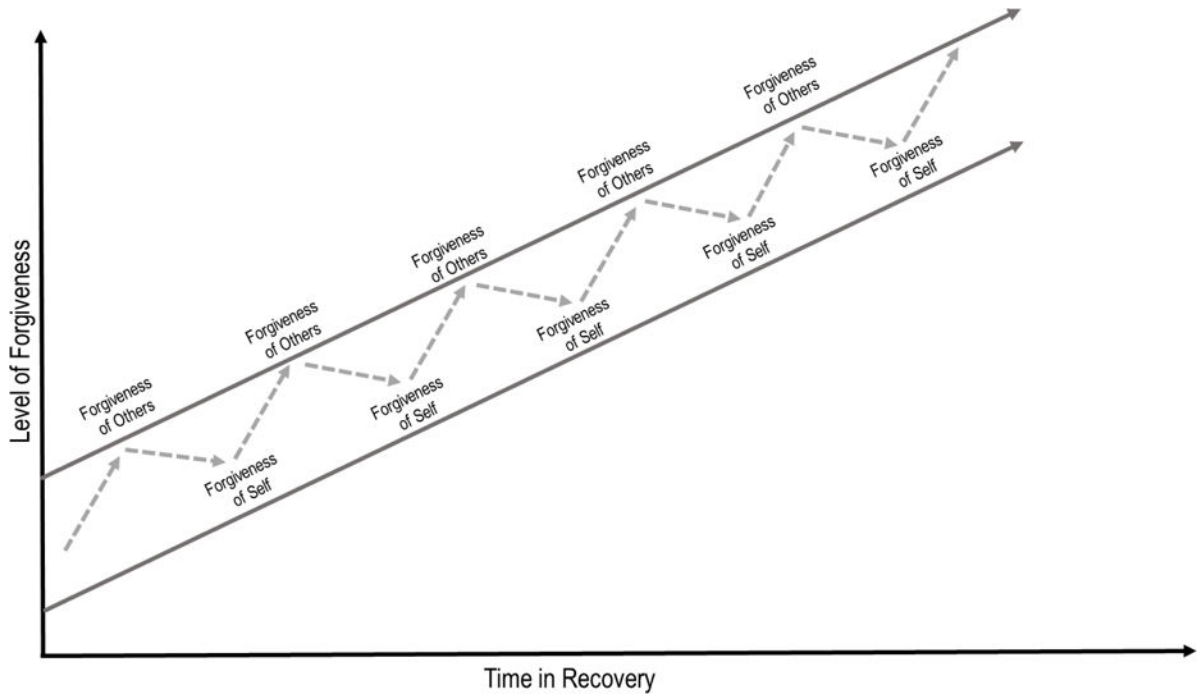


Figure 1. Conceptual framework for the current study. (1) Both forgiveness of self and forgiveness of others have been observed to increase significantly over time during the course of addiction recovery (Krentzman, 2016). (2) Forgiving one’s self has been rated lower than other dimensions of forgiveness (Charzy ska, 2015; Webb et al., 2006; Webb & Brewer, 2010). (3) Forgiveness of self and forgiveness of others share conceptual similarities, therefore, the ability to forgive another should be related to the ability to forgive one’s self at a future time point and vice versa. (4) We offer no a priori hypothesis about whether one dimension of forgiveness might more strongly predict the other, but underscore the importance of investigating this question.

