Available online at www.sciencedirect.com

ScienceDirect

Comprehensive Psychiatry 54 (2013) 996–1002

COMPREHENSIVE PSYCHIATRY

www.elsevier.com/locate/comppsych

# Low distress tolerance as an indirect risk factor for suicidal behavior: Considering the explanatory role of non-suicidal self-injury

Michael D. Anestis[a,*], Stephanie M. Pennings[a], Jason M. Lavender[b,c], Matthew T. Tull[d], Kim L. Gratz[d]

[a]University of Southern Mississippi, Hattiesburg, MS, USA
[b]Neuropsychiatric Research Institute, Fargo, ND, USA
[c]University of North Dakota School of Medicine and Health Sciences, Fargo, ND, USA
[d]University of Mississippi Medical Center, Jackson, MS, USA

**Abstract**

Although some theorists conceptualize the relationship between emotion dysregulation and suicidal behavior as direct, recent research suggests that this relationship may be indirect and mediated by repeated experiences with certain behaviors (e.g., non-suicidal self-injury; NSSI) common among individuals with heightened emotion dysregulation. To date, however, this research has been limited in both scope (e.g., examining few components of emotion dysregulation) and generalizability (e.g., over-emphasis on undergraduate samples). This study sought to extend the research in this area by examining the mediating role of NSSI in the association between one relevant aspect of emotion dysregulation (i.e., low distress tolerance [DT]) and suicidal behavior with a clear intent to die among an at-risk sample of substance use disorder (SUD) patients in residential treatment. SUD patients ($N$ = 93) completed a structured interview assessing past suicidal behavior and questionnaires assessing DT and NSSI. Consistent with hypotheses, results revealed a significant indirect association between low DT and lifetime suicide attempts through NSSI frequency. These results suggest that exposure to painful and provocative events through experience with NSSI may be one pathway through which certain facets of emotion dysregulation increase the risk for suicidal behaviors (consistent with theories that individuals low in DT may be unable and/or unwilling to engage in suicidal behavior unless they have experienced sufficient levels of painful and/or provocative events capable of changing their relationship with and experience of pain and fear of death).


Suicide is a pernicious problem that claims the lives of approximately 1 million individuals worldwide [1] and 38,000 individuals within the United States alone [2] annually. Accordingly, substantial research has focused on identifying risk factors for both non-lethal and lethal suicidal behavior, with results of these studies yielding information that has greatly enhanced the ability to detect and mitigate suicide risk. Nonetheless, a number of misperceptions regarding suicidal behavior persist [3], many of which are based in sound reasoning but run counter to empirical data. One such misperception concerns the association between emotion dysregulation and suicidal behavior.

Emotion dysregulation is a broad construct that encompasses difficulties identifying, accepting, modulating, and adaptively responding to affective experiences (e.g., Gratz and Roemer [4]). Historically, emotion dysregulation has been considered an important risk factor for suicidal behavior, theorized to increase the risk for this behavior directly (with individuals engaging in lethal self-harm in an effort to escape or avoid unwanted distress; [5,6]). Empirical work testing this theory, however, suggests that this relationship may be more complex.

Specifically, studies examining the association between suicidal behavior and emotion dysregulation in general have produced mixed results. Whereas some studies have failed to find an association between suicidal behavior and emotion dysregulation (e.g., Tamas et al. [7]), others (e.g., Zlotnick et al. [8]) have found that emotion dysregulation demonstrates a significant zero-order correlation with suicidal behavior but does not differentiate between individuals hospitalized due to suicidal behavior versus severe suicidal ideation. Such inconsistencies in the literature highlight the need for more

* Corresponding author.
*E-mail address:* michael.anestis@usm.edu (M.D. Anestis).

0010-440X/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.comppsych.2013.04.005

nuanced examinations of the relation between emotion dysregulation and suicidal behavior (as aspects of each may evidence differential associations with one another). Indeed, a clearer picture has emerged from studies examining the interrelations of two specific dimensions of emotion dysregulation (i.e., negative urgency and low distress tolerance) with two facets of the Interpersonal Psychological Theory of Suicidal Behavior (IPTS; [9]): suicidal desire (comprised of thwarted belongingness and perceived burdensomeness) and the acquired capacity for suicide (comprised of heightened pain tolerance and a diminished fear of death and bodily harm; [10]) [9].

