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An Empirical Test of the Three-Step Theory of Suicide in U.K. University Students

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The purpose of this study was to further our understanding of how individuals move down the pathway from first thinking about suicide to ultimately attempting to take their own lives by empirically testing the Three-Step Theory (3ST) in a sample of university students (n = 665). Results largely support the theory's central propositions. First, an interactive model of pain and hopelessness accounted for substantial variance in suicidal desire. This result replicated in both men and women, and across age groups (i.e., below 35 and at or above 35). Also, as predicted, connectedness was protective against ideation in those high on both pain and hopelessness. However, contrary to our prediction, connectedness was similarly protective among everyone else. Finally, suicide capacity predicted suicide attempt history over and above current and lifetime suicide ideation. These findings provide further support to the 3ST.

Suicidal behavior is a significant behavioral health concern among university students and is the second leading cause of death among this demographic group (World Health Organization, 2016). Five to 35 percent of undergraduate students report having considered suicide in the past 12 months (Robins & Fiske, 2009; Wong, Brower, & Zucker, 2011), while up to 11% report having made a suicide attempt (Eisenberg, Hunt, & Speer, 2013). Recent figures show that there were 130 suicide deaths in England and Wales among students aged 18 or above in 2014 (ONS, 2016). In response to these concerning statistics, a diverse array of interventions (e.g., educational curricula, means restriction, and safety planning) has been developed and implemented in universities worldwide. However, a recent Cochrane review found little evidence that these programmes lead to sustained reductions in suicidality (Harrod, Goss, Stallones, & Di Guiseppi, 2014).

To effectively intervene and ultimately prevent suicidal behavior in university students, we need to better understand suicide and those at risk. Unfortunately, although our understanding of suicide risk factors has improved considerably over the past few decades (O'Connor & Nock, 2014), there remain significant gaps in knowledge that hinder our ability to predict with sensitivity and specificity which individuals are most at risk. Especially lacking is an understanding of how and why people move along the pathway to suicide: from onset of suicide ideation, to developing a

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plan and intention, to ultimately attempting to take their own lives (Klonsky & May, 2014). This knowledge gap is critical, as considerable evidence suggests that out of the relatively high percentage of individuals who contemplate suicide, only one-third make a suicide attempt (Nock et al., 2008). Moreover, recent studies continue to find that traditionally cited risk factors for suicide—including most mental disorders and hopelessness—predict suicide ideation, but fail to distinguish suicide attempters from ideators (Dhingra, Boduszek, & O'Connor, 2015; May & Klonsky, 2016).

To address this very issue, studies are increasingly employing an "ideation-to-action" framework (Klonsky, Qui, & Saffer, 2017). This *framework* views the development of suicide ideation and the progression from ideation to potentially lethal attempts as distinct processes with distinct explanations and predictors. A new theory of suicide positioned within the ideation-to-action framework is the Three-Step Theory (3ST; Klonsky & May, 2015). The 3ST (Figure 1) makes three central claims. First, the *combination* of pain and hopelessness is what brings about suicide ideation. Second, connectedness prevents suicide ideation from escalating in intensity in those at risk (i.e., those experiencing both pain and hopelessness). Finally, strong suicide ideation leads to a suicide attempt if, and only if, one has the means and capacity (dispositional, acquired, and practical) to make an attempt.

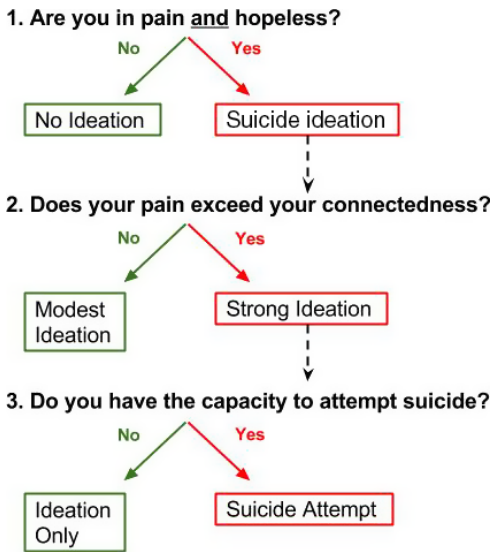

Figure 1. Illustration of the Three-Step Theory (3ST) of suicide (Klonsky & May, 2015).

