

Forgiveness, Depression, and Suicidal Behavior Among a Diverse Sample of College Students

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Depression and suicide are significant public health concerns for college-age young adults. Meaning-based characteristics, such as forgiveness, a voluntary coping process involving offering, feeling, or seeking a change from negative to positive cognitions, behaviors, and affect toward a transgressor, may buffer such poor mental health outcomes. Utilizing mediation analyses, we examined cross-sectional associations between forgiveness, depression, and suicidal behavior in a diverse student sample reporting mild to severe depressive symptoms. The effect of self-forgiveness on suicidal behavior was fully mediated by depression; self-forgiveness was associated with depression and, in turn, with suicidal behavior. Forgiveness of others was directly associated with suicidal behavior. Prospective research is needed, yet self and other-forgiveness may be appropriate targets for promotion in suicide prevention efforts. © 2011 Wiley Periodicals, Inc. *J Clin Psychol* 67:1–11, 2011.

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Depression and suicide are significant public health problems in the United States, and young adults attending college may be at particular risk (American College Health Association [ACHA], 2009). Almost half of all college students meet criteria for at least one Diagnostic and Statistical Manual, Fourth Edition, Text Revision (DSM-IV-TR) psychiatric disorder, with about 11% satisfying criteria for a mood disorder (Blanco et al., 2008). In a national study, 17% of students screened positive for depressive symptoms (Eisenberg, Gollust, Golberstein, & Hefner, 2007), including 9% who met criteria for major depression.

Often associated with symptoms of depression, suicidal behavior is a major source of concern on college campuses (Wilcox et al., 2010). Although some studies indicate a lower rate of suicidal behavior for college students compared with same-age peers (Drum, Brownson, Denmark, & Smith, 2009), suicide is the second leading cause of death for young adults and about 1,100 college students die by suicide each year (Centers for Disease Control and Prevention, 2010). Furthermore, about 6.4% to 9.5% of college students seriously consider suicide, and 1.3% to 1.5% made a suicide attempt in the last school year (ACHA, 2009). History of lifetime suicide attempts is also high in college students, around 10%, and the rate of suicide ideation is higher still, ranging between 12% and 85% (Wilcox et al., 2010).

Development of effective suicide prevention strategies hinges on identifying modifiable risk and protective factors (Knox, Conwell, & Caine, 2004). Risk factors for suicide in college students include negative life events, substance abuse, interpersonal problems, hopelessness and poor problem-solving ability and symptoms of depression and borderline personality disorder (Heisel, Flett, & Hewitt, 2003; Jeglic, Pepper, Vanderhoff, & Ryabchenko, 2007). Elements of the college “experience” itself also have the potential to become risk factors, including role changes, academic demands, career indecision, financial pressures, and loneliness and separation from support networks (Hirsch & Ellis, 1996; Richardson, Bergen, Martin, Roeger, & Allison, 2005). In fact, many successful intervention efforts have focused on the amelioration of such difficulties (Townsend et al., 2001).

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Similarly, the absence of protective characteristics may contribute to suicidal behavior (Hirsch, Duberstein, Chapman, & Lyness, 2007). Indeed, a lack of positive mood may be a more robust predictor of poor outcomes than the presence of low mood (Hirsch, Visser, Chang, & Jeglic, 2011). When present, broad meaning-based characteristics such as goal-setting, religiousness, and spirituality have been consistently associated with less suicide (Park, 2007; Toussaint, Webb, & Keltner, 2011), yet few research or prevention efforts have focused on specific aspects of such variables that might buffer against suicidal behavior (Hirsch, Conner, & Duberstein, 2007).

Religiousness and spirituality has long been important to most Americans and is generally associated with better health outcomes (Gallup Poll, 2009; Koenig, McCullough, & Larson, 2001). Distinctly conceptualized, religiousness is a reflection of a social entity entailing particular beliefs, customs, and boundaries, whereas spirituality is concerned with transcendent aspects of personal existence (Miller & Thoresen, 2003). Emphasis is shared, however, on meaningfulness in life and a motivational quality that promotes goal-oriented behavioral activation (Park, 2007).

One meaning-based construct, forgiveness, is often considered a specific aspect of religiousness and spirituality, and rightly so as it is common to all mainstream world religions (Webb, Toussaint, & Conway-Williams, 2011). Yet, it is not constrained by these parameters as it is also common to psychology and philosophy (McCullough & Worthington, 1994) and is practiced by both religious and nonreligious individuals (Worthington, Witvliet, Pietrini, & Miller, 2007). A motivationally and volitionally unique means of coping that does not require restitution, retribution, or reconciliation, and which may be dispositional and/or situational, forgiveness is a voluntary process undertaken in response to an offense, consisting of offering, feeling, or seeking a change from negative to positive *cognitions, behaviors, and affect* in the context of self, others, and God (Toussaint & Webb, 2005; Worthington, 1998). As such, the process of (un)forgiveness may have important consequences for myriad health-related outcomes (Webb, Toussaint, & Conway-Williams, 2011).

The constructive association between forgiveness and health may operate through direct and indirect mechanisms (Worthington, Berry, & Parrott, 2001). The direct effect may function, in part, through an inextricable association with the cognitive process of rumination and resultant negative emotions, such as anger or resentment (Levens, Muhtadie, & Gotlib, 2009). An indirect effect may operate through mediating associations with *distinct* variables such as health behavior, interpersonal functioning, social support, and mental health (Webb, Robinson, & Brower, 2011; Worthington, Berry, & Parrott, 2001).

