



ELSEVIER

Contents lists available at ScienceDirect

## Journal of Affective Disorders

journal homepage: [www.elsevier.com/locate/jad](http://www.elsevier.com/locate/jad)

## Research report

# Near-term predictors of the intensity of suicidal ideation: An examination of the 24 h prior to a recent suicide attempt



Courtney L. Bagge<sup>a,\*</sup>, Andrew K. Littlefield<sup>b,1</sup>, Kenneth R. Conner<sup>c,2</sup>,  
Julie A. Schumacher<sup>a,3</sup>, Han-Joo Lee<sup>d,4</sup>

<sup>a</sup> University of Mississippi Medical Center, Department of Psychiatry and Human Behavior, 2500 North State Street, Jackson, MS 39216, United States

<sup>b</sup> Texas Tech University, Department of Psychology, Lubbock, TX 79409, United States

<sup>c</sup> VISN 2 Center of Excellence for Suicide Prevention, 400 Fort Hill Avenue, Canandaigua, NY 14424, United States

<sup>d</sup> University of Wisconsin–Milwaukee, Department of Psychology, 2441 E. Hartford Avenue, Garland 211, Milwaukee, WI 53211, United States

## ARTICLE INFO

## Article history:

Received 21 March 2014

Accepted 11 April 2014

Available online 18 April 2014

## Keywords:

Suicide ideation

Suicide attempt

Warning signs

Alcohol

Substance use

Negative life events

Acute risk factors

## ABSTRACT

**Background:** The extent to which acute exposures such as alcohol use (AU) and negative life events (NLE) are uniquely associated with intensity of suicidal ideation during the hours leading up to a suicide attempt is unknown. The main aim of the current study was to quantify the unique effect of acute exposures on next-hour suicidal ideation when adjusting for previous hour acute exposures and suicidal ideation. An exploratory aim of the current study was to examine the effect of non-alcohol drug use (DU) on suicidal ideation.

**Methods:** Participants included 166 (61.0% female) recent suicide attempters presenting to a Level 1 trauma hospital. A timeline follow-back methodology was used to assess acute exposures and intensity of suicidal ideation within the 24 h prior to the suicide attempt.

**Results:** Findings indicated that acute AU ( $b=.20, p < .01$ ) and NLE ( $b=.58, p < .01$ ) uniquely predicted increases in next-hour suicidal ideation, over and above previous hour suicidal ideation, whereas acute DU did not.

**Limitations:** The current study's methodology provides continuous hourly snapshots prior to the suicide attempt, quite close to when it happened, but is retrospective and causality cannot be inferred.

**Conclusions:** Understanding that, within a patient, AU and NLE predict near-term increases in suicidal ideation has practical utility impacting providers' clinical decision-making, safety concerns, and ultimate determination of level of risk for suicide.

Published by Elsevier B.V.

## 1. Introduction

Suicidal behaviors are deliberate acts of self-harm with at least some intent to die that may result in death (as is the case with suicide) or may be survived (as is the case with suicide attempts; Silverman et al., 2007). It is widely believed that suicidal thoughts are a precondition for suicidal behavior; in other words, one must formulate the idea to engage in a suicidal act before taking such action (e.g., Kessler et al., 1999). Accordingly, proximal suicide contemplation preceding suicidal behavior (i.e., Bagge et al., 2013a) may serve as a

key target for prevention and intervention efforts. Importantly, suicide contemplation is shown to fluctuate over time (i.e., vary within person; e.g., Nock et al., 2009). Thus, from a prevention perspective, it is critical to understand what near-term factors predict the intensification of suicidal ideation preceding suicidal behavior, within a given person and across clinically relevant time frames, such as hours to days. A focus on such time frames is critical for providers tasked with determining whether a patient is at imminent risk. The current study uses novel methods (Bagge et al., 2013a–2013c) to examine whether known key risk factors for suicidal behavior (e.g., acute alcohol use [AU] and negative life events [NLE]) are proximally associated with the subsequent intensification of suicidal ideation during the 24 h prior to a suicide attempt.

