

Running head: HOPE, SEXUAL ASSAULT, SUICIDAL RISK

Hope Under Assault: Understanding the Impact of Sexual Assault on the
Relation Between Hope and Suicidal Risk

Tina Yu

Faculty Advisor: Edward C. Chang, Ph.D.

Abstract

The present study sought to examine for how hope and sexual assault are involved in suicidal risk in a sample of 325 college students. Specifically, we were interested to examine whether sexual assault may play an additive as well as interactive role in the prediction of suicidal risk (viz., suicidal behaviors & reasons for living) above and beyond hope. Results from regression analyses indicated that hope and sexual assault were important and unique predictors of suicidal risk in students. Moreover, we found support for a Hope \times Sexual Assault interaction in predicting both suicidal behaviors and reasons for living. Some important implications of the present findings are discussed.

Keywords: hope, sexual assault, suicidal risk, college students

Hope Under Assault: Understanding the Impact of Sexual Assault on the Relation Between Hope and Suicidal Risk

Hope has long played a fundamental role in human flourishing and well-being (Snyder, 1994, 2000, 2002). According to Snyder et al. (1991), hope represents a central cognitive process defined by the determination to reach goals and an ability to make plans to meet those goals that plays a central role in adjustment. Consistent with Snyder's (1994, 2002) contention that hope represents a positive psychological variable involved in adult adjustment, findings from studies have indicated that greater hope is associated with greater life satisfaction (e.g., Chang, 2003; O'Sullivan, 2011), greater positive affect (e.g., Chang & Banks, 2007; Ciarrochi, Heaven, & Davies, 2007), and greater self-esteem (e.g., Carvajal, Clair, Nash, & Evans, 1998; Vacek, Coyle, & Vera, 2010). Alternatively, findings from studies looking at hope and maladjustment have indicated that lower hope is associated with greater depressive symptoms (e.g., Chang, Yu, & Hirsch, 2013; Geiger & Kwon, 2010; Visser, Loess, Jeglic, & Hirsch, 2013), anxiety (e.g., Arnau, Rosen, Finch, Rhudy, & Fortunato, 2007; Snyder et al., 1991), negative affect (e.g., Chang & Banks, 2007; Snyder, LaPointe, Crowson, & Early, 1998), and stress (e.g., Gustafsson, Skoog, Podlog, Lundqvist, & Wagnsson, 2013; O'Sullivan, 2011).

As a number of researchers and practitioners have argued, suicide represents a powerful example of what may unfold when one's hope to overcome unbearable experiences of personal pain is lost (Grewal & Porter, 2007; Hanna, 1991; Rudd & Brown, 2011; Snyder, 1994; Wingate & Davidson, 2011). Indeed, among the links found between hope and adjustment in adults, one of the most compelling associations to emerge has been the finding of a negative association between hope and suicidal risk (Davidson, Wingate, Sligh, & Rasmussen, 2010; O'Keefe & Wingate, 2013; c.f., Davidson & Wingate, 2013; Davidson, Wingate, Rasmussen, & Sligh,

2009). For example, Range and Penton (1994) reported that lower hope in adults was associated with greater suicidal ideation. Similarly, Chang, Yu, Kahle, Jeglic, and Hirsch (2013) found lower hope to adults to be associated with greater suicidal behaviors, including suicidal intent and attempts. Conversely, Dogra, Basu, and Das (2011) found that lower hope in adults was associated with fewer reasons for living (i.e., greater suicidal risk). Thus, there are a number of reasons to consider the role of hope in understanding suicidal risk in adults.

Importantly, according to Snyder's (1994, 2002) hope theory, the influence of hope on adjustment may sometimes be impacted by adverse life events (e.g., failure, abuse, neglect, & mistreatment) that tend to limit or block one's ability to engage in goal-oriented thinking. Indeed, Visser et al. (2013) found that not only did hope and negative life events uniquely predict depressive symptoms in a sample of adults, but that the inclusion of the Hope \times Negative Life Events interaction term also predicted depressive symptoms, independent of the main effects of hope and negative life events. Specifically, these researchers found that the highest level of depressive symptoms was indicated among low hope students who experienced the highest level of negative life events. In contrast, the lowest level of depressive symptoms was indicated among high hope students who experienced the lowest level of negative life events. Thus, negative life events appears to add to, as well as interact with, hope in predicting adjustment in adults. However, no study has yet examined the role of hope and negative life events in predicting suicidal risk in adults.