Although forgiveness is distally related to suicidal behavior, that is, with correlates such as anger, depression, and hope (Webb, Toussaint, & Conway-Williams, 2011), we are unaware of any published work examining the proximal association. However, in a separate study from which the current data are a subsample, we observed forgiveness of self to be a moderator of the association between anger expression and suicidal behavior (Hirsch, Webb, & Jeglic, 2011).

Suicidal behavior is often considered a byproduct of psychiatric dysfunction, particularly depression (Wilcox et al., 2010); however, suicidal individuals often report motives of interpersonal distress, shame, anger, revenge, and “escape from pain” or otherwise unbearable circumstances (Baumeister, 1990; Hendin, 1992). Forgiveness may function indirectly through such motives. The ability to forgive others for transgressions or one’s self for mistakes, or to feel forgiven by God, may help to assuage the feeling of “psychache” that often precipitates a suicidal crisis (Shneidman, 1993). Indeed, forgiveness may influence suicidal behavior through its association with depression. Related evidence suggests that forgiveness may also exert a direct effect on suicidal behavior. An examination of suicide notes left by those who have died by suicide reveals that they often ask others or God for forgiveness for behaviors they have engaged in, as well as for the suicidal act (Ho, Yip, Chiu, & Halliday, 1998). Suicide has also been characterized as an “act of atonement” in some cases, or a form of repentance, whereby the suicidal person may believe that by ending their life they have counteracted some infraction and thus attained forgiveness of and/or for the self (Hendin, 1991).

With little rigorous research having been conducted, the link between forgiveness and suicidal behavior is little more than anecdotal and may vary based on the dimensions of forgiveness under consideration. Previous research supports intuitive associations between forgiveness and depression (Toussaint & Webb, 2005) and between depression and suicidal behavior (Furr, Westefeld, McConnell, & Jenkins, 2001), suggesting that depression may operate as a mediator of the relationship between forgiveness and suicidal behavior. To our knowledge, these direct and indirect associations have not been scientifically tested. Therefore, consistent with theory (Worthington et al., 2001) and previous research (Webb, Robinson, & Brower, 2011) regarding the relationship between forgiveness and health, we hypothesized that (a) direct relationships would exist between forgiveness and depressive symptoms and between forgiveness and suicidal behavior, and (b) depressive symptoms would operate as a mediator (partial, full, or indirect only) of the association between forgiveness and suicidal behavior.

Methods

Participants

One hundred fifty-eight individuals (123 females; 78%) participated in this international review board-approved, cross-sectional study drawn from an otherwise healthy sample participating in a larger study on college student suicidal behavior (Chang, Sanna, Hirsch, & Jeglic, 2010; Hirsch et al., 2011). Inclusion criterion was a score of ≥ 13 on the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). Participants had a mean age of 19.58 (standard deviation [*SD*] = 3.16), and were ethnically diverse: 73 Hispanic (46%), 36 Black (23%), 27 White (17%), 7 Asian (4%), 3 American Indian/Alaskan Native (2%), and 10 students from other ethnic groups (6%).

Measures

To classify our sample and assess depressive symptoms therein, we used the BDI-II (Beck et al., 1996), a 21-item self-report measure of the presence and severity of cognitive, affective, somatic, and motivational symptoms of depression. The BDI-II is scored on a 4-point Likert scale ranging from 0 (*absence*) to 3 (*severe presence*), which is summed to derive a total score, with greater scores indicating higher levels of symptoms. In an analysis of optimal sensitivity and specificity (Dozois, Dobson, & Ahnberg, 1998), the following cutoffs were recommended for undergraduate students: nondepressed = 0–12, dysphoric = 13–19, and dysphoric or depressed = 20–63. In use with collegiate samples, scores on the BDI-II predict major depressive disorder and the measure exhibits adequate convergent validity, test-retest reliability, and internal consistency (Carmody, 2005). In the current sample, mean score = 20.31 (*SD* = 7.12) and internal consistency was adequate (Cronbach's $\alpha = .77$).

Distinct dimensions of dispositional forgiveness were assessed using the Brief Multi-dimensional Measure of Religiousness and Spirituality (BMMRS; Fetzer Institute, 2003). Three single-item measures of forgiveness were used: of self ("I have forgiven myself for things that I have done wrong"; mean [*M*] = 2.51, *SD* = .88), of others ("I have forgiven those who hurt me"; *M* = 2.56, *SD* = .93), and by God ("I know that God forgives me"; *M* = 3.15, *SD* = .99). Each item was answered on a 4-point Likert scale anchored by 1 (*never*) and 4 (*almost always*). As a broad measure of forgiveness, these items have exhibited adequate internal consistency ($\alpha = .68$), as well as good test-retest reliability ($ICC \geq .70$), and were significantly negatively related to depressive symptoms (Harris et al., 2008). There is a precedent for individual use of these items to assess distinct dimensions of forgiveness (Knight et al., 2007), and in such independent analyses, these items are associated with better overall physical and mental health status (SF-12), higher levels of reported health promotional behaviors, and lower levels of alcohol use and somatic symptoms (Webb & Brewer, 2010; Webb, Robinson, & Brower, 2011).

Given their common association with forgiveness, we also assessed two single-item measures of religiousness and spirituality as covariates (Fetzer Institute, 2003). Both items,

using the stem "To what extent do you consider yourself a" (1) "religious person" and (2) "spiritual person," were answered on a 4-point Likert scale anchored by 1 (*very ...*) and 4 (*not ... at all*). These items have exhibited good internal consistency ($\alpha = .75$) and excellent test-retest reliability (Harris et al., 2008).