Different aspects of the 3ST have been empirically tested. For instance, studies of suicide attempters have found that suicide attempts are most often motivated by pain and hopelessness (May & Klonsky, 2013). In addition, a recent study of 910 U.S. adults (Klonsky & May, 2015) found that suicide ideation was negligible in those low on both pain and hopelessness, and those either high on pain or high on hopelessness. In contrast, suicide ideation was elevated in the subgroup high on both pain and hopelessness. Additionally, connectedness protected against escalation of ideation in those high on both pain and hopelessness, but was minimally related to ideation among everyone else. A number of studies have also supported the importance of the capability for suicide in enhancing the association between suicidal desire and suicidal behavior (e.g., Dhingra et al., 2015). Finally, Klonsky and May (2015) found that dispositional, acquired, and practical contributors to the capacity for suicide each predicted suicide attempt history over and above current and past suicide ideation. Thus, based on this preliminary research, it appears that the 3ST has great potential to advance suicide research and prevention.

This Study

Few studies have examined the central hypotheses postulated by the 3ST. Therefore, the present research aimed to empirically test the 3ST in a large sample of U.K. university students. It was predicted that (a) pain and hopelessness will interact to predict current suicide ideation and will predict suicide ideation better than a comparison model consisting of high burdensomeness

and low belongingness, (b) connectedness will protect against the escalation of suicide ideation among those high on both pain and hopelessness, and (c) suicide capacity will distinguish lifetime suicide attempters from those with histories of ideation but not attempts. Should the theory be validated, the 3ST will help generate more parsimonious risk assessment tools as well as more targeted intervention approaches.

METHODS

Sample

Participants ($N = 665$) were 475 female and 190 male university students recruited from various faculties from two U.K. universities. Participants were aged between 17 and 67 years ($M = 24.2$; $SD = 8.11$). Regarding ethnicity, 78.9% of participants reported they were Caucasian, 12.1% Asian, 3.4% Black, 3.4% Mixed, and 2.2% Other. Additionally, most students (83.3%) described their sexual orientation as heterosexual/straight.

Procedure

The research protocol was reviewed and approved by the institutional ethics panels of both participating universities. Participants were recruited via an e-mail invite to participate in a study of suicide. Within this e-mail, it was made clear to potential participants that they did not need to have experienced suicidal thoughts and behaviors to take part. Participants were required to consent before the survey was presented online. Participation in this study was voluntary and no inducements or obligations were used. All participants were debriefed and given phone numbers for local mental health services.

Measures

Suicide Attempts. Suicide attempts were recorded if a respondent answered "yes" to the following question taken from The Self-Injurious Thoughts and Behaviours Interview (SITBI; Nock, Holmberg, Photos, & Michel, 2007): "Have you ever made an actual attempt to kill yourself in which you had at least some intent to die?" The SITBI suicide attempt subscale has demonstrated strong interrater reliability (average $k = 0.99$), test–retest reliability (average $k = 0.70$), and construct validity, as demonstrated by strong relations with other measures of suicide attempt ($k = .65$; Nock et al., 2007).

Suicidal Desire. Eight items from the Beck Scale for Suicide Ideation (BSS; Beck & Steer, 1991) were used to index suicidal desire. Item selection and their use as an index of suicidal desire are now explained. Some items assess suicidal desire, whereas some index other variables such as preparatory actions (e.g., "... finished or completed my preparations for committing suicide") or perceived capability to make a suicide attempt (e.g., "I have the courage or ability to commit suicide"). The former is addressed by Steps 1 and 2 of the 3ST, whereas, the latter is addressed by Step 3. Thus, to test Steps 1 and 2 of the 3ST, factor analysis was used to identify a subset of BSS items that index suicidal desire unconfounded by items relevant to preparations or capability. This approach is similar to previously published factor-analyses that distinguished ideation items assessing suicidal desire from those assessing preparation (Beck, Brown, & Steer, 1997; Beck, Kovacs, & Weissman, 1979).