One problem in studying negative life events, however, is that they are typically assessed using measures that capture a very broad range of potentially adverse events (e.g., failing an exam, death of a close family member/friend, divorce, being fired from a job, & detention in jail; Sarason, Johnson, & Siegel, 1978). Accordingly, it is not clear from general studies examining

the role of negative life events if findings linking such events with adjustment reflect the influence of some or of all the adverse life events assessed. With this concern in mind, there are at least two compelling reasons to specifically focus on one particular type of negative life event, namely, sexual assault. First, and foremost, sexual assault represents a major problem in society (Devries et al., 2011), and it remains a serious concern in college student populations (Gidycz, Orchowski, King, & Rich, 2008; Humphrey & White, 2000; Loh, Gidycz, Lobo & Luthra, 2005; Palmer, McMahon, Rounsaville, & Ball, 2010). For example, according to Krebs, Lindquist, Warner, Fisher, and Martin (2011), 19% of undergraduate women reported experiencing some form of sexual assault since entering college. Second, and relatedly, findings from studies have pointed to a reliable positive association between sexual assault and suicidal risk in student populations (Tomasula, Anderson, Littleton, & Riley-Tillman, 2012). For example, Bryan, McNaughton-Cassill, Osman, and Hernandez (2013) found that college students who had previously experienced unwanted sexual experiences had significantly increased risks for suicide ideation. Furthermore, Davidson, Hughes, George, and Blazer (1996) reported that individuals who had a history of sexual assault were more likely to report higher lifetime rates of suicide attempts. Given these findings, it might be particularly important to examine for the role of sexual assault on the association between hope and suicidal risk in adults.

Purpose of the Present Study

Given these concerns and possibilities, we conducted the present study to: (1) examine for the relations between hope, sexual assault, and suicidal risk (viz., suicidal behaviors & reasons for living); (2) examine for whether hope and sexual assault uniquely accounts for suicidal risk; and (3) determine if the interaction of Hope \times Sexual Assault accounts for additional variance in suicidal risk beyond hope and sexual assault alone.

Consistent with Snyder's (1994, 2002) hope theory and with past research findings (e.g., Chang et al., 2013), we expected hope to be associated with lower suicidal risk (i.e., lower suicidal behaviors & greater reasons for living). In addition, given that the experience of adverse events is believed to limit hopeful thinking (Snyder, 1994), we expected to find greater sexual assault to be associated with lower hope. Furthermore, consistent with past research findings, we expected to find greater sexual assault to be associated with greater suicidal risk.

Noteworthy, although we expected to find hope to be an important predictor of suicidal risk in adults (Grewal & Porter, 2007; Snyder, 2002), we also expected to find past experiences of sexual assault to further add to the prediction of suicidal risk. As discussed earlier, sexual assault has often been reliably linked to greater risk for suicide (e.g., Bryan et al., 2013; Tomasula et al., 2012). Finally, consistent with the notion that the interaction of hope and adverse events may further add to the prediction of adjustment (Visser et al., 2013), we expected to find some evidence for a significant Hope \times Sexual Assault interaction in predicting suicidal risk. Specifically, we predicted that the greatest level of suicidal risk (viz., high suicidal behaviors & low reasons for living) would be found among low hope adults who have experienced sexual assault. In contrast, we predicted that the lowest level of suicidal risk would be found among high hope adults who have experienced minimal sexual assault.

Method

Participants

A total of 349 college students were recruited from a university in the Southeast United States. Of the original 349 participants, 24 did not complete all study measures, thus the present study analyses are based off a total of 325 participants (215 female, 106 male, & 3 transgender; 1 participant did not report sex). Participant's ages ranged from 17 to 58 years, with a mean age of 21.8 ($SD = 5.31$). The breakdown of participants' year in school was as follows: 43.5%

freshman, 18.2% sophomore, 23.7% junior, and 14.5% senior. The racial/ethnic breakdown of the participants was 89.3% White, 5.4% Black, 3.5% Asian, and 1.9% Hispanic.

Measures

Hope. To assess for hope, we used the Hope Scale (HS; Snyder et al., 1991). The HS is a 12-item self-report measure of dispositional hope (e.g., “My past experiences have prepared me well for my future”). Four items are filler items. Respondents are asked to indicate how accurately each item described them using an 8-point Likert-type scale, ranging from 1 (*definitely false*) to 8 (*definitely true*). Evidence for the construct validity of the HS has been reported in Snyder et al. (1991). Higher scores on the HS indicate greater hope.

Sexual assault. To assess for sexual assault, we used 4 individual self-report questions from the National College Health Assessment scale (NCHA; Hoban, 2007). The items assessed for various dimensions of sexual assault, namely, verbal threat (“Within the last school year, have you experienced verbal threats for sex against your will?”), unwanted sexual touching (“Within the last school year, have you experienced sexual touching against your will?”), attempted sexual penetration (“Within the last school year, have you experienced attempted penetration against your will?”), and completed sexual penetration (“Within the last school year, have you experienced sexual penetration against your will?”). Participants responded to each question with either “yes” or “no”. If participants responded “yes” to any of the aforementioned questions, they were coded as having experienced sexual assault.

Suicidal risk. To assess for suicidal risk we used the Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001) and the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998). The SBQ-R is a 4-item self-report measure developed to directly tap key aspects of suicidality, namely, lifetime ideation and/or suicide attempt (“Have you ever

thought about or attempted to kill yourself?”), frequency of suicidal ideation over the past 12 months (“How often have you thought about killing yourself in the past year?”), threat of suicide attempt (“Have you ever told someone that you were going to commit suicide or that you might do it?”), and likelihood of suicidal behavior in the future (“How likely is it that you will attempt suicide someday?”). The responses for each item are given total points and are measured across a 5- or 6-point Likert-type scale. The item measuring frequency of suicidal ideation over the past 12 months is the only item in the scale given a temporal restriction. Evidence for the construct validity of the SBQ-R has been reported in Osman et al. (2001). Higher scores on the SBQ-R indicate greater risk for suicidal risk.