Suicidal thoughts and behaviors were assessed with the Suicidal Behaviors Questionnaire-Revised (SBQ; Linehan & Nielsen, 1981; Osman et al., 2001). The SBQ total score ($M = 3.06$, $SD = 4.05$) comprises four items: lifetime suicide ideation and attempt, frequency of suicide ideation in the past year, communication of suicidal intent, and likelihood of future suicidal behavior. SBQ items are scored on a Likert scale, with higher scores indicating greater suicidal behavior. Cronbach's α (.81) for our sample was excellent.

Statistical Analyses

Pearson correlation coefficients (r) were calculated to examine zero-order associations among, and independence of, the variables in this study; common thresholds for multicollinearity were not reached (Tabachnick & Fidell, 2001). Each continuous independent (IV) and mediator variable (MV) was centered before multivariable analyses (Cohen, Cohen, West, & Aiken, 2003). Mediation analyses consistent with Preacher and Hayes (2008a) were conducted. As only one IV per model is allowed, three forgiveness-based models were constructed for the SBQ total score (DV); each model accounting for depressive symptoms (MV) and controlling for the two dimensions of forgiveness not employed as the IV (Preacher & Hayes, 2008a). Other covariates included age, gender, ethnicity, religiousness, and spirituality.

Preacher and Hayes' techniques allow for more accurate analysis of indirect effects associated with MVs (Hayes, 2009; Preacher & Hayes, 2008b), compared with Baron and Kenny's (1986) techniques, by allowing for indirect effects without requiring direct effects and use of non-normally distributed data, as bootstrap resampling is used. Potential associations among variables are described by a variety of terms (see Table 1). Importantly, the broad term *indirect effect* can be defined as the relationship between two variables (X and Y) based on another variable (Z), such that Z influences the nature of the relationship between X and Y . Basic mediation, one example of an indirect effect, is defined as X and Y are associated through Z , such that X is associated with Z , which, in turn, is associated with Y (Hayes, 2009). Mediation analyses can produce three mediation-based effects (Preacher & Hayes, 2008a; Preacher & Hayes, 2004): (a) *full mediation* where an initial association between X and Y subsequently *fully* operates through Z ; (b) *partial mediation* where an initial association between X and Y remains, yet *also* operates through Z ; and (c) *indirect only* where X and Y are associated, but *only* through Z ; an initial X to Y association is not observed.

Results

Of our 158 participants, 66 (42%) scored greater than 20 on the BDI-II and were classified as reporting dysphoric or severe depressive symptoms; the remainder scored at least 13 on the BDI, indicating mild depressive symptoms. Seventy-eight participants (49%) reported lifetime suicide ideation or attempts and 59 (37%) reported suicide ideation in the past year. Fifty-three students (34%) acknowledged that they had previously communicated suicide intent to another person and 29 (18%) reported some likelihood of making a future suicide attempt.

In bivariate correlations, dimensions of forgiveness were significantly associated with each other ($ps \leq .01$): of self with of others ($r = .35$), of self with by God ($r = .41$), and of others with by God ($r = .23$). Forgiveness of self ($r = -.36$, $p \leq .01$), but neither of others ($r = -.05$) nor by God ($r = -.07$), was significantly associated with depressive symptoms. Forgiveness of self ($r = -.26$), of others ($r = -.19$), and by God ($r = -.18$) were each significantly related to suicidal behavior ($ps \leq .05$), as were depressive symptoms ($r = .49$, $p \leq .01$).

In mediation analyses, depressive symptoms, as well as forgiveness of self and of others, were predictive of suicidal behavior (see Table 1); forgiveness by God was not. There was a significant total effect (c) for forgiveness of self, which was fully mediated (c') by the significant

Table 1
Depressive Symptoms as a Mediator of the Association Between Forgiveness and Suicidal Behavior

	Forgiveness of self			Forgiveness of others			Forgiven by god			
	<i>a</i>	<i>b</i>	<i>c</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>a</i>	<i>b</i>	<i>c</i>	
	-3.25****	.30****	-1.21**	.33	.30****	-.68†	.68	.30****	-.10	<i>c'</i>
	Point estimate	Point estimate	BCa 95% CI	Point estimate	Point estimate	BCa 95% CI	Point estimate	Point estimate	BCa 95% CI	<i>c'</i>
<i>ab</i>	-.99*		-1.54	.10		-.24	.46	.21	-.21	.73
							Suicidal behavior total score ^{a,b} Full model $R^2 = .34^{****}$			

Note: Sample size = 151. *a*, *b*, *c*, and *c'* represent unstandardized regression coefficients; *a* = direct association between forgiveness and depressive symptoms; *b* = direct association between depressive symptoms and suicidal behavior; *c* = total effect between forgiveness and suicidal behavior (not accounting for depressive symptoms); *c'* = direct effect between forgiveness and suicidal behavior (accounting for depressive symptoms); *ab* = indirect effect between forgiveness and suicidal behavior operating through depressive symptoms. Full mediation = *c* is reduced by *ab* to a nonsignificant *c'*; partial mediation = *c* is reduced by *ab*, but *c'* remains significant; indirect only = *ab*, but no *c* and no *c'* initially. BCa 95% CI = bias corrected and accelerated 95% confidence interval; 5,000 bootstrap samples.

^aAge, sex, ethnicity, religiosity, and spirituality were covaried.

^bFull mediation with forgiveness of self; direct effect only with forgiveness of others.

