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Empirical Research

Valued living, life fulfillment, and suicide ideation among psychiatric inpatients: The mediating role of thwarted interpersonal needs

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A B S T R A C T

Suicide is one of the leading causes of death in psychiatric hospitals with an estimated rate of 100–400 per 100,000 admissions. The current study aimed to examine suicide ideation among psychiatric inpatients utilizing perspectives from the psychological flexibility model (Hayes, Strosahl, & Wilson, 2012) and the interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010) to better understand suicide risk among psychiatric inpatients. We hypothesized that valued living (i.e., connection with one's values and committed action) and life fulfillment would each be negatively associated with suicide ideation and that these relations would be mediated by thwarted interpersonal needs (i.e., additive effect of thwarted belongingness and perceived burdensomeness) in parallel. We also hypothesized that the direct and indirect association between valued living and suicide ideation would be moderated by life fulfillment, such that those lower in life fulfillment would report a stronger direct and indirect association between valued living and suicide ideation. Results obtained from bootstrapped parallel mediation regression procedures indicated greater valued living and life fulfillment were each associated with lower thwarted interpersonal needs and suicide ideation. Further, a significant interaction between valued living and life fulfillment suggests those lower in both valued living and life fulfillment reported the greatest suicide ideation. Research examining the psychological flexibility model in the context of the interpersonal theory of suicide may improve suicide risk conceptualization, assessment and treatment among psychiatric inpatients.

1. Introduction

Suicide is the 17th leading cause of death worldwide (World Health Organization, 2017) and the 10th leading cause of death in the United States (Centers for Disease Control & Prevention, 2017). Suicide is also one of the leading causes of death in psychiatric hospitals (Maris, 2002) with an estimated rate of 100–400 per 100,000 admissions (Combs & Romm, 2007) and elevated rates of suicide ideation are reported among psychiatric inpatients (Ellis, Green, Allen, Jobes, & Nadorff, 2012). Given the diagnostic heterogeneity among psychiatric inpatients who experience suicide ideation (Healy, Barry, Blow, Welsh, & Milner, 2006), an examination of transdiagnostic, theory-driven factors may improve suicide risk conceptualization and lead to more effective suicide-specific psychological treatments.

Acceptance and commitment therapy (ACT), which is grounded in the psychological flexibility model (Hayes, Strosahl, & Wilson, 2012), has been shown to be an efficacious therapeutic approach for a variety of conditions (Atkins et al., 2017) and aims, in part, to increase behaviors that are congruent with one's identified values (Hayes et al., 2012). Processes underlying the psychological flexibility model, namely connection with one's values and committed action (i.e., valued living), may be particularly relevant to suicide risk. Values, a universal cross-cultural construct (Ciarrochi & Bailey, 2008), refers to "freely chosen, verbally constructed consequences of ongoing, dynamic, evolving patterns of activity, which establish predominant reinforces for that activity that are intrinsic in engagement in the valued behavioral pattern itself" (Hayes et al., 2012, p. 298 as cited in Wilson (2009), p. 66). The psychological flexibility model proposes that individuals naturally possess values; however, some individuals have an impaired awareness of, and connection with, their values (Hayes et al., 2012). Committed action, the second component of valued living, refers to "a values-based action … that is deliberately linked to creating a pattern of action that serves the value" (Hayes et al., 2012, p. 328). Committed action extends beyond connecting with one's values to incorporating values-congruent behaviors into one's life. A related, but distinct, construct to valued living is life fulfillment, or the sense of fulfillment in life due to recognizing and living in accordance with personal values (Trompetter et al., 2013). The psychological flexibility model suggests that

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decreased valued living is linked to human suffering and maladaptive functioning (Hayes et al., 2012), which may also be driven by one's lack of fulfillment in life. In fact, research suggests that increased engagement in valued behaviors precedes reductions in suffering (Gloster et al., 2017). From this perspective, the human suffering and psychological pain inherent in suicide ideation (Shneidman, 1993) may be due to a lack of valued living and life fulfillment.

Less valued living and life fulfillment may be directly associated with greater suicide ideation. For instance, preliminary research suggests a direct link between valued living and suicide ideation, such that values identification and values attainment, but not their statistical interaction, was associated with lower odds of reporting suicide ideation among veterans seeking outpatient mental health care (Bahraini et al., 2013). Additionally, a sense of fulfillment in life based on one's values-congruent behaviors may also be directly associated with suicide ideation, as meaning in life has been found to predict decreased suicide ideation over time (Kleiman & Beaver, 2013). Further, there may be a statistical interaction between valued living and life fulfillment, such that individuals reporting greater valued living *and* greater life fulfillment may report less suicide ideation compared with those reporting greater valued living but less life fulfillment. That is, reduced life fulfillment may confer greater risk for suicide ideation among those with greater valued living.