The RFL-A is a 32-item self-report inventory that assesses for the specific reasons individuals may have for not committing suicide on a 6-point Likert-type scale, ranging from 0 (*not at all important*) to 5 (*extremely important*). A sample item includes “Whenever I have a problem, I can turn to my family for support or advice”). Evidence for the construct validity of the RFL-A has been reported in Osman et al. (1998). Higher scores on the RFL-A indicate lower suicidal risk.

Procedure

Approval for the study was obtained from the Institutional Review Board prior to data collection. Participants were recruited at a regional university in the Southeast United States and received either course-required credit or extra credit upon completion of the survey. All participants were provided with written informed consent, which indicated that all data would be kept strictly confidential.

Results

Correlations, means, and standard deviations for all study measures are presented in **Table 1**. As the table shows, all of the correlations were significant and in the expected direction. Specifically, hope was negatively associated with suicidal behaviors ($r = -.38, p < .001$) and positively associated with reasons for living ($r = .60, p < .001$). In addition, hope was negatively associated with sexual assault ($r = -.26, p < .001$). Finally, sexual assault was significantly associated with both suicidal behaviors ($r = .30, p < .001$) and with reasons for living ($r = -.29, p < .001$) in the expected directions.

Examining Hope and Sexual Assault as Predictors of Suicidal Risk

To determine whether sexual assault accounts for additional unique variance in suicidal risk beyond hope, we conducted a series of hierarchical regression analyses in predicting each of the suicidal risk measures used in the present study. For each regression model, hope was entered in the First Step, followed by sexual assault in the Second Step. As noted earlier, because sexual assault may potentially interact with hope in predicting suicidal risk, we included the multiplicative terms of Hope \times Sexual Assault in the Third Step. Results of these regression analyses are presented in **Table 2**. To determine whether any of the predictors accounted for a small, medium, or large amount of the variance in functioning, we used Cohen's (1977) convention for small ($f^2 = .02$), medium ($f^2 = .15$), and large effects ($f^2 = .35$) as a general guide.

In predicting suicidal behaviors for college students, hope was found to account for a medium ($f^2 = .18$) 15% of variance in suicidal behaviors, $F(1, 323) = 57.98, p < .001$. When sexual assault was entered in the Second Step, it was found to account for a small ($f^2 = .04$) but significant 4% of additional variance in suicidal behaviors, $F(1, 322) = 17.93, p < .001$. Finally, when the interaction term involving hope and sexual assault was entered in the Third Step, it was found to account for a small ($f^2 = .02$) but significant 2% of additional variance in suicidal

behaviors, $F(1, 321) = 7.48, p < .01$. The full prediction model including hope, sexual assault, and the interaction term was found to account for a large ($f^2 = .27$) 21% of variance in suicidal behaviors, $F(3, 321) = 29.27, p < .001$.

Interestingly, in predicting reasons for living, hope was found to account for a large ($f^2 = .56$) 36% of variance in reasons for living, $F(1, 323) = 182.58, p < .001$. When sexual assault was entered in the Second Step, it was found to account for a small ($f^2 = .02$) but significant 2% of additional variance in reasons for living, $F(1, 322) = 8.05, p < .01$. Finally, when the interaction term involving hope and sexual assault was entered in the Third Step, it was found to account for a small ($f^2 = .01$) albeit marginally significant 1% additional variance in reasons for living, $F(1, 321) = 2.77, p < .10$. The full prediction model for predicting reasons for living involving hope, sexual assault, and the interaction term was found to account for a large ($f^2 = .61$) 38% of variance in reasons for living, $F(3, 321) = 66.15, p < .001$.

To visually inspect the manner in which hope interacted with sexual assault in predicting suicidal risk, we plotted the regressions of suicidal behaviors (see **Figure 1**) and reasons for living (see **Figure 2**) on hope (shown at low and high levels, using a mean split at 48.06) at experiences or no experiences of sexual assault based on our initial regression results. As shown in **Figure 1**, the negative association between hope and suicidal behaviors was strongest for students who have experienced sexual assault. Consistent with expectations, low hope students who experienced sexual assault reported the highest level of suicidal behaviors. Alternatively, high hope students reported the lowest levels of suicidal risk independent of their experience of sexual assault. As **Figure 2** shows, the positive association between hope and reasons for living was strongest for students who have experienced sexual assault. Again, as expected, low hope students who experienced sexual assault reported the lowest level of reasons for living. In

contrast, high hope students reported the highest levels of reasons for living independent of their experience of sexual assault. Overall, these figures underscore a consistent pattern in which suicidal risk is highest among low hope students who have experienced sexual assault, and lowest among high hope students independent of sexual assault experiences.