In this study, a factor analysis (principle-axis factoring) with promax rotation yielded a 3-factor solution accounting for 53.6% of variance. Factor 1, with an eigenvalue of 7.2, assessed suicidal desire. This factor included items 1–7 and 9; each of these items had loadings above .4 with no cross-loadings on other factors. This factor was similar to the suicidal desire factors identified in previous studies (Beck et al., 1979, 1997). Thus, items 1–7 and 9 were summed to form a suicidal desire scale, which was used for subsequent analyses

(α = .89). Factors 2 and 3 were less robust (eigenvalues of 1.7 and 1.3, respectively), contained items peripherally related or unrelated to suicidal desire, and were not used in this study.

Psychological Pain. The 13-item Scale of Psychache measured current emotional or mental pain as conceptualized by Shneidman (1993). Items are rated on a 5-point Likert scale. The psychometric properties of this measure have been established (Holden, Mehta, Cunningham, & McLeod, 2001). In this sample, coefficient alpha was very high (α = .96).

Hopelessness. The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) is a widely used scale that assesses hopelessness within the past week. The BHS includes 20 items, which are rated as true or false. In this sample, coefficient alpha was excellent (α = .90).

Burdensomeness and Belongingness. The 12-item version of the Interpersonal Needs Questionnaire (INQ; Van Orden, Witte, Gordon, Bender, & Joiner, 2008) was used to measure participants' beliefs about the extent to which they feel connected to others (i.e., belongingness; α = .82) and the degree to which they feel they are a burden to others (i.e., burdensomeness; α = .86). Participants indicate the degree to which each item is true for them on a 7-point Likert scale.

Suicide Capacity. The 6-item Suicide Capacity Scale (SCS-3; Klonsky & May, 2015) assesses three contributors to the capacity to enact a potentially lethal suicide attempt: Dispositional Capacity (i.e., long-standing pattern of low fear of pain or death), Acquired Capacity (i.e., fear of pain or death had decreased over time), and Practical Capacity (i.e., access to and knowledge of suicide methods). Items are rated on a 7-point Likert scale. The SCS-3 has been shown to reliably differentiate suicide attempters from suicide ideators (Klonsky & May, 2015). Coefficient alpha in the present sample was satisfactory (α = .72).

RESULTS

Descriptive statistics and intercorrelations for the study variables are presented in Table 1. All variables had skewness and kurtosis statistics within normal limits (i.e., <|2|). At least one suicide attempt was reported by 24% of participants, and 72.4% reported a lifetime history of suicide ideation. Described below are results addressing each step of the 3ST.

TABLE 1
Means, Standard Deviations, and Intercorrelations for Study Variables

			Correlations						
Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Suicidal desire	2.09	3.07	—						
2. Suicide attempt[a]	0.25	0.43	.43	—					
3. Pain (Psychache)	30.86	13.47	.64	.37	—				
4. Hopelessness	6.89	5.30	.67	.31	.65	—			
5. Belongingness (Low)	18.64	7.39	.51	.29	.58	.65	—		
6. Burdensomeness	21.12	9.96	.67	.36	.65	.66	.58	—	
7. SCS-3	25.94	7.46	.39	.33	.33	.24	.26	.33	—

SCS-3 = Suicide Capacity Scale.
All correlations presented are statistically reliable at $p < .001$.
[a]The mean of .25 indicates that 25% of participants had a history of at least one suicide attempt. Because this variable is dichotomous, point-biserial correlations are reported.