There are meager data on suicidal thoughts immediately preceding suicidal behavior. Investigations of predictors of suicidal ideation and behavior have been dominated by retrospective reports with long recall periods (e.g., Conner et al., 2007; Kessler et al., 1999) and cohort studies that measure suicidal ideation far ahead of the occurrence of suicidal behavior (e.g., Brown et al., 2000; Borges et al., 2008). Notably,

\* Corresponding author. Tel.: +1 601 984 5824; fax: +1 601 984 5867.

E-mail addresses: [cbagge@umc.edu](mailto:cbagge@umc.edu) (C.L. Bagge), [andrew.littlefield@ttu.edu](mailto:andrew.littlefield@ttu.edu) (A.K. Littlefield), [ken.conner@va.gov](mailto:ken.conner@va.gov) (K.R. Conner), [jschumacher@umc.edu](mailto:jschumacher@umc.edu) (J.A. Schumacher), [leejh@uwm.edu](mailto:leejh@uwm.edu) (H.-J. Lee).

<sup>1</sup> Tel.: +806 834 3746; fax: +806 742 0818.

<sup>2</sup> Tel.: +585 393 7548; fax: +585 393 7985.

<sup>3</sup> Tel.: +601 815 5588; fax: +601 984 5867.

<sup>4</sup> Tel.: +414 229 5858; fax: +414 229 5219.

these studies are not well suited to uncover suicidal thoughts occurring proximally to suicidal behavior. In recent years, several studies have used ecological momentary assessment methodology (Shiffman et al., 2008) and closely related techniques in an effort to examine near-term precursors of suicidal thoughts. These types of investigations focused on the link between acute negative affective states and suicidal thoughts. For instance, researchers demonstrated that a range of negative affective states co-occur with suicidal ideation within individuals (Nock et al., 2009), and also presence, or intensity, of these states predict suicidal ideation in the subsequent hour (Ben-Zeev et al., 2011) or day (Links et al., 2007). Notably, the outcomes of all of these investigations included suicidal thoughts that did not immediately precede a suicide attempt. Given that a minority of individuals with suicidal ideation will ultimately make a suicide attempt and suicidal thoughts are infrequently followed by suicidal acts (Klonsky and May, 2014), understanding the configuration of hours leading up to a suicide attempt is of critical clinical interest.

A second limitation of studies examining suicidal thoughts using ecological momentary assessment approaches is the common use of narrowly defined samples, for example individuals with borderline personality disorder with history of recurrent suicidal behavior (Links et al., 2007; Nisenbaum, et al., 2010), patients hospitalized for depression (Ben-Zeev et al., 2011), and individuals at high risk for psychosis (Palmier-Claus et al., 2012), with unclear generalizability to the broader population of individuals who attempt suicide or die by suicide.

A third limitation of previous research is that the vast majority of studies examining risk for suicidal thoughts and behavior focus on between-person designs (Bagge et al., 2013b). This is a key point because differences between persons are not directly informative of the unfolding of risk immediately preceding an event (Curran and Bauer, 2011). For example, an individual is at higher risk for a myocardial infarction while (or soon after) exercising (a within-person analysis). Yet one could not infer this fact from data showing that people with regular exertion through exercise are at lower risk for myocardial infarction (between-person analysis; as discussed by Curran and Bauer, 2011). In regards to suicidal thoughts (and behavior), in emergency settings for example, it is often clear that an individual belongs to a higher risk group (a between-persons concept indicative of “who” is at greater risk for a specified outcome) based on prior history and present circumstances. Yet the most pressing question to be answered by treating clinicians is *when* a particular *individual* is at high-risk in the short-term and, if so, how best to protect him/her from harm (a within-persons question indicative of “when” someone is at higher risk for a specified outcome). Although between-level analyses are informative, they do not speak to understanding what predicts fluctuations within a given person for a specific outcome (e.g., what relates to changes in suicidal ideation within a given individual?). Thus, examination of within-person change proximal to a suicide attempt is uniquely suited to inform the understanding of the unfolding of acute risk, and identifying predictors of changes in suicidal thoughts prior to suicidal behavior can provide key insights into the determination of imminent risk. To understand this process, intensive repeated measures need to be captured (e.g., multiple assessments of suicidal ideation) and examined within an analytic framework that distinguishes within-person fluctuations from between-person differences.