Discussion

We conducted the present study to examine for how hope and sexual assault are involved in suicidal risk in adults. Given the dearth in the extant empirical literature concerning the relationship between positive cognitions, especially hope, and suicidal risk (e.g., Wingate et al., 2006), our correlation results join those of several other recent studies to provide further support for an inverse relationship between hope and indices of suicidal risk (e.g., Chang et al., 2013; Davidson et al., 2010; Dogra et al., 2011; O'Keefe & Wingate, 2013). Interestingly, it is important to note that of the available studies, some studies have failed to identify a significant negative association between hope and suicidal risk. Specifically, in a study of adult college students, Davidson et al. (2009) found that the association between hope and suicide ideation was nonsignificant. Additionally, in a study of adult clinical patients, Davidson and Wingate (2013) also failed to find a significant association between hope and suicide ideation. One possible explanation for these contradictory findings may be due to the use of a more temporally constrained measure of suicidal risk in the Davidson et al. and Davidson and Wingate studies. In both of these studies, the researchers used a measure of suicide ideation that asks participants to report the presence of suicidal thoughts over the past two weeks. In contrast, for example, the SBQ-R used in the present study asks participants to report the frequency of suicide ideation over the past 12 months. Interestingly, it is worth noting that other studies using similarly constrained suicidal risk measures have sometimes found support for a negative association

between hope and suicide ideation in adults (e.g., Davidson et al., 2010). However, because little to no rationale is offered in these studies for why a particular two week window of assessment was used for identifying a link between hope and suicidal risk, it is not clear what to make of these inconsistencies. At the very least, our findings indicate that researchers interested in optimizing their ability to identify a link between hope and suicidal risk in adults may benefit from using measures of suicidal risk that are sufficiently sensitive enough to capture response variance across a wide timeframe (e.g., past year).

As expected, we also found a significant positive association between sexual assault and suicidal risk. This pattern is not only consistent with findings obtained from studies showing a positive relationship involving sexual assault with positive indices of suicidal risk (e.g., suicide ideation, suicide attempt; Tomasula et al., 2012; Ullman, 2004), but it is also consistent with findings from other studies showing a negative relationship involving sexual assault with negative indices of suicidal risk. For example, in a recent study of adult females, Segal (2009) found that women who were sexually victimized were more likely to report fewer reasons for living than those who were not victimized. Taken together, our correlational findings based on using the SBQ-R and the RFL-A as measures of suicidal risk in adults provide further support for the general notion that adverse life events, including sexual assault, are reliably associated with greater suicidal risk. Indeed, based on using data from a large scale national survey of adults, Wang et al. (2012) found that assaultive violence was one of the only two types of stressful life events (the other was financial stress) that remained associated with suicide attempts, after partialling out the influence of control variables (e.g., race/ethnicity, age, sex, & education). Accordingly, it would be important in future studies to determine why assaultive violence like sexual assault is significantly linked to suicidal risk, compared to other types of stressful life

events like traumatic events (e.g., death of a family member, life-threatening illness) or interpersonal stressors (e.g., problems with friends/relatives, break-up with significant others). Relatedly, within acts of assaultive violence, it would be useful to determine if the association between sexual assault and suicidal risk found in adults is significantly different when examining other acts of violence (e.g., domestic abuse, physical violence, & bullying).

Hope, Sexual Assault, and Suicidal Risk in College Students: On the Dangers of When Low Hope is Under Assault

As discussed earlier, past studies have shown that hope is an important predictor of suicidal risk in adults. Indeed, our regression findings affirmed that hope is a significant predictor of different forms of suicidal risk (viz., suicidal behaviors & reasons for living). Interestingly, hope was found to be a stronger predictor of reasons for living than of suicidal behaviors. Because some researchers have argued that fewer reasons for living may lead to the development of suicide ideation in adults (Bagge, Lamis, Nadorff, & Osman, 2014), our findings suggest that one way hope-based interventions may prove to be useful in thwarting the development of suicidal behaviors is by helping at-risk college students to identify and sustain greater reasons for living (Fiske, 2008).

Beyond hope, we found that experience of sexual assault in students was a unique predictor of greater suicidal behaviors and fewer reasons for living. Thus, our findings not only affirm the association found in past studies linking sexual assault with greater suicidal risk in adults (e.g., Bryan et al., 2013), but they also indicate that the association cannot be sufficiently accounted for by variations in hope. That is, although low hope may foster greater suicidal behaviors and fewer reasons for living in students, being the victim of sexual assault appears to significantly add to the vulnerabilities of these students. Importantly, when we tested for a

significant Hope \times Sexual Assault interaction, we found that the highest levels of suicidal risk (i.e., high suicidal behaviors, fewer reasons for living) was present among low hope students who experienced some form of sexual assault. Taken together, these findings not only underscore the role of negative life events like sexual assault in elevating suicidal risk in college students (e.g., Chang, Sanna, Hirsch, & Jeglic, 2010; Hirsch, Wolford, LaLonde, Brunk, & Morris, 2007), but further point to how sexual assault may be particularly damaging to low hope college students. Specifically, our findings indicate that sexual assault consistently intensifies the harmful properties of low hope to place some students at greatest risk of suicide.