Step 1: Pain and Hopelessness Combine to Predict Suicidal Desire

First, we report the direct effects of pain and hopelessness on suicidal desire. As expected, both pain (r = .64) and hopelessness (r = .67) exhibited robust correlations with suicidal desire. Also, as expected, pain and hopelessness were strongly related (r = .65).

Second, as a direct test of the 3ST's Step 1, we examined whether pain and hopelessness interacted to predict suicidal desire. The interaction was significant (t = 6.42, p < .001), and the full model accounted for 56% of the variance in suicidal desire. The interaction term itself explained an additional 3% of variance over and above the main effects. However, because the interaction term correlates strongly with both main effect terms, the 3% of unique variance added may not fully capture the interactive nature of pain and hopelessness in predicting suicide ideation. Thus, to illustrate the potential clinical significance of this pattern, median splits were used to create low and high subgroups for pain and hopelessness. As seen in Figure 2, suicide ideation is negligible in subgroups with (a) low pain and hopelessness or (b) either high pain *or* high hopelessness, but is elevated in the subgroup, (c) reporting *both* high pain and high hopelessness.

Next, we examined whether the interaction between pain and hopelessness would appear consistently across demographic subgroups. As expected, the interaction was statistically reliable in both men (t = 4.24, p < .001) and women (t = 7.73, p < .001), as well as in participants both less than 35 years old (t = 5.91, p < .001) and at or >35 years old (t = 3.05, p = .003).

Finally, we wanted to evaluate Step 1 of the 3ST in comparison with a highly cited, well-researched model. We, therefore, also examined the variables hypothesized by the Interpersonal Theory of Suicide (Joiner, 2005; Van Orden et al., 2010) to explain suicidal desire. This comparison model specifies that thwarted belongingness and perceived burdensomeness interact to explain suicidal desire. Results indicate that these variables indeed interacted significantly to predict suicidal desire (t = 4.12, p < .001), although the full model including the interaction term accounted for 49% of the variance in suicidal desire—which represents 7% less variance explained than Step 1 of the 3ST.

Step 2: Connectedness Protects Against Escalation of Suicidal Desire

The 3ST hypothesizes that connectedness can foster a desire to live even among

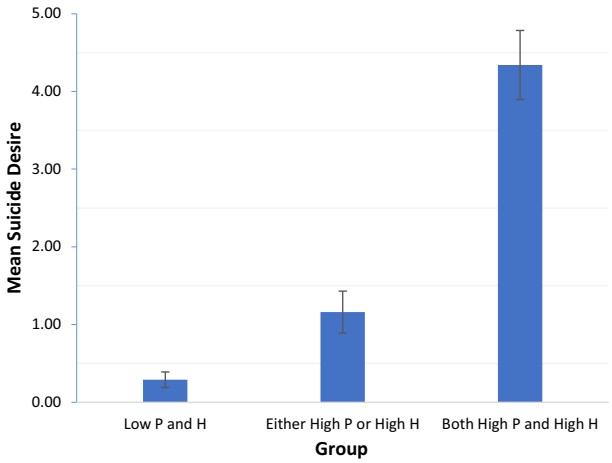

Figure 2. Interactive effects of pain (P) and hopelessness (H) on suicidal desire.

those with both pain and hopelessness, and thus protect against higher levels of suicidal desire among this at-risk subgroup. We conducted two analyses to evaluate this hypothesis. First, we examined whether the relationship of connectedness to suicidal desire is particularly strong in the subgroup of at-risk participants high on both pain and hopelessness. We utilized the belongingness scale of the INQ to assess connectedness. As predicted, among the subgroup high on both pain and hopelessness (n = 237), there was a robust correlation between connectedness and increased suicidal desire (r = .34, p < .001). However, contrary to expectations, this relationship was not lower among participants without both pain and hopelessness (n = 396, r = .41, p < .001).