The integration of a well-supported theory of general psychological health and human suffering (i.e., the psychological flexibility model) with a theory of suicide risk may advance our understanding of suicide risk among psychiatric inpatients by helping to explain the association between valued living and suicide ideation and life fulfillment and suicide ideation. The interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010) is a leading theory of suicide, which has been examined in psychiatric inpatient samples (Cero, Zuromski, Witte, Ribeiro, & Joiner, 2015; Jahn, Cukrowicz, et al., 2015; Mitchell et al., 2016; Monteith, Menefee, Pettit, Leopoulos, & Vincent, 2013; Taylor et al., 2016). The interpersonal theory of suicide posits thwarted belongingness (indicated by a lack of social connectedness or reciprocal caring relationships) and perceived burdensomeness (indicated by feelings of self-hate and a perception that one is a liability on others) are *proximally* associated with suicidal desire (i.e., active suicide ideation; Joiner, 2005; Van Orden et al., 2010). When thwarted belongingness and perceived burdensomeness are experienced independently, passive suicide ideation is theorized to occur, whereas the simultaneous presence of thwarted belongingness and perceived burdensomeness (i.e., thwarted interpersonal needs) accompanied by as sense of hopelessness about these states changing, leads to active suicide ideation. Thwarted interpersonal needs, which refers to the combined effect of thwarted belongingness and perceived burdensomeness, have been found to significantly mediate the relations between various psychological constructs (e.g., shame, guilt, anger, need satisfaction) and suicide ideation in community and clinical samples (Baams, Grossman, & Russell, 2015; Forrest et al., 2016; Hawkins et al., 2014; Jahn, Poindexter, et al., 2015; Poindexter et al., 2015; Roush, Brown, Mitchell, & Cukrowicz, 2016; Tucker & Wingate, 2014). It is evident that thwarted interpersonal needs may explain sometimes otherwise atheoretical associations found between variables of interest and suicide ideation.

Thwarted interpersonal needs may also mediate the negative associations between valued living and suicide ideation, and life fulfillment and suicide ideation. That is, individuals may believe their values-incongruent behavior negatively impacts their interpersonal relationships, leading to thwarted interpersonal needs. Nearly all aspects of valued living and life fulfillment likely involve some relation to interpersonal relationships, which may be traced to the fundamental need to belong that requires one to form and maintain interpersonal relationships (Baumeister & Leary, 1995). For instance, valuing relationships, achievement, and security was negatively associated with thwarted interpersonal needs among veterans (Monteith, Pease, Forster, Homaifar, & Bahraini, 2015). The interpersonal theory of suicide posits that thwarted belongingness and perceived burdensomeness, when experienced simultaneously, are *proximal* and sufficient causes of suicide ideation (Van Orden et al., 2010). In support of this postulation, research using longitudinal and ecological momentary assessment methodologies indicates that greater perceived burdensomeness predicts prospective increases in suicide ideation (Kleiman et al., 2017; Teismann, Forkmann, Rath, Glaesmer, & Margraf, 2016). As such, it is expected that thwarted interpersonal needs, as opposed to values or life fulfillment, would statistically mediate the relation between valued living and suicide ideation, and life fulfillment and suicide ideation. Therefore, the current study aimed to examine how valued living and life fulfillment may be negatively associated with suicide ideation through thwarted interpersonal needs.

The current study is the first to examine the potential role of thwarted interpersonal needs as mediators in the relation between values and suicide ideation, and life fulfillment and suicide ideation. Given that a sense of fulfillment in life due to recognizing and living in accordance with personal values may provide additional information regarding suicide risk that is distinct from valued living itself, we sought to utilize a global assessment of valued living (i.e., values and committed action) that also provides useful information regarding life fulfillment (Trompetter et al., 2013). First, we hypothesized that valued living would be negatively associated with suicide ideation and this relation would be mediated by thwarted belongingness and perceived burdensomeness in parallel. Second, we hypothesized that life fulfillment would be negatively associated with suicide ideation and this relation would be mediated by thwarted belongingness and perceived burdensomeness in parallel. Third, we hypothesized that the direct and indirect association between valued living and suicide ideation would be moderated by life fulfillment, such that those lower in life fulfillment would report stronger direct and indirect associations between valued living and suicide ideation.

2. Method

2.1. Participants

Participants were 118 adult psychiatric inpatients (M_{age} = 36.17, SD_{age} = 15.30) in the southwest United States. The sample consisted of 63 males (53.4%) and 55 females (46.6%). Most of the sample identified as non-Hispanic (n = 82, 69.5%) followed by Hispanic (n = 34, 28.8%), and 2 participants (1.7%) did not indicate an ethnicity. Most of the sample also identified as White or Caucasian (n = 95, 80.5%), followed by “other” (n = 9; 7.6%), Black or African American (n = 6, 5.1%), American Indian or Native American (n = 4, 3.4%), and Asian or Asian American (n = 1, 0.8%). Participants were eligible to participate if they were at least 18 years of age and able to speak and read English and exclusionary criteria included incapacity to consent to participation in the study. Although data on reason for admission was not collected, 49.2% (n = 58) reported at least one previous suicide attempt, 39.8% (n = 47) reported previous non-suicidal self-injury, and 50.8% (n = 60) reported at least one previous psychiatric hospitalization prior to their current admission. On average, participants reported significant depressive symptoms over the past week, as evidenced by elevated scores (M = 34.77, SD = 12.59) on the Center for Epidemiological Studies—Depression Scale (Radloff, 1977).

2.2. Procedures

All procedures were conducted in accordance with the approved university and hospital Institutional Review Board protocols. Participants were recruited individually on a psychiatric inpatient unit with an average approximate length of stay of three to five days and asked to complete a battery of self-report questionnaires in a private room. Exclusion criteria included incapacity to provide consent and