Furthermore, because researchers have found that prior exposure to interpersonal violence, including sexual assault, among college students is not only associated with greater risk for subsequent revictimization (e.g., Gidycz, Hanson, & Layman, 1995), but also associated with greater experience of psychological distress upon revictimization (Aosved, Long, & Voller, 2011), our findings point to a critical need for both researchers and practitioners to not only offer interventions that help foster the development of greater hope in students (Feldman & Dreher, 2012), but to also work on identifying, developing, and implementing effective and sustainable campus-wide strategies and programs that seek to prevent and respond to sexual assault on college campuses (Carmody, Ekhomu, & Payne, 2009).

Limitations

Although the present study provides some important findings involving the complex interplay between hope, sexual assault, and suicidal risk in college students, some limitations to the present study are worth noting. First, because our sample was predominantly White, it would be important to determine if similar or different findings emerge when studying more diverse ethnic or racial groups. Indeed, as some studies have found, the function of hope in adjustment

can sometimes vary across different racial and ethnic groups (Chang & Banks, 2007). Second, because hope represents one of a few important positive future cognition (e.g., optimism, positive orientation, future orientation; Chang, Yu, Kahle, et al., 2013; Chang, Yu, Lee, et al., 2013; Davidson & Wingate, 2013), it would be useful to determine if similar findings might emerge when studying other positive cognitions. Third, although the present study focused on the prediction of suicidal risk in college students, it would be useful to determine if hope and sexual assault continue to be significant predictors of other important outcomes (e.g., depression, anxiety, & stress) in students. Fourth, and relatedly, although we were interested in testing a prediction model involving hope and sexual assault as predictors of suicidal risk, our findings do not preclude the possibility that suicidal risk may play an important role in determining hope and sexual assault in students. Thus, building from the present findings, prospective studies are now needed to examine the extent to which hope and sexual assault predict changes in suicidal risk over time in college students.

Concluding Thoughts

In summary, the current study was conducted to provide a first look at the role of hope and sexual assault on suicidal risk in college students. Consistent with expectations, our findings provide convergent support for the notion that hope and sexual assault are important and unique predictors of suicidal risk (i.e., greater suicidal behaviors, fewer reasons for living) in college students. Moreover, we were able to determine that the greatest risk for suicide was present among low hope students who had experienced sexual assault. Accordingly, our study calls for further attention to examine for the role of positive cognitions in adjustment, and it also underscores a need to better understand how negative life events may place some individuals at greater risk for maladjustment when such cognitions are low or absent.

References

- Aosved, A. C., Long, P. J., & Voller, E. K. (2011). Sexual revictimization and adjustment in college men. *Psychology of Men and Masculinity, 12*, 285-296.
- Arnau, R. C., Rosen, D. H., Finch, J. F., Rhudy, J. L., & Fortunato, V. J. (2007). Longitudinal effects of hope on depression and anxiety: A latent variable analysis. *Journal of Personality, 75*, 43-46.
- Bagge, C. L., Lamis, D. A., Nadorff, M., & Osman, A. (2014). Relations between hopelessness, depressive symptoms and suicidality: Mediation by reasons for living. *Journal of Clinical Psychology, 70*, 18-31.
- Bryan, C. J., McNaughton-Cassill, M., Osman, A., & Hernandez, A. (2013). The associations of physical and sexual assault with suicide risk in nonclinical military and undergraduate samples. *Suicide and Life-Threatening Behavior, 43*, 223-234.
- Carmody, D., Ekholm, J., & Payne, B. K. (2009). Needs of sexual assault advocates in campus-based sexual assault centers. *College Student Journal, 43*, 507-513.
- Carvajal, S. C., Clair, S. D., Nash, S. G., & Evans, R. I. (1988). Relating optimism, hope, and self-esteem to social influences in deterring substance use in adolescents. *Journal of Social and Clinical Psychology, 17*, 443-465.
- Chang, E. C. (2003). A critical appraisal and extension of hope theory in middle-aged men and women: Is it important to distinguish agency and pathways components?. *Journal of Social and Clinical Psychology, 22*, 121-143.
- Chang, E. C., & Banks, K. H. (2007). The color and texture of hope: Some preliminary findings and implications for hope theory and counseling among diverse racial/ethnic groups. *Cultural Diversity and Ethnic Minority Psychology, 13*, 94-103.

- 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*, 1242-1253.
- Chang, E. C., Yu, E. A., & Hirsch, J. K. (2013). On the confluence of optimism and hope on depressive symptoms in primary care patients: Does doubling up on bonum futurum proffer any added benefits?. *The Journal of Positive Psychology, 8*, 404-411.
- Chang, E. C., Yu, E. A., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013). Is doubling up on positive future cognitions associated with lower suicide risk in Latinos? A look at hope and positive problem orientation. *Cognitive Therapy and Research, 37*, 1285-1293.
- Chang, E. C., Yu, E. A., Lee, J. Y., Hirsch, J. K., Kupfermann, Y., & Kahle, E. R. (2013). An examination of optimism/pessimism and suicide risk in primary care patients: Does belief in a changeable future make a difference? *Cognitive Therapy and Research, 37*, 796-804.
- Ciarrochi, J., Heaven, P. L., & Davies, F. (2007). The impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: A longitudinal study. *Journal of Research in Personality, 41*, 1161-1178.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences* (rev. ed.). New York: Academic Press.
- Davidson, C. L., & Wingate, L. R. (2013). The glass half-full or a hopeful outlook: Which explains more variance in interpersonal suicide risk in a psychotherapy clinic sample?. *The Journal of Positive Psychology, 8*, 263-272.
- Davidson, C. L., Wingate, L. R., Rasmussen, K. A., & Sligh, M. L. (2009). Hope as a predictor of interpersonal suicide risk. *Suicide and Life-Threatening Behavior, 39*, 499-507.
- Davidson, C. L., Wingate, L. R., Sligh, M. L., & Rasmussen, K. A. (2010). The great black hope:

- Hope and its relation to suicide risk among African Americans. *Suicide and Life-Threatening Behavior*, *40*, 170-180.
- Davidson, J. T., Hughes, D. C., George, L. K., & Blazer, D. G. (1996). The association of sexual assault and attempted suicide within the community. *Archives of General Psychiatry*, *53*, 550-555.
- Devries, K., Watts, C., Yoshihama, M., Kiss, L., Schraiber, L. B., Deyessa, ... & Garcia-Moreno, C. (2011). Violence against women is strongly associated with suicide attempts: Evidence from the WHO multi-country study on women's health and domestic violence against women. *Social Science & Medicine*, *73*, 79-86.
- Dogra, A. K., Basu, S., & Das, S. (2011). Impact of meaning in life and reasons for living to hope and suicidal ideation: A study among college students. *Journal of Projective Psychology and Mental Health*, *18*, 89-102.
- Feldman, D. B., & Dreher, D. E. (2012). Can hope be changed in 90 minutes? Testing the efficacy of a single-session goal-pursuit intervention for college students. *Journal of Happiness Studies*, *13*, 745-759.
- Fiske, H. (2008). *Hope in action: Solution-focused conversations about suicide*. New York, NY, US: Routledge/Taylor & Francis Group.
- Geiger, K. A., & Kwon, P. (2010). Rumination and depressive symptoms: Evidence for the moderating role of hope. *Personality and Individual Differences*, *49*, 391-395.
- Gidycz, C. A., Hanson, K., & Layman, M. J. (1995). A prospective analysis of the relationship among sexual assault experiences: An extension of previous findings. *Psychology of Women Quarterly*, *19*, 5-29.
- Gidycz, C. A., Orchowski, L. M., King, C. R., & Rich, C. L. (2008). Sexual victimization and

- health-risk behaviors: A prospective analysis of college women. *Journal of Interpersonal Violence, 23*, 744-763.
- Grewal, P. K., & Porter, J. E. (2007). Hope Theory: A framework for understanding suicidal action. *Death Studies, 31*, 131-154.
- Gustafsson, H., Skoog, T., Podlog, L., Lundqvist, C., & Wagnsson, S. (2013). Hope and athlete burnout: Stress and affect as mediators. *Psychology of Sport and Exercise, 14*, 640-649.
- Hanna, F. J. (1991). Suicide and hope: The common ground. *Journal of Mental Health Counseling, 13*, 459-472.
- Hirsch, J. K., Wolford, K., LaLonde, S. M., Brunk, L., & Morris, A. (2007). Dispositional optimism as a moderator of the relationship between negative life events and suicide ideation and attempts. *Cognitive Therapy and Research, 31*, 533-546.
- Hoban, M. (2007). American College Health Association National College Health Assessment spring 2006 reference group data report (abridged). *Journal of American College Health, 55*, 195-206.
- Humphrey, J. A., & White, J. W. (2000). Women's vulnerability to sexual assault from adolescence to young adulthood. *Journal of Adolescent Health, 27*, 419-424.
- Krebs, C. P., Lindquist, C. H., Warner, T. D., Fisher, B. S., Martin, S. L., & Childers, J. M. (2011). Comparing sexual assault prevalence estimates obtained with direct and indirect questioning techniques. *Violence against Women, 17*, 219-235.
- Loh, C., Gidycz, C. A., Lobo, T. R., & Luthra, R. (2005). A prospective analysis of sexual assault perpetration: Risk factors related to perpetrator characteristics. *Journal of Interpersonal Violence, 20*, 1325-1348.
- O'Keefe, V. M., & Wingate, L. R. (2013). The role of hope and optimism in suicide risk for

- American Indians/Alaska Natives. *Suicide and Life-Threatening Behavior*, 43, 621-633.
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kooper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment*, 5, 443-454.
- Osman, A., Downs, W. R., Kopper, B. A., Barrios, F. X., Baker, M. T., Osman, J. R., & Linehan, M. M. (1988). The Reasons for Living Inventory for Adolescents (RFL-A): Development and psychometric properties. *Journal of Clinical Psychology*, 54, 1063-1078.
- O'Sullivan, G. (2011). The relationship between hope, stress, self-efficacy, and life satisfaction among undergraduates. *Social Indicators Research*, 101, 155-172.
- Palmer, R. S., McMahon, T. J., Rounsaville, B. J., & Ball, S. A. (2010). Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students. *Journal of Interpersonal Violence*, 25, 1563-1578.
- Range, L. M., & Penton, S. R. (1994). Hope, hopelessness, and suicidality in college students. *Psychological Reports*, 75, 456-458.
- Rudd, M. & Brown, G. K. (2011). A cognitive theory of suicide: Building hope in treatment and strengthening the therapeutic relationship. In K. Michel, D. A. Jobes (Eds.), *Building a therapeutic alliance with the suicidal patient* (pp. 169-181). Washington, DC: American Psychological Association.
- Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, 46, 932-946.
- Segal, D. L. (2009). Self-reported history of sexual coercion and rape negatively impacts