The general pattern of results from studies examining these two dimensions of emotion dysregulation in particular suggests a bifurcated relationship with IPTS theory components. For instance, in a sample of undergraduates, Anestis et al. [11] found that both high levels of negative urgency (i.e., the tendency to act rashly when experiencing negative affect) [12] and low levels of distress tolerance (the inability or unwillingness to function in the context of negative affective states) [13] were associated with greater suicidal desire but lower levels of the acquired capability for suicide. Likewise, low levels of behaviorally indexed distress tolerance have been found to predict lower acquired capability in undergraduate samples [14], suggesting that individuals who experience difficulties tolerating and persisting in the face of negative affect may find it particularly difficult to engage in suicidal behavior. Providing further support for this theory, the associations between suicidal behavior and both borderline personality disorder (BPD) and posttraumatic stress disorder (PTSD) have been found to increase in magnitude at higher levels of behaviorally indexed distress tolerance [15,16] among inpatients with substance use disorders (SUDs). These findings suggest that high levels of distress tolerance may be necessary to facilitate suicidal behavior in high-risk populations.

Despite evidence that low levels of distress tolerance may pose a barrier to suicidal behavior, disorders characterized by low distress tolerance (such as BPD and SUDs; e.g., Howell et al. [17]; Linehan [6]) have been found to be associated with elevated rates of suicidal behavior and death by suicide (e.g., Bornovalova et al. [18–20], Frances et al. [18–20], and Skodol et al. [18–20]) These findings suggest the need for additional research to clarify the relation between low distress tolerance and suicidal behavior. The IPTS suggests that whereas low distress tolerance may have a direct relation to suicidal desire, its relation to both the acquired capability and suicidal behavior per se may be indirect and mediated by exposure to painful and/or provocative experiences (for research in support of this theory, see Anestis et al. [15]). Specifically, the underlying premise of the acquired capability for suicide is that individuals develop the capacity to engage in lethal self-harm through repeated exposure to painful and/or provocative events. Repeated exposure to such experiences is thought to both influence an individual's relationship with and experience of pain and diminish the fear of death and bodily harm. Thus, one key consideration in the relation between low distress tolerance and suicidal behavior may be the extent to which the particular strategies used to escape or avoid unwanted emotional distress among those with low distress tolerance (e.g., disordered eating behaviors, substance use, self-injury; see Anestis et al. [21]; Gratz et al. [22]) are painful and/or provocative. This in turn is likely to differ between clinical and nonclinical populations. For example, in nonclinical populations, individuals with low distress tolerance might engage in behaviors that, although problematic, are unlikely to involve sufficient pain and/or provocation to facilitate the acquired capability (e.g., binge eating). In clinical samples, however, low distress tolerance might lead to more extreme dysregulated behaviors (e.g., non-suicidal self-injury; NSSI) that are sufficiently painful and/or provocative to increase the acquired capability for suicide and, thus, risk for suicidal behavior (see Van Orden et al. [23]). Indeed, Selby et al. [24] have posited that the acquired capability for suicide may differentiate emotionally dysregulated individuals who engage in NSSI from those who engage in less painful and/or provocative behaviors (e.g., binge eating). Further findings in support of this theory may help clarify the relation between low distress tolerance and suicidal behavior, suggesting that the vulnerability to suicidal behavior seen among individuals with low distress tolerance may be due to their use of painful and/or provocative behaviors to escape or avoid unwanted emotions rather than their low distress tolerance itself.

This study sought to extend extant research on the relation between low distress tolerance and suicidal behavior by examining the extent to which this relation is accounted for by a history of painful and/or provocative experiences within an at-risk clinical sample of SUD patients (found to exhibit both high rates of suicidal behavior and low levels of distress tolerance; e.g., Bornovalova et al. [18,25]). To this end, we examined distress tolerance, suicidal behaviors with a clear intent to die, and frequency of NSSI (a relevant painful and provocative experience linked to both suicidal behaviors and the acquired capability for suicide; see Van Orden et al. [23]) among patients in a residential SUD treatment center. Consistent with prior findings that painful and/or provocative experiences account for the relation between other dimensions of emotion dysregulation (i.e., negative urgency) and suicidal behaviors (e.g., Anestis et al. [15]), we hypothesized that the association between low distress tolerance and lifetime suicide attempts would be indirect and mediated by NSSI frequency. Findings in support for our hypotheses would contribute to an emerging body of research suggesting that whereas emotion dysregulation may present an obstacle to suicidal behavior, repeated experiences with certain behaviors stemming from emotion dysregulation may facilitate overcoming those obstacles (leading to increased risk for suicidal behaviors).