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$.

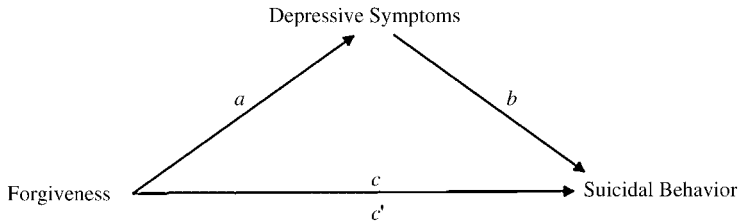


Figure 1. Illustration of an indirect effect model. Note: A *total effect* (c) occurs if there is a relationship between the IV and DV without accounting for the MV. That is, forgiveness affects suicidal behavior without accounting for depressive symptoms. A *direct effect* (c') occurs if there is a relationship between IV and DV after accounting for the MV. That is, forgiveness affects suicidal behavior after accounting for the indirect effect of depressive symptoms. An *indirect effect* (ab) occurs if the MV plays a role in the relationship between the IV and DV. That is, forgiveness affects suicidal behavior through depressive symptoms. Additionally, mediation analysis, if significant, may further describe the indirect effect as one of: *full mediation*; c is reduced by ab to a non-significant c' ; *partial mediation*; c is reduced by ab , but c' remains significant; and, *indirect effect only*; ab , but no c and no c' in the first place. Adapted from Preacher and Hayes (Preacher & Hayes, 2008a).

indirect effect of depressive symptoms (ab ; confidence interval did not cross zero) (see Fig. 1). Although higher levels of forgiveness of self are associated with lower levels of suicidal behavior, this effect is accounted for by the presence of depressive symptoms, such that greater self-forgiveness is associated with fewer depressive symptoms, which, in turn, are associated with less suicidal behavior. Forgiveness of others exerted a marginally significant total effect on our outcome ($p < .10$), in the predicted direction, and this association was strengthened with the inclusion of depressive symptoms, suggesting a suppressor effect. In other words, a weak relationship between forgiveness of others and suicidal behavior is strengthened when the effect of depression is accounted for.

Discussion

We assessed the mediating effect of depression on the association between forgiveness and suicidal behavior in a sample of college students reporting mild to severe depressive symptoms. We found that greater forgiveness of others was directly related to lower levels of suicidal behavior, *exclusive* of the effects of depressive symptoms. Suicidal behavior, both anecdotally and empirically, often results from the experience of a stressful life event or an interpersonal disruption (Van Orden, Merrill, & Joiner, 2005); that is, a suicidal crisis may often be the consequence of triggers requiring the forgiveness of another person. Therapeutically, forgiveness of others may allow someone to cognitively and emotionally progress beyond distressing experiences or persons from his or her past and can, when appropriate, facilitate the reconciliation of relationships (Enright, Freedman, & Rique, 1998; Fitzgibbons, 1986).

The indirect effects of forgiveness, through its association with mental health, are only beginning to be examined (Webb, Robinson, & Brower, 2011), and our study is the first to extend this investigation to suicidal behavior. We found that the relationship between forgiveness of self and suicidal behavior was mediated by depressive symptoms, such that greater forgiveness was associated with less depression and, consequently, less suicidal behavior. This is a theoretically informative finding. Cognitive theory as well as the DSM-IV-TR diagnostic system suggest that negative and often punitive thoughts about the self, such as worthlessness and guilt, are a key characteristic of depression (American Psychiatric Association, 2000; Beck, Brown, & Steer, 1989); such self-deprecation may be the result of personal actions that require self-forgiveness (Fisher & Exline, 2010). Indeed, it is important to make this distinction—Is forgiveness, particularly self-forgiveness, simply a lack of depressive symptoms such as guilt? It has been suggested that guilt is a necessary but not sufficient component of self-forgiveness, indicating that there are other contributors to the ability to self-forgive (Tangney, Boone, & Dearing, 2005). Our findings are an initial step toward better understanding this process, and they suggest that the indirect effect of forgiveness via its

association with depressive symptoms may be an appropriate target for therapeutic promotion in suicide prevention efforts.

Treatments designed to bolster levels of forgiveness have resulted in greater self-esteem and hopefulness, positive emotions toward others, less depression and anxiety, and improved resistance against drug use (Al-Mabuk, Enright, & Cardis, 1995; Hebl & Enright, 1993; Toussaint & Webb, 2005). Forgiveness is also associated with a reduced stress response and a greater sense of perceived control that is often lacking in hopeless and suicidal individuals (Clements, Sabourin, & Spiby, 2004; Witvliet, Ludwig, & Vander Laan, 2001). Such improvements in intrapersonal and interpersonal functioning, via forgiveness, may consequently affect risk for depression and suicidal behavior (Bertera, 2007; Overholser, 1995).

A variety of forgiveness-based interventions have been developed (Enright et al., 1998; Worthington, 2005) for use with individuals, couples, and groups and for specific forms of psychological dysfunction such as bereavement and alcohol abuse (Worthington, Scherer, & Cooke, 2006); however, none have been explicitly adapted for suicidal behaviors. Importantly, Worthington and others acknowledge that forgiveness of self tends to be somewhat less available than other forms of forgiveness and more difficult to engender on ones' own; thus, its promotion is explicitly encouraged therapeutically (Webb, Robinson, & Brower, 2011; Worthington, 2006). Applied to suicide prevention efforts, promotion of forgiveness of self and others could be delivered utilizing traditional psychotherapy strategies or, systematically, through public health prevention efforts such as psychoeducation and social marketing strategies (Fincham & Beach, 2002).