- resilience to suicide among women students. *Death Studies*, 33, 848-855.
- Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. New York, NY US: Free Press.
- Snyder, C. R. (2000). *Handbook of hope: Theory, measures, and applications*. San Diego, CA, US: Academic Press.
- Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry*, 13, 249-275.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., ... & Harney, P. (1991). The wills and the ways: Development and validation of an individual differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585.
- Snyder, C. R., LaPointe, A. B., Crowson, J. r., & Early, S. (1998). Preferences of high- and low-hope people for self-referential input. *Cognition and Emotion*, 12, 807-823.
- Tomasula, J. L., Anderson, L. M., Littleton, H. L., & Riley-Tillman, T. (2012). The association between sexual assault and suicidal activity in a national sample. *School Psychology Quarterly*, 27, 109-119.
- Ullman, S. E. (2004). Sexual assault victimization and suicidal behavior in women: A review of the literature. *Aggression and Violent Behavior*, 9, 331-351.
- Vacek, K. R., Coyle, L. D., & Vera, E. M. (2010). Stress, self-esteem, hope, optimism, and well-being in urban ethnic minority adolescents. *Journal of Multicultural Counseling and Development*, 38, 99-111.
- Visser, P. L., Loess, P., Jeglic, E. L., & Hirsch, J. K. (2013). Hope as a moderator of negative life events and depressive symptoms in a diverse sample. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 29, 82-88.
- Wang, Y., Sareen, J., Afifi, T. O., Bolton, S., Johnson, E. A., & Bolton, J. M. (2012). Recent

stressful life events and suicide attempt. *Psychiatric Annals*, 42, 101-108.

Wingate, L. R., Burns, A. B., Gordon, K. H., Perez, M., Walker, R. L., Williams, F. M., & Jiner, T. r. (2006). Suicide and positive cognitions: Positive psychology applied to the understanding and treatment of suicidal behavior. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 261-283). Washington, DC, US: American Psychological Association.

Wingate, L. R., & Davidson, C. L. (2011). Hope as a personal resource. In M. J. Celinski, K. M. Gow (Eds.), *Continuity versus creative response to challenge: The primacy of resilience and resourcefulness in life and therapy* (pp. 229-242). Hauppauge, NY, US: Nova Science Publishers.

Table 1

Correlations Between All Study Measures

Measures	1	2	3	4
1. Hope	--			
2. Sexual assault	-.26***	--		
3. Suicidal behaviors	-.38***	.30***	--	
4. Reasons for living	.60	-.29***	-.49***	--
<i>M</i>	48.06	.15	2.30	117.38
<i>SD</i>	10.28	.36	3.35	31.47

Note. $N = 325$

*** $p < .001$.

Table 2

Results of Hierarchical Regression Analyses Showing Amount of Variance in Suicidal Risk Accounted for by Hope and Sexual Assault in College Students

Outcome and Measure	β	R^2	ΔR^2	F
Suicidal behaviors				
Step 1: Hope	-.38***	.15	--	57.98***
Step 2: Sexual assault	.22***	.19	.04	17.93***
Step 3: Hope \times Sexual Assault	-.52**	.21	.02	7.48**
Reasons for living				
Step 1: Hope	.60***	.36	--	182.58***
Step 2: Sexual assault	-.13**	.38	.02	8.05**
Step 3: Hope \times Sexual Assault	-.28†	.38	.01	2.77†