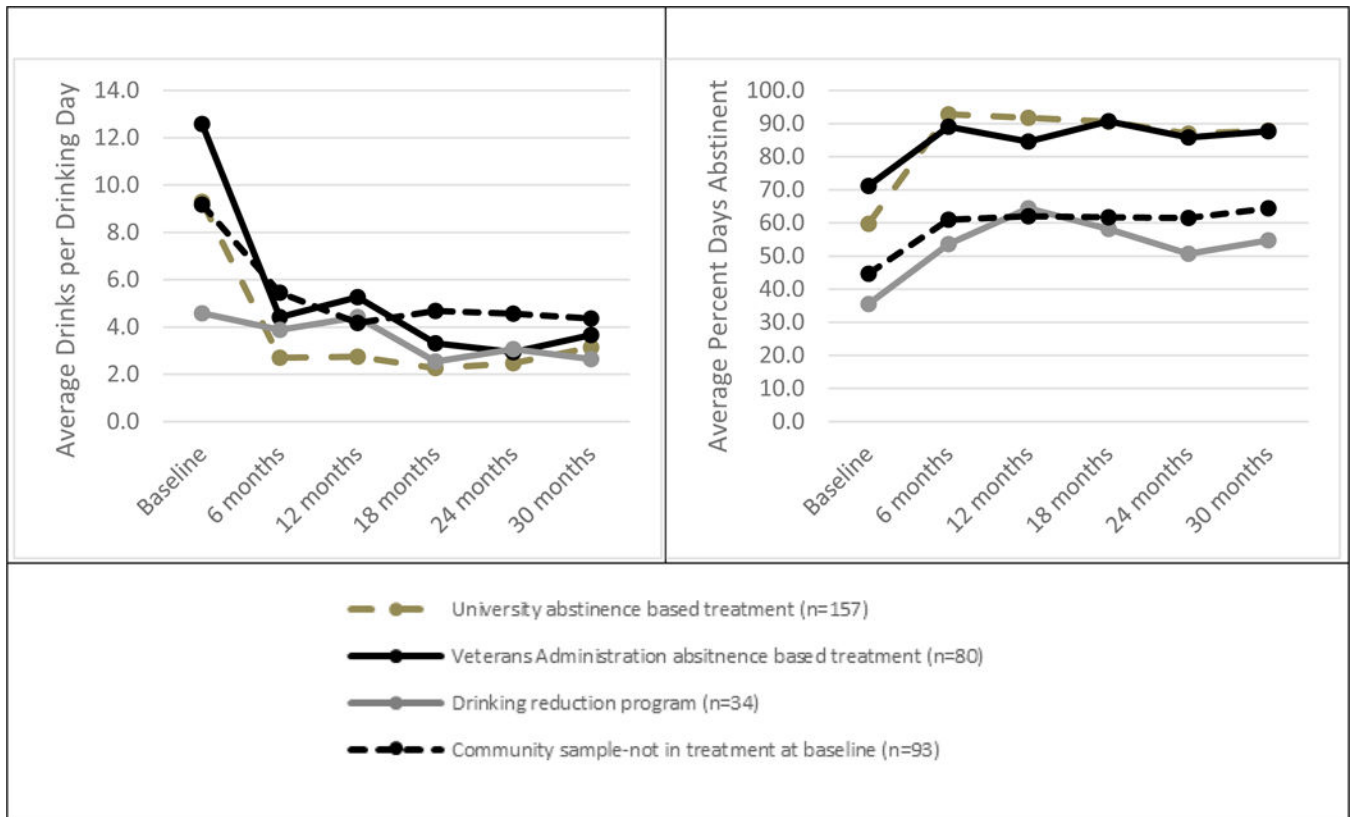


Figure 2. Drinks per drinking day (left) and percent days abstinent (right) averaged over the previous 90 days at 6 month increments. Statistically significant decreases in drinking were observed for all sites in both measures of drinking.