As with other protective factors, forgiveness is not a panacea, and the nature and severity of a transgression may determine the effectiveness of forgiveness as a preventive measure (Connor, Davidson, & Lee, 2003). Client characteristics, such as perspective taking and empathy, rumination, relational closeness, and apology, may also influence client ability to forgive (McCullough, 2000) and can be targeted in treatment. Overall, however, forgiveness of self and forgiveness of others appear to be associated with lower levels of suicidal behavior, including future likelihood of a suicide attempt, and should be explored further in both clinical and research endeavors, including with family members of suicidal individuals. For example, forgiveness interventions have been successfully used with parents of adolescent suicide victims, resulting in increased self-esteem and hope, and decreased anger, guilt, and depression (Al-Mabuk & Downs, 1996).

Limitations

Despite their novelty, our results must be understood in the context of limitations. Our self-report, cross-sectional methodology precludes assessment of causality, and bidirectionality is a possibility. For instance, depressed or suicidal individuals may be somewhat less forgiving of themselves than nondepressed or nonsuicidal individuals. Prospective and interviewer-administered research in clinical and community samples is needed to better understand the interrelationships between forgiveness, depression, and suicidal behavior. Although our sample was ethnically diverse, future comparative research is needed to determine the effect of culture, race, and ethnicity on coping characteristics, such as forgiveness, and their association with mental health outcomes. In this secondary analysis, use of single-item assessments of dispositional forgiveness is not ideal, and future studies should incorporate more comprehensive, as well as situational, assessments of such religious and spiritual elements. However, Worthington and colleagues (2001) suggest that dispositional forgiveness is more likely to be associated with health, and previous research, including factor analyses, focused on single versus multiple-item analyses of religious and spiritual beliefs suggest that these approaches yield similarly sensitive results (Dollinger & Malmquist, 2009; Gorsuch & McFarland, 1972).

Particular issues related to statistical interpretation may also be important to consider. A fully mediated relationship may suggest that variable *Z* (depressive symptoms), in fully accounting for the relationship between *X* (forgiveness) and *Y* (suicidal behavior), negates the effect of *X* on *Y*. However, such interpretation may be overly restrictive. If an initial *X* to *Y* effect is *not required* before *X* can be considered to affect *Y* through another variable

(i.e., indirect only effect; Hayes, 2009; Preacher & Hayes, 2008a,b; Preacher & Hayes, 2004), likewise, it seems more accurate to interpret full mediation as Z playing a necessary role in the relationship between X and Y . Last, a suppressor effect, in the context of forgiveness of others, may suggest a spurious relationship. Alternatively, subsequently accounting for the additional variance attributable to depressive symptoms may allow a more accurate representation of the relationship between forgiveness of others and suicidal behavior to be observed (Cohen et al., 2003; Tabachnick & Fidell, 2001). Indeed, addressing depressive symptoms through self-forgiveness may, further, allow the effect of forgiveness of others to occur; analysis is outside the scope of this article.

Conclusion

Our study is the first to assess the basic associations between forgiveness, depressive symptoms, and suicidal behavior. Our results, in general, are not unexpected and contribute to the consistent body of literature supporting the beneficial effects of meaning-based characteristics on health functioning (American Psychologist, 2003; Toussaint et al., 2011). Meaning-based, cognitive-emotional characteristics, such as forgiveness, may be associated with lower levels of psychopathology, and although prospective research is needed, promoting forgiveness of self and others could be an important way to reduce the interpersonal distress and depressogenic “psychache” that often precipitate a suicidal crisis (Shneidman, 1993; Van Orden et al., 2005).

References

- American College Health Association. (2009). National College Health Assessment II: Reference Group Executive Summary, Fall 2008. Baltimore, MD: Author.
- Al-Mabuk, R.H., & Downs, W.R. (1996). Forgiveness therapy with parents of adolescent suicide victims. *Journal of Family Psychotherapy*, 7(2), 21–39. DOI: 10.1300/J085V07N02_02. Retrieved from http://www.informaworld.com/10.1300/J085V07N02_02
- Al-Mabuk, R.H., Enright, R.D., & Cardis, P.A. (1995). Forgiveness education with parentally love-deprived late adolescents. *Journal of Moral Education*, 24(4), 427–444. DOI: 10.1080/0305724950240405. Retrieved from <http://www.informaworld.com/10.1080/0305724950240405>
- American Psychiatric Association. (2000). DSM-IV-TR. Arlington, VA: American Psychiatric Association.
- American Psychologist. (2003). Spirituality, religion and health. *American Psychologist*, 58, 24–74.
- Baron, R.M., & Kenny, D.A. (1986). The moderator mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. DOI: 10.1037/0022-3514.51.6.1173
- Baumeister, R.F. (1990). Suicide as escape from self. *Psychological Review*, 97(1), 90–113. Retrieved from <http://www.sciencedirect.com/science/article/B6X04-46WG49R-7/2/8c2df603241b19602a8a07b7a6fa97d3>
- Beck, A.T., Brown, G., & Steer, R.A. (1989). Prediction of eventual suicide in psychiatric inpatients by clinical ratings of hopelessness. *Journal of Consulting and Clinical Psychology*, 57, 309–310. DOI: 10.1037//0022-006X.57.2.309.
- Beck, A.T., Steer, R.A., & Brown, G. (1996). Manual for Beck Depression Inventory-II. San Antonio, TX: Psychological Corporation.
- Bertera, E. (2007). The role of positive and negative social exchanges between adolescents, their peers and family as predictors of suicide ideation. *Child and Adolescent Social Work Journal*, 24(6), 523–538. DOI: 10.1007/s10560-007-0104-y. Retrieved from <http://dx.doi.org/10.1007/s10560-007-0104-y>
- Blanco, C., Okuda, M., Wright, C., Hasin, D.S., Grant, B.F., Liu, S.M., & Olfson, M. (2008). Mental health of college students and their non-college-attending peers: Results from the National Epidemiologic Study on Alcohol and Related Conditions. *Archives of General Psychiatry*, 65(12), 1429–1437. Retrieved from <http://archpsyc.ama-assn.org/cgi/content/abstract/65/12/1429>
- Carmody, D.P. (2005). Psychometric characteristics of the Beck Depression Inventory-II with college students of diverse ethnicity. *International Journal of Psychiatry in Clinical Practice*, 9(1), 22–28. Retrieved from <http://dx.doi.org/10.1080/13651500510014800>
- Centers for Disease Control and Prevention. (2010). National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS). Retrieved from <http://www.cdc.gov/injury/wisqars/index.html>