Note. $N = 325$.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

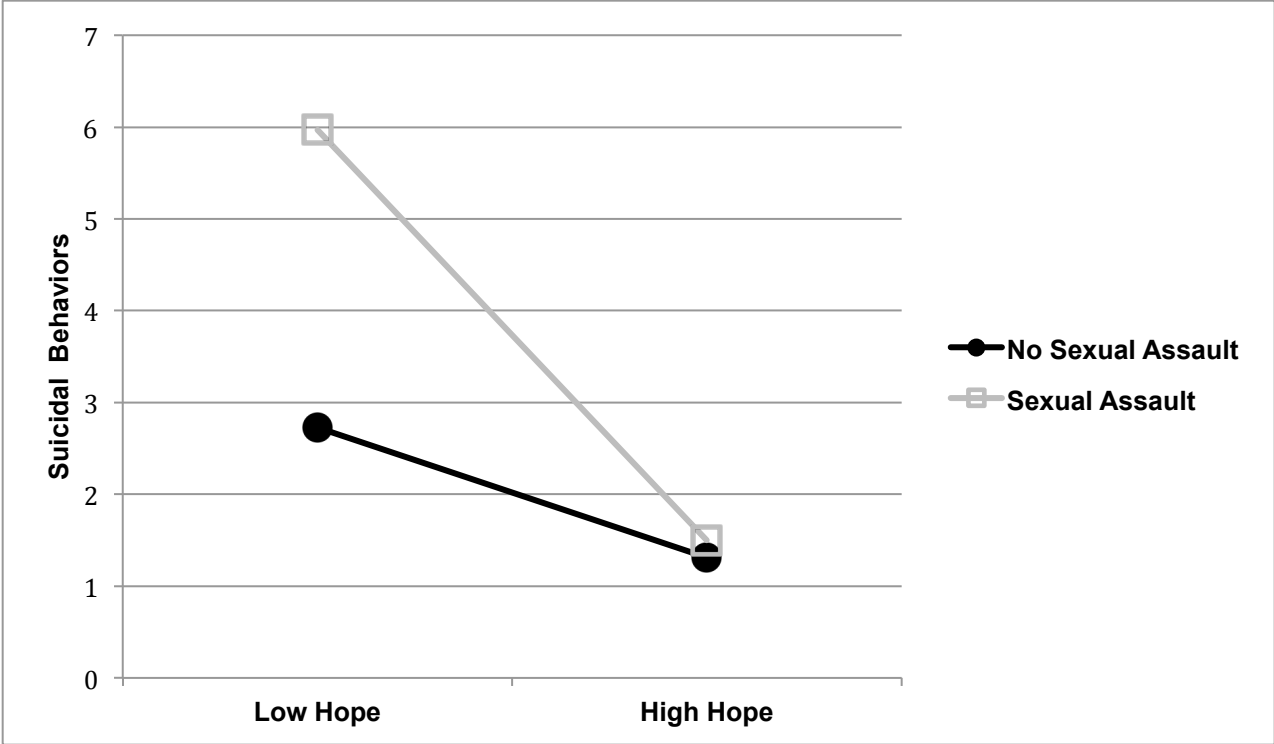


Figure 1. Hope and suicide behaviors in college students with vs. without sexual assault.

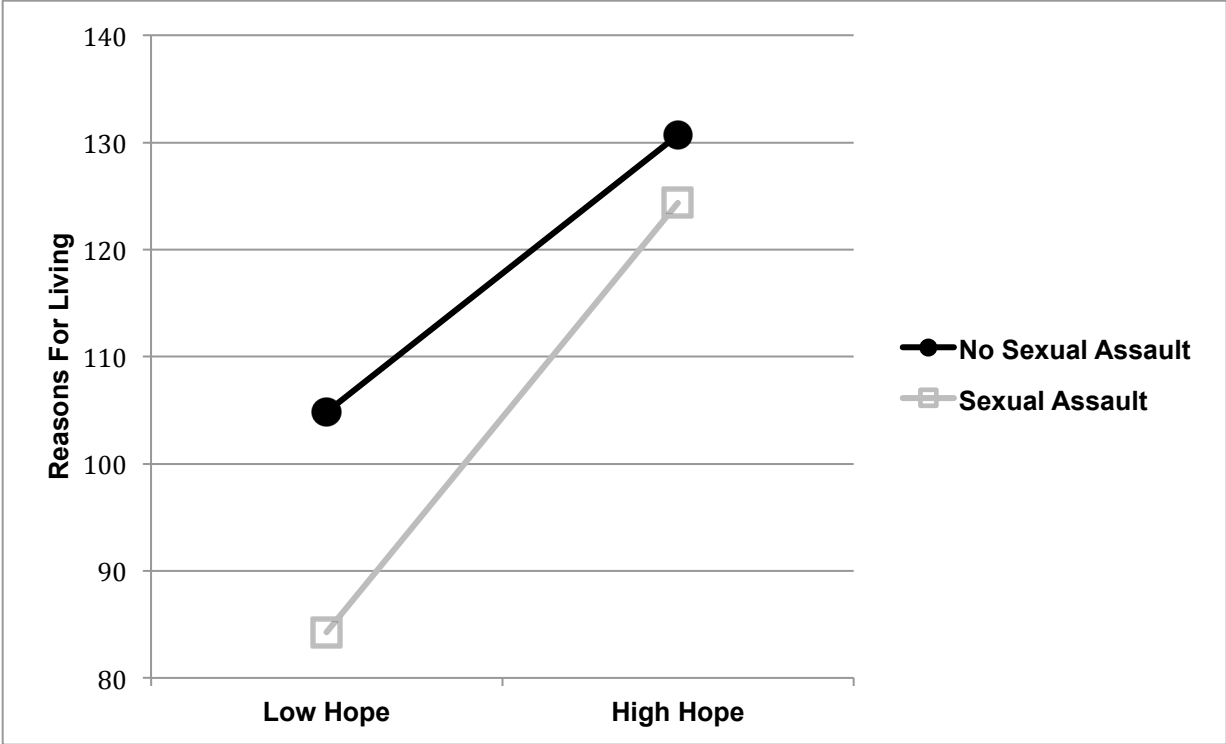


Figure 2. Hope and reasons for living among college students with vs. without sexual assault.