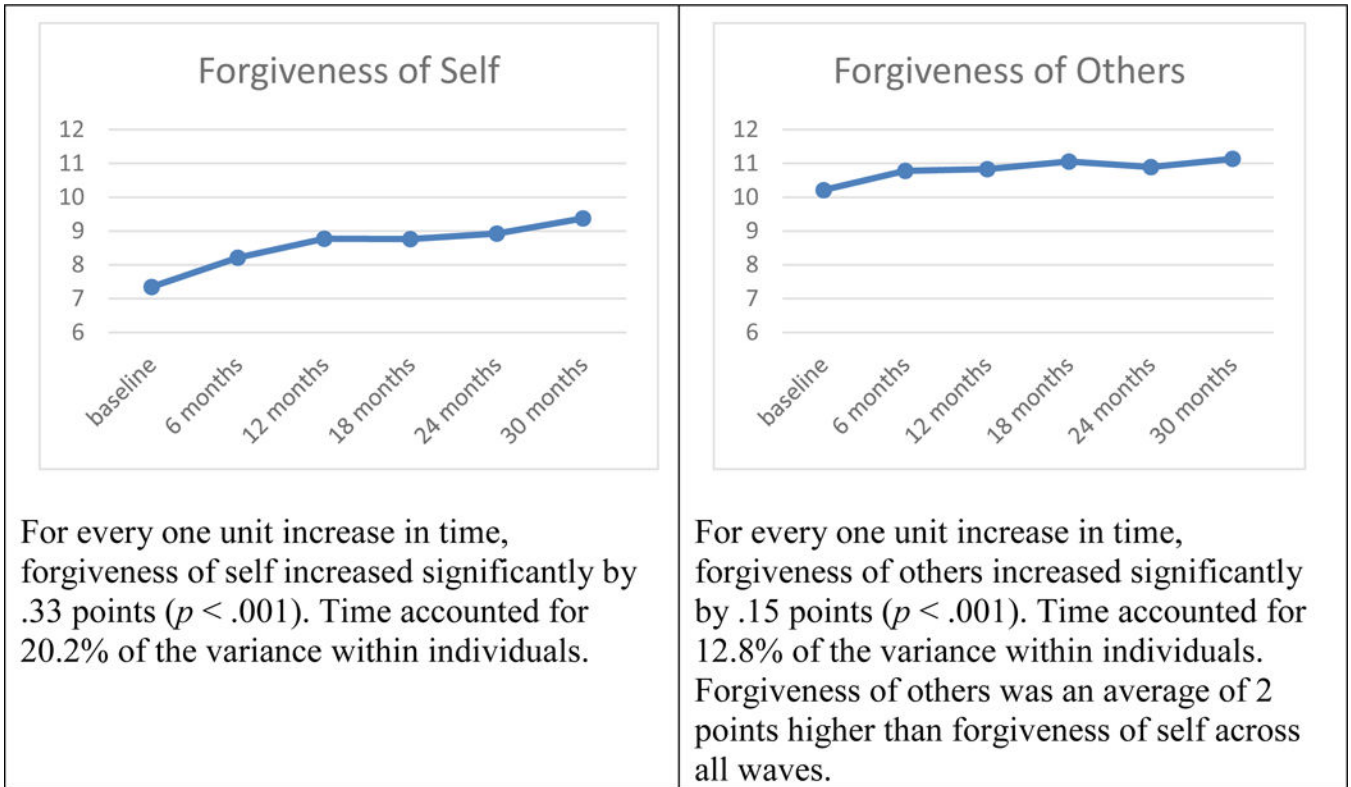


Figure 3. Change over time in forgiveness of self and forgiveness of others.