- Chang, E.C., Sanna, L.J., Hirsch, J.K., & Jeglic, E.L. (2010). Loneliness and negative life events as predictors of hopelessness and suicidal behaviors in Hispanics: Evidence for a diathesis-stress model. *Journal of Clinical Psychology*, 66(12), 1242–1253. DOI: 10.1002/jclp.20721.
- Clements, C., Sabourin, C., & Spiby, L. (2004). Dysphoria and hopelessness following battering: The role of perceived control, coping, and self-esteem. *Journal of Family Violence*, 19(1), 25–36. DOI: 10.1023/B:JOFV.0000011580.63593.96. Retrieved from <http://dx.doi.org/10.1023/B:JOFV.0000011580.63593.96>
- Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Connor, K.M., Davidson, J.R.T., & Lee, L.C. (2003). Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of Traumatic Stress*, 16(5), 487–494. DOI: 10.1023/A:1025762512279. Retrieved from <http://dx.doi.org/10.1023/A:1025762512279>
- Dollinger, S.J., & Malmquist, D. (2009). Reliability and validity of single-item self-reports: With special relevance to college students' alcohol use, religiosity, study, and social life. *Journal of General Psychology*, 136, 231–241.
- Dozois, D.J.A., Dobson, K.S., & Ahnberg, J.L. (1998). A psychometric evaluation of the Beck Depression Inventory-II. *Psychological Assessment*, 10(2), 83–89. Retrieved from <http://www.sciencedirect.com/science/article/B6WYX-46NPSKK-17/2/300681edb26f55e274673921c1cda926>
- Drum, D.J., Brownson, C., Denmark, A.B., & Smith, S.E. (2009). New data on the nature of suicidal crises in college students: Shifting the paradigm. *Professional Psychology: Research and Practice*, 40(3), 213–222. DOI: 10.1037/a0014465. Retrieved from <http://www.sciencedirect.com/science/article/B6X00-4WTP8G9-1/2/95957ab835041631266bd614992c755c>
- Eisenberg, D., Gollust, S.E., Golberstein, E., & Hefner, J.L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *Journal of Orthopsychiatry*, 77(4), 534–542.
- Enright, R.D., Freedman, S., & Rique, J. (1998). The psychology of interpersonal forgiveness. In R.D. Enright & J. North (Eds.), *Exploring forgiveness* (pp. 46–62). Madison, WI: University of Wisconsin Press.
- Fetzer Institute. (2003). *Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging working group, with additional psychometric data*. Kalamazoo, MI: Fetzer Institute.
- Fincham, F.D., & Beach, S.R. (2002). Forgiveness: Toward a public health approach to intervention. In J.H. Harvey & A. Wenzel (Eds.), *A clinician's guide to maintaining and enhancing close relationships*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Fisher, M.L., & Exline, J.J. (2010). Moving toward self-forgiveness: Removing barriers related to shame, guilt, and regret. *Social and Personality Psychology Compass*, 4(8), 548–558. DOI: 10.1111/j.1751-9004.2010.00276.x. Retrieved from <http://dx.doi.org/10.1111/j.1751-9004.2010.00276.x>
- Fitzgibbons, R.P. (1986). The cognitive and emotive uses of forgiveness in the treatment of anger. *Psychotherapy: Theory, Research, Practice, Training*, 23(4), 629–633. DOI: 10.1037/h0085667.
- Furr, S.R., Westefeld, J.S., McConnell, G.N., & Jenkins, J.M. (2001). Suicide and depression among college students: A decade later. *Professional Psychology-Research and Practice*, 32(1), 97–100.
- Gallup Poll. (2009). Religion. Retrieved from <http://www.gallup.com/poll/1690/Religion.aspx#1>
- Gorsuch, R.L., & McFarland, S.G. (1972). Single vs multiple-item scales for measuring religious values. *Journal for the Scientific Study of Religion*, 11(1), 53–64. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rh&AN=ATLA0000734492&site=ehost-live>
- Harris, S., Sherritt, L., Holder, D., Kulig, J., Shrier, L., & Knight, J. (2008). Reliability and validity of the Brief Multidimensional Measure of Religiousness/Spirituality among adolescents. *Journal of Religion and Health*, 47(4), 438. Retrieved from <http://proquest.umi.com/pqdweb?did=1896841881&Fmt=7&clientId=17941&RQT=309&VName=PQD>
- Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 708–720. DOI: 10.1080/03637750903310360.
- Hebl, J., & Enright, R.D. (1993). Forgiveness as a psychotherapeutic goal with elderly females. *Psychotherapy: Theory, Research, Practice, Training*, 30(4), 658–667. DOI: 10.1037/0033-3204.30.4.658.
- Heisel, M.J., Flett, G.L., & Hewitt, P.L. (2003). Social hopelessness and college student suicide ideation. *Archives of Suicide Research*, 7, 221–235.
- Hendin, H. (1991). Psychodynamics of suicide, with particular reference to the young. *American Journal of Psychiatry*, 148(9), 1150–1158. Retrieved from <http://ajp.psychiatryonline.org/cgi/content/abstract/148/9/1150>