Second, we wanted to test the more specific hypothesis that suicidal desire is buffered in individuals with combined pain and hopelessness when connectedness exceeds pain. To do this, we standardized scores for pain and connectedness, and then subtracted connectedness scores from pain. Thus, positive scores indicated that pain exceeds connectedness, whereas negative scores indicated that connectedness exceeds pain. If our hypothesis is correct, this difference score should be a particularly powerful predictor of suicidal desire in the combined pain and hopelessness subgroup, and less predictive of suicidal desire in everyone else. As predicted, the correlation of suicidal desire with the pain-connectedness difference score was strong (r = .46, p < .001) among those high on both pain and hopelessness. However, contrary to expectations, this correlation was similar to that observed among everyone else (r = .47, p < .001).

Step 3: Dispositional, Acquired, and Practical Contributors to Capacity for Suicide Differentiate Attempters from Ideators

T-tests were used to compare suicide capacity (SCS-3 scores) between (a) participants with histories of suicide ideation but not attempts (n = 301), and (b) participants with histories of suicide attempts (n = 161). As predicted, suicide capacity robustly distinguished suicide ideators and attempters: d = .72, p < .001. Similarly, dispositional (d = .29, p < .005), acquired (d = .48, p < .001), and practical d = .87, p < .001) contributors to suicide capacity each distinguished ideators from attempters. Additionally, overall suicide capacity predicted suicide attempt history when controlling for current suicidal desire (partial r_{pb} = .21, p < .001). Similar findings were found for practical (partial r_{pb} = .26, p < .001) and acquired (partial r_{pb} = .11, p = .02) contributors to suicide capacity, but not dispositional contributors (partial r_{pb} = .06, p = .23). In contrast to overall suicide capacity—and consistent with the 3ST—pain, hopelessness, thwarted belongingness, and perceived burdensomeness each failed to predict suicide attempt status over and above suicidal desire (all point-biserial correlations <.09, all ps > .09).

DISCUSSION

As previously noted, our ability to better predict and prevent suicide likely hinges upon a better understanding of the transition from suicidal thoughts to action. The aim of the present study, therefore, was to empirically test the Three-Step Theory (3ST; Klonsky & May, 2015). In brief, the 3ST proposes that (a) suicide ideation develops due to a combination of high levels of both pain and hopelessness, (b) connectedness is a key protective factor against escalating ideation in those high on both pain and hopelessness, and (c) the progression from suicide ideation to attempts occurs when someone has the capacity to face the pain and fear inherent in attempting to end one's own life. Data drawn from our large sample of U.K. university students provide partial support for the theory.

The first tenet of the 3ST, that suicide ideation is driven by the combination of pain and hopelessness, was strongly supported. These two variables significantly

interacted, explaining 56% of the variance in suicidal desire. Moreover, this interaction was statistically reliable in both men and women, as well as in participants both below age 35 and at or above age 35. Furthermore, the model including pain, hopelessness, and their interaction explained 7% more variability in suicide ideation than a comparison model including the variables hypothesized by the Interpersonal Theory of Suicide (Joiner, 2005). Not only are these results consistent with the predictions of the 3ST, but also with research indicating that suicide attempts are more often motivated by pain and hopelessness than by any other factor (May & Klonsky, 2013).

Partial support for the second tenet—that connectedness plays a particularly important protective role against the escalation of suicide ideation in those at greatest risk for ideation (i.e., those high on both pain and hopelessness)—was also found. Specifically, connectedness, as well as the degree to which participants' connectedness exceeded their pain, predicted lower suicide ideation among those with combined pain and hopelessness. However, contrary to our prediction, and in contrast to the findings of Klonsky and May (2015), this relationship was not lower among participants without combined pain and hopelessness. It is worth noting that Klonsky and May (2015) suggest a broad definition of connectedness that can involve connection not only to other people, but also to a valued job, project, role, interest, or any sense of perceived purpose or meaning that keeps one invested in living. This is important to highlight as the measures used in the present study relates to interpersonal connectedness, rather than connectedness in a broader sense. Consequently, it is questionable whether the construct of connectedness was adequately assessed, and it may be that university students have more interpersonal connections than individuals in the general population due to their student status. As such, it is important that future studies develop and validate broader measures of connectedness and examine what components may be missing from existing measures. An alternative explanation for the disparity between our study findings and those of Klonsky and May (2015) is that the theory could have better explanatory power for certain subsets of individuals. This suggestion is consistent with recent work using latent class analysis to distinguish subclasses of individuals with self-injurious thoughts and behavior who display different symptom patterns and risk trajectories over time (Dhingra, Boduszek, & Klonsky, 2016; Logan, Hall, & Karch, 2011). Future research testing the 3ST constructs across different subsets of individuals would, therefore, help to further specify the generalizability of the 3ST to different populations.