Addressing the above limitations in the literature, the current study uses a general sample of hospitalized recent suicide attempters to examine acute exposures (i.e., AU and NLE) as predictors of hourly within-person changes in suicidal ideation prior to a documented non-fatal suicide attempt. We selected NLEs and AU for four reasons. (1) They are observable experiences that are separable (both conceptually and practically) from suicidal thoughts. (2) They are discrete experiences that may occur (or recur) within a short time of suicidal thoughts (and behavior). (3) Cogent theoretical arguments have been

made that both NLEs (van Heeringen, 2012) and AU (Hufford, 2001) confer acute risk for suicidal thoughts and behavior. 4) Research shows that interpersonal NLEs are common contexts in which suicidal thoughts occur (Nock et al., 2009) and that AU (Bagge et al., 2013c; Borges et al., 2004; Borges and Rosovsky, 1996; Branas et al., 2011) and NLEs (particularly interpersonal stressors; Bagge et al., 2013b; Conner et al., 2012; Foster, 2011) confer acute risk for suicidal behavior, after adjustment for other risk factors. Importantly, the current study builds upon previous literature by determining whether acute NLEs and AU relate to hourly changes in suicidal ideation proximally tied to a suicide attempt.

In the current paper we used novel timeline followback methodology (Bagge et al., 2013b, 2013c) and hierarchical linear modeling to examine whether NLEs and AU are near-term predictors of within-person change in the intensity of suicidal thoughts during the 24 h period prior to a suicide attempt. We chose 24 h based on data including studies using within-person designs that NLEs (Bagge et al., 2013b; Conner et al., 2012) and AU (Bagge et al., 2013c; Borges and Loera, 2010 for review) are elevated within 24 h of a suicide attempt compared to control periods. To our knowledge, this is the first large-scale study to characterize suicidal thoughts on an hourly basis prior to suicide attempts and the first to test hypothesized associations of NLEs (or AU) with such thoughts. The study had three specific aims: (1) Examine whether presence of acute exposures (any AU, any NLE) increased risk for subsequent hour suicidal ideation, when adjusting and not adjusting for previous hour suicidal ideation; (2) Determine whether a specific acute exposure will uniquely increase risk for subsequent hour suicidal ideation, when adjusting for other acute exposures, and with and without adjusting for previous hour suicidal ideation; and (3) Explore the association of acute non-alcohol drug use (any DU) on the presence and intensity of suicidal ideation; this aim is exploratory in light of meager controlled data on risk associated with acute DU for suicide attempts (see Borges and Loera, 2010 for review). Given the small body of research to date examining near-term within-person predictors of suicidal ideation, and that no study has examined within-person changes in ideation proximally tied to a suicide attempt, no hypotheses were made regarding exposure-specific effects on suicidal ideation.

## 2. Method

### 2.1. Participants

We recruited patients, between the ages of 18 and 64, who presented to a Level 1 trauma hospital within 24 h after a suicide attempt (i.e., a self-inflicted behavior with some intent to die; Silverman et al., 2007). A consecutive sample of suicide attempt patients was recruited between October, 2008 and December, 2012 ( $n=248$ ; see Bagge et al., 2013c for further details). Beginning with participant 47, the researchers began to collect hourly assessments of suicidal ideation, providing the sample for the current analysis of predictors of hourly suicidal ideation. Beginning with participant 121, subjects received \$35 for their time and interviews were audiotaped. Notably, 81.5% of those approached by study personnel were enrolled.

The current study uses data from participants with complete data (listwise-deletion  $n=166$ ).<sup>1</sup> This sample included 61% females, mean age was 36.61 years ( $SD=11.27$ ), and the ethnic/racial composition was 64% White and 36% Minority (Black/Other Race/Ethnicity).

<sup>1</sup> Supplemental models using all available data yielded an identical pattern of significance and nearly identical estimates as those presented throughout the manuscript. Given this, we present estimates from those with complete data to facilitate communication of results by having non-varying  $ns$  throughout the manuscript.

Download English Version:

<https://daneshyari.com/en/article/4185991>

Download Persian Version:

<https://daneshyari.com/article/4185991>

[Daneshyari.com](https://daneshyari.com)