- Hendin, H. (1992). The psychodynamics of suicide. *International Review of Psychiatry*, 4(2), 157–167. Retrieved from <http://informahealthcare.com/doi/abs/10.3109/09540269209066313>
- Hirsch, J.K., Conner, K.R., & Duberstein, P.R. (2007). Optimism and suicide ideation in young adult college students. *Archives of Suicide Research*, 11, 177–185.
- Hirsch, J.K., Duberstein, P.R., Chapman, B., & Lyness, J.M. (2007). Positive and negative affect and suicide ideation in older adult primary care patients. *Psychology & Aging*, 22(2), 80–85. DOI: 10.1097/01.JGP.0000209219.06017.62
- Hirsch, J.K., & Ellis, J.B. (1996). Differences in life stress and reasons for living among college student suicide ideators and non-ideators. *College Student Journal*, 30, 377–386.
- Hirsch, J.K., Visser, P.L., Chang, E.C., & Jeglic, E.L. (2011). Race and ethnic differences in hope and hopelessness as moderators of the association between depressive symptoms and suicidal behavior. *Journal of American College Health*.
- Hirsch, J.K., Webb, J.R., & Jeglic, E.L. (In press). Forgiveness as a moderator of the association between anger and suicidal behavior. *Mental Health, Religion and Culture*.
- Ho, T.P., Yip, P.S.F., Chiu, C.W.F., & Halliday, P. (1998). Suicide notes: What do they tell us? *Acta Psychiatrica Scandinavica*, 98(6), 467–473.
- Jeglic, E.L., Pepper, C.M., Vanderhoff, H.A., & Ryabchenko, K.A. (2007). An analysis of suicidal ideation in a college sample. *Archives of Suicide Research*, 11(1), 41–56. DOI: 10.1080/13811110600897176. Retrieved from <http://www.informaworld.com/10.1080/13811110600897176>
- Knight, J.R., Sherritt, L., Harris, S.K., Holder, D.W., Kulig, J., Shrier, L.A., ... Chang, G. (2007). Alcohol use and religiousness/spirituality among adolescents. *Southern Medical Journal*, 100(4). Retrieved from http://journals.lww.com/smajournalonline/Fulltext/2007/04000/Alcohol_Use_and_Religiousness_Spirituality_Among.6.aspx
- Knox, K.L., Conwell, Y., & Caine, E.D. (2004). If suicide is a public health problem, what are we doing to prevent it?. *American Journal of Public Health*, 94(1), 37–45. Retrieved from <http://www.ajph.org/cgi/content/abstract/94/1/37>
- Koenig, H.G., McCullough, M.E., & Larson, D.B. (2001). *Handbook of religion and health*. Oxford: Oxford University Press.
- Levens, S.M., Muhtadie, L., & Gotlib, I.H. (2009). Rumination and impaired resource allocation in depression. *Journal of Abnormal Psychology*, 118(4), 757–766. DOI: 10.1037/a0017206. Retrieved from <http://www.sciencedirect.com/science/article/B6WY0-4Y0627J-7/2/dd9c5a73790415d06bfe103162fb3ee5>
- Linehan, M.M., & Nielsen, S.L. (1981). Assessment of suicide ideation and parasuicide: Hopelessness and social desirability. *Journal of Consulting & Clinical Psychology*, 49(5), 773–775.
- McCullough, M.E. (2000). Forgiveness as human strength: Theory, measurement and links to well-being. *Journal of Social & Clinical Psychology*, 19(1), 43–55.
- McCullough, M.E., & Worthington, E.L. (1994). Encouraging clients to forgive people who have hurt them: Review, critique, and research prospectus. *Journal of Psychology and Theology*, 22, 3–20.
- Miller, W.R., & Thoresen, C.E. (2003). Spirituality, religion, and health: An emerging research field. *American Psychologist*, 58(1), 24–35.
- Osman, A., Bagge, C., Gutierrez, P.M., Konick, L.C., Kopper, B.A., & Barrios, F.X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment*, 8(4), 443–454. Retrieved from <http://asm.sagepub.com/cgi/content/abstract/8/4/443>
- Overholser, J. (1995). Cognitive-behavioral treatment of depression, part II: Techniques for improving social functioning. *Journal of Contemporary Psychotherapy*, 25(3), 205–222. DOI: 10.1007/BF02306629. Retrieved from <http://dx.doi.org/10.1007/BF02306629>
- Park, C. (2007). Religiousness/spirituality and health: A meaning systems perspective. *Journal of Behavioral Medicine*, 30(4), 319–328. Retrieved from <http://dx.doi.org/10.1007/s10865-007-9111-x>
- Preacher, K.J., & Hayes, A.F. (2008a). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Preacher, K.J., & Hayes, A.F. (2008b). Contemporary approaches to assessing mediation in communication research. In A.F. Hayes, M.D. Slater, & L.B. Snyder (Eds.), *The Sage sourcebook of advanced data analysis methods for communication research* (pp. 13–54). Thousand Oaks, CA: Sage Publications.
- Preacher, K., & Hayes, A. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods*, 36(4), 717–731. Retrieved from <http://dx.doi.org/10.3758/BF03206553>. Retrieved from Springer New York.