The third key tenet of the 3ST, that suicide capacity explains the progression from suicide ideation to attempts, was supported. Results indicated that suicide capacity robustly distinguished suicide ideators and attempters. This finding is consistent with Joiner's (2005) and O'Connor's (2011) emphasis on acquired capability, but also supports the relevance of dispositional and practical contributors to suicide capacity. However, it is important to note that the effect was small and less reliable for dispositional contributors and that much variability in the progression from suicide ideation to attempts remain unexplained. Consequently, it is necessary to explore novel factors that may contribute to action among ideators (Glenn & Nock, 2014). In addition, the measure of suicide capacity used is quite brief and does not cover the full breadth of dispositional, acquired, and practical contributors to capacity. Consequently, it is important for future research to develop more comprehensive measures of suicide capacity. Finally, and consistent with the 3ST, pain, hopelessness, thwarted belongingness, and perceived burdensomeness, all failed to predict suicide attempt status over and above suicidal desire.

The results should be interpreted in light of potential limitations. First, the analysis was based on retrospective self-reports, which may contain inaccuracies due to

reporting biases or forgetting. Consequently, there is a need for future studies to be designed in ways that move us from tests of correlation to the examination of risk factors, mechanisms, moderators, and complex interactions. Prospective and longitudinal studies will be particularly important as a next step to test the usefulness of the 3ST constructs. Second, although the 3ST posits specific and testable mechanisms that differentiate suicide ideators from suicide attempters, as yet, it does not make any predictions in terms of *when* the transition from thought to action will occur, or *how* this transition is expected to unfold. Given that the transition from thoughts to action is typically rapid (Nock, 2010), this constitutes an important direction for future research. It is also important to note that there may be important differences between those who make nonfatal (as in participants in our sample) and those who make fatal suicide attempts. As only a minority of attempters die by suicide, and the majority of those who do die by suicide do so on their first attempt (Nock et al., 2008), further research is needed to determine whether individuals who have made nonfatal attempts provide knowledge that is also relevant to understanding and preventing suicide death.

Despite the aforementioned considerations, the results presented here complement and extend previous research by testing the 3ST in a large sample of U.K. university students. The results indicate that the 3ST is a promising conceptual framework for guiding future research on the development of suicide ideation and behavior.

The findings also have important clinical implications. Applying our results to risk appraisal would suggest that health care professionals should explicitly address the degree to which individuals are currently experiencing feelings of pain and hopelessness, as well as the degree to which they feel connected to others and have capability for lethal self-injury. Addressing the factors that involve or increase an individual's capability for suicide, in particular, may be important, as capability appears to facilitate the transition from ideation to acts. In addition, when considered alongside previous research (e.g., Boduszek & Dhingra, 2015; O'Connor, Fraser, Whyte, MacHale, & Masterton, 2008), findings suggest that prevention efforts targeting a specific type of hopelessness, namely low levels of positive future thinking, may be particularly useful. To this end, we suggest the use of behavioral and cognitive techniques (e.g., behavior activation strategies) to assist individuals to encode and access particular memories (MacLeod & Moore, 2000) and to develop positive schemas (Padesky, 1994). It is anticipated that through such interventions, at-risk individuals (i.e., those high on pain and hopelessness) may be able to access positive memories more frequently, with greater speed and specificity.