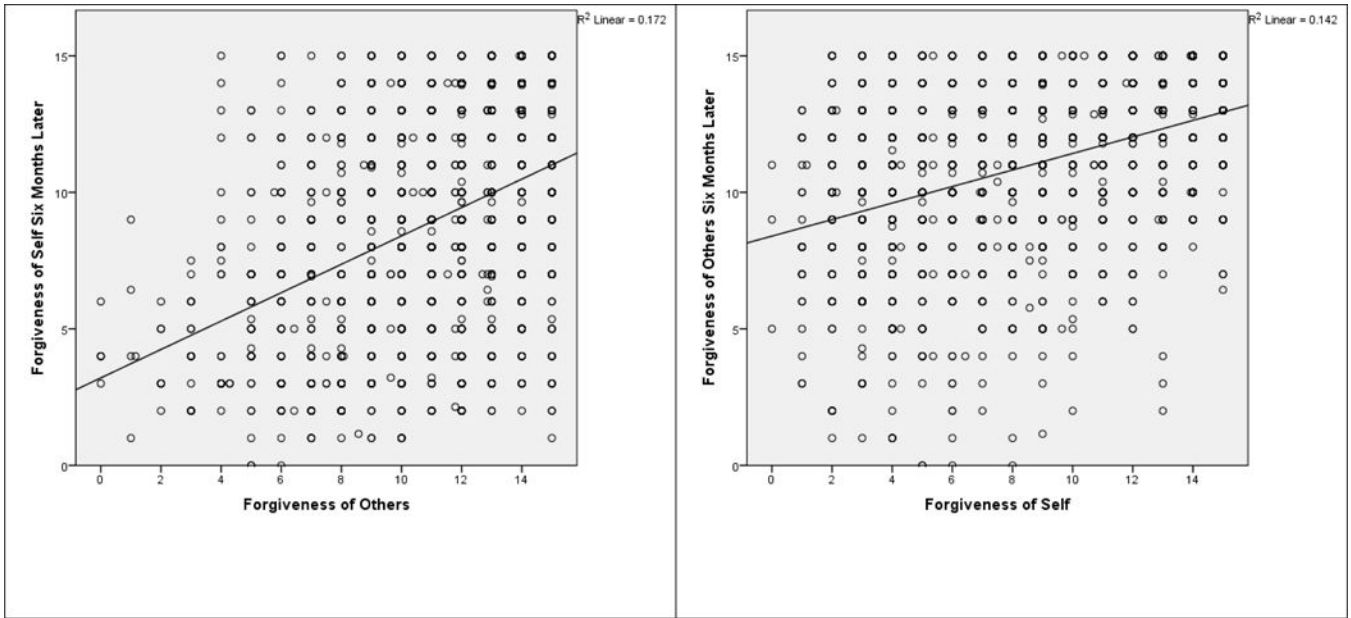


Figure 4.
a. The association between forgiveness of others and forgiveness of self six months later.
b. The association between forgiveness of self and forgiveness of others six months later.
Data points represent coordinates for all pairings (baseline-6 months, 6-12 months, 12-18 months, 18-24 months, and 24-30 months) with the earlier wave represented on the x axis and the wave 6 months later on the y axis. The steeper trend line in Figure 2a depicts the stronger association between Forgiveness of Others and Forgiveness of Self six months later.

Forgiveness of Self and Forgiveness of Others as They Predict Each Other Six Months Later, Controlling for Socio-economic and Clinical Covariates

Table 1

Predicting Forgiveness of Others				Predicting Forgiveness of Self					
Predictor	Beta Coefficient	p value	Confidence Interval		Predictor	Beta Coefficient	p value	Confidence Interval	
			lower	upper				lower	Upper
Intercept	9.40	.000	8.67	10.14	Intercept	6.44	.000	5.42	7.45
Baseline age in years, mean centered	0.05	.000	0.02	0.07	Baseline age in years, mean centered	0.01	.336	-0.02	0.04
Gender (female=1, male=0)	0.75	.019	0.12	1.38	Gender (female=1, male=0)	0.40	.307	-0.37	1.18
Baseline years of education, mean centered	0.06	.389	-0.07	0.18	Baseline years of education, mean centered	0.26	.001	0.10	0.42
Baseline employment status (employed=1, not employed=0)	0.55	.087	-0.08	1.19	Baseline employment status (employed=1, not employed=0)	0.52	.187	-0.26	1.31
Baseline average drinks per drinking day ^a	0.01	.513	-0.03	0.05	Baseline average drinks per drinking day ^a	-0.05	.049	-0.10	0.00
Forgiveness of self ^b	0.10	.000	0.06	0.13	Forgiveness of others ^b	0.21	.000	0.15	0.27

Note. **Bold** highlights $p < .05$. Table depicts the results of 2 multi-level analyses one predicting forgiveness of others from 6–30 months (displayed on the left) the other predicting forgiveness of self from 6–30 months (displayed on the right).

^aOver the previous 90 days.

^bAssessed from baseline to 24 months to create a 6-month time lag in relationship to the time-varying forgiveness outcomes, assessed between 6–30 months.