- Richardson, A.S., Bergen, H.A., Martin, G., Roeger, L., & Allison, S. (2005). Perceived academic performance as an indicator of risk of attempted suicide in young adolescents. *Archives of Suicide Research*, 9, 163–176.
- Shneidman, E.S. (1993). Commentary: Suicide as psychache. *The Journal of Nervous and Mental Disease*, 181(3). Retrieved from http://journals.lww.com/jonmd/Fulltext/1993/03000/Commentary__Suicide_as_Psychache.1.aspx
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics*. Boston: Allyn and Bacon.
- Tangney, J.P., Boone, A.L., & Dearing, R. (2005). Forgiving the self: Conceptual issues and empirical findings. In E.L. Worthington (Ed.), *Handbook of forgiveness*. New York: Routledge.
- Toussaint, L., & Webb, J.R. (2005). Theoretical and empirical connections between forgiveness, mental health and well being. In E.L. Worthington (Ed.), *Handbook of forgiveness* (pp. 349–362). New York: Routledge.
- Toussaint, L.L., Webb, J.R., & Keltner, W. (2011). Religion, spirituality, and mental health. In J.D. Aten, K.A. O'Grady, & E.L. Worthington (Eds.), *The psychology of religion and spirituality for clinicians: Using research in your practice*. New York: Routledge.
- Townsend, E., Hawton, K., Altman, D.G., Arensman, E., Gunnell, D., Hazell, P., ... Van Heeringen, K. (2001). The efficacy of problem-solving treatments after deliberate self-harm: Meta-analysis of randomized controlled trials with respect to depression, hopelessness and improvement in problems. *Psychological Medicine*, 31(6), 979–988. DOI: 10.1017/S0033291701004238.
- Van Orden, K.A., Merrill, K.A., & Joiner, J. (2005). Interpersonal-psychological precursors to suicidal behavior: A theory of attempted and completed suicide. *Current Psychiatry Reviews*, 1, 187–196. DOI: 10.2174/1573400054065541. Retrieved from <http://www.ingentaconnect.com/content/ben/cpsr/2005/00000001/00000002/art00008>; <http://dx.doi.org/10.2174/1573400054065541>
- Webb, J.R., & Brewer, K. (2010). Forgiveness, health, and problematic drinking among college students in Southern Appalachia. *Journal of Health Psychology*, 15(8), 1257–1266. DOI: 10.1177/1359105310365177.
- Webb, J.R., Robinson, E.A.R., & Brower, K.J. (2011). Mental health, not social support, mediates the forgiveness alcohol-outcome relationship. *Psychology of Addictive Behaviors*.
- Webb, J.R., Toussaint, L., & Conway-Williams, E. (2011). Integrating psychology and religiousness/spirituality: Forgiveness as a nexus. Manuscript submitted for publication.
- Wilcox, H.C., Arria, A.M., Caldeira, K.M., Vincent, K.B., Pinchevsky, G.M., & O'Grady, K.E. (2010). Prevalence and predictors of persistent suicide ideation, plans, and attempts during college. *Journal of Affective Disorders*. DOI: 10.1016/j.jad.2010.04.017. Retrieved from <http://www.sciencedirect.com/science/article/B6T2X-502Y2VH-1/2/ec19ec0354a270f7d478d7c58a26b722>
- Witvliet, C.v.O., Ludwig, T.E., & Vander Laan, K.L. (2001). Granting forgiveness or harboring grudges: Implications for emotion, physiology, and health. *Psychological Science*, 12(2), 117–123. Retrieved from <http://pss.sagepub.com/content/12/2/117.abstract>
- Worthington, E.L. (1998). Empirical research in forgiveness: Looking backward, looking forward. In: E.L. Worthington (Ed.), *Dimensions of forgiveness: Psychological research and theological perspectives* (pp. 321–339). Philadelphia, PA: Templeton Foundation Press.
- Worthington, E.L. (2005). *Handbook of forgiveness*. New York, NY: Routledge.
- Worthington, E.L. (2006). *Forgiveness and reconciliation: Theory and application*. New York: Routledge.
- Worthington, E.L., Berry, J.W., & Parrott, L. (2001). Unforgiveness, forgiveness, religion and health. In T.G. Plante & A.C. Sherman (Eds.), *Faith and health: Psychological perspectives* (pp. 107–138). New York: The Guilford Press.
- Worthington, E.L., Scherer, M., & Cooke, K.L. (2006). Forgiveness in the treatment of persons with alcohol problems. *Alcoholism Treatment Quarterly*, 24(1), 125–145. Retrieved from http://www.informaworld.com/10.1300/J020v24n01_08
- Worthington, E.L., Witvliet, C., Pietrini, P., & Miller, A. (2007). Forgiveness, health, and well-being: A review of evidence for emotional versus decisional forgiveness, dispositional forgivingness, and reduced unforgiveness. *Journal of Behavioral Medicine*, 30(4), 291–302. DOI: 10.1007/s10865-007-9105-8. Retrieved from <http://dx.doi.org/10.1007/s10865-007-9105-8>