In general, the 3ST suggests that any intervention—regardless of type (e.g., medication vs. psychotherapy) or level (e.g., individual vs. community)—will succeed to the extent it decreases pain, increases hope, improves connection, and/or reduces suicide capacity. Future research should examine these four variables as potential mechanisms of change in the treatment of suicide risk and develop and evaluate interventions for suicide risk that specifically target one or more of these variables.

REFERENCES

Beck, A. T., Brown, G. K., & Steer, R. A. (1997). Psychometric characteristics of the Scale for Suicide Ideation with psychiatric outpatients. *Behaviour Research and Therapy*, *35*(11), 1039–1046. https://doi.org/10.1016/S0005-7967(97)00073-9

Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The scale for suicidal ideation. *Journal of Consulting and Clinical Psychology*, *47*, 343–352. https://doi.org/10.1037/0022-006X.47.2.343

Beck, A. T., & Steer, R. A. (1991). *Manual for the beck scale for suicide ideation*. San Antonio, TX: Psychological Corporation.

BECK, A. T., WEISSMAN, A., LESTER, D., & TREXLER, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology*, *42*, 861–865. https://doi.org/10.1037/h0037562

BODUSZEK, D., & DHINGRA, K. (2015). Construct validity of the Beck Hopelessness Scale (BHS) among university students: A multitrait–multimethod approach. *Psychological Assessment*, *28*(10), 1325–1330.

DHINGRA, K., BODUSZEK, D., & KLONSKY, D. (2016). Empirically derived subgroups of self-injurious thoughts and behavior: Application of latent class analysis. *Suicide and Life-Threatening Behavior*, *46*, 486–499. https://doi.org/10.1111/sltb.12232

DHINGRA, K., BODUSZEK, D., & O'CONNOR, R. (2015). Differentiating suicide attempters from suicide ideators using the Integrated Motivational-Volitional Model of suicidal behavior. *Journal of Affective Disorders*, *186*, 211–218. https://doi.org/10.1016/j.jad.2015.07.007

EISENBERG, D., HUNT, J. B., & SPEER, N. (2013). Mental health in American colleges and universities: Variation across student subgroups and across campuses. *Journal of Nervous and Mental Disease*, *201*(1), 60–67. https://doi.org/10.1097/NMD.0b013e31827ab077

GLENN, C. R., & NOCK, M. K. (2014). Improving the short-term prediction of suicidal behavior. *American Journal of Preventive Medicine*, *47*(3), S176–S180. https://doi.org/10.1016/j.amepre.2014.06.004

HARROD, C. S., GOSS, C. W., STALLONES, L., & DI GUISEPPI, C. (2014). Interventions for primary prevention of suicide in university and other post-secondary educational settings. *Cochrane Database of Systematic Reviews*, *10*, Cd009439.

HOLDEN, R., MEHTA, K., CUNNINGHAM, E. J., & MCLEOD, L. D. (2001). Development and preliminary validation of a scale of psychache. *Canadian Journal of Behavioural Science*, *33*(4), 224–232. https://doi.org/10.1037/h0087144

JOINER, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

KLONSKY, E. D., & MAY, A. M. (2014). Differentiating suicide attempters from suicide ideators: A critical frontier for suicidology research. *Suicide and Life-Threatening Behavior*, *1*, 1–5. https://doi.org/10.1111/sltb.12068

KLONSKY, E. D., & MAY, A. M. (2015). The three-step theory (3ST): A new theory of suicide rooted in the "ideation-to-action" framework. *International Journal of Cognitive Therapy*, *8*(2), 114–129. https://doi.org/10.1521/ijct.2015.8.2.114

KLONSKY, E. D., QUI, T., & SAFFER, B. Y. (2017). Recent advances in differentiating suicide attempters from suicide ideators. *Current Opinion in Psychiatry*, *30*, 15–20. https://doi.org/10.1097/YCO.0000000000000294

LOGAN, J., HALL, J., & KARCH, D. (2011). Suicide categories by patterns of known risk factors: A latent class analysis. *Archives of General Psychiatry*, *68*(9), 935–941. https://doi.org/10.1001/archgenpsychiatry.2011.85

MACLEOD, A. K., & MOORE, R. (2000). Positive thinking revisited: Positive cognitions, well- being and mental health. *Clinical Psychology and Psychotherapy*, *7*, 1–10. https://doi.org/10.1002/(ISSN)1099-0879

MAY, A. M., & KLONSKY, E. D. (2013). Assessing motivations for suicide attempts: Development and psychometric properties of the inventory of motivations for suicide attempts. *Suicide and Life-Threatening Behavior*, *43*(5), 532–546.

MAY, A. M., & KLONSKY, E. D. (2016). What distinguishes suicide attempters from suicide ideators? A meta-analysis of potential factors. *Clinical Psychology: Science and Practice*, *23*, 5–20. https://doi.org/10.1111/cpsp.12136.

NOCK, M. K. (2010). Self-injury. *Annual Review of Clinical Psychology*, *6*, 339–363. https://doi.org/10.1146/annurev.clinpsy.121208.131258

NOCK, M. K., BORGES, G., BROMET, E. J., CHA, C. B., KESSLER, R. C., & LEE, S. (2008). Suicide and suicidal behavior. *Epidemiologic Reviews*, *30*, 133–154. https://doi.org/10.1093/epirev/mxn002

NOCK, M. K., HOLMBERG, E. B., PHOTOS, V. I., & MICHEL, B. D. (2007). The self-injurious thoughts and behaviors interview: Development, reliability, and validity in an adolescent sample. *Psychological Assessment*, *19*, 309–317. https://doi.org/10.1037/1040-3590.19.3.309

O'CONNOR, R. C. (2011). The integrated motivational-volitional model of suicide behavior. *Crisis*, *32*, 295–298. https://doi.org/10.1027/0227-5910/a000120

O'CONNOR, R. C., FRASER, L., WHYTE, M. C., MACHALE, S., & MASTERTON, G. (2008). A comparison of specific positive future expectancies and global hopelessness as predictors of suicidal ideation in a prospective study of repeat self-harmers. *Journal of Affective Disorders*, *110*(3), 207–214. https://doi.org/10.1016/j.jad.2008.01.008

O'CONNOR, R. C., & NOCK, M. K. (2014). The psychology of suicidal behavior. *Lancet Psychiatry*, *1*, 73–85. https://doi.org/10.1016/S2215-0366(14)70222-6

ONS (2016). *Total number of deaths by suicide or undetermined intent for Students aged 18 and above in England and Wales, 2014*. Retrieved November 15, 2016, from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/adhocs/005732totalnumberofdeathsbysuicideorundeterminedintentforstudentsaged18andaboveinenglandandwales2014.

Padesky, C. A. (1994). Schema change processes in cognitive therapy. *Clinical Psychology and Psychotherapy*, *1*, 267–278. https://doi.org/10.1002/cpp.5640010502

Robins, A., & Fiske, A. (2009). Explaining the relation between religiousness and reduced suicidal behavior: Social support rather than specific beliefs. *Suicide and Life-Threatening Behavior*, *39*, 386–395. https://doi.org/10.1521/suli.2009.39.4.386

Shneidman, E. S. (1993). *Suicide as psychache: A clinical approach to self-destructive behavior*. Northfield, NJ: Jason Aronson.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575–600. https://doi.org/10.1037/a0018697

Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E., Jr, (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology*, *76*(1), 72–83. https://doi.org/10.1037/0022-006X.76.1.72

Wong, M. M., Brower, K. J., & Zucker, R. A. (2011). Sleep problems, suicidal ideation, and self-harm behaviors in adolescence. *Journal of Psychiatric Research*, *45*(3), 505–511. https://doi.org/10.1016/j.jpsychires.2010.09.005

World Health Organization (2016). *World Health Organization (WHO) Suicide data*. Retrieved June 8, 2016, from http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/

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