



Review

A meta-analytic review of the association between agitation and suicide attempts☆



Megan L. Rogers ^{*}, Fallon B. Ringer, Thomas E. Joiner

Florida State University, United States

HIGHLIGHTS

- Agitation has been implicated as a risk factor for suicide in recent literature.
- We conducted a meta-analysis on the agitation-suicidal behavior association.
- There exists a moderate positive association between agitation and suicidal behavior.
- More research is needed to better understand short-term suicide risk.

ARTICLE INFO

Article history:

Received 29 February 2016
 Received in revised form 5 May 2016
 Accepted 14 June 2016
 Available online 16 June 2016

Keywords:

Agitation
 Suicide
 Suicide attempts
 Meta-analysis

ABSTRACT

Agitation has been implicated as an acute risk factor for suicidal behavior, yet the literature to date has not been consolidated to better understand this relationship. We conducted a meta-analysis of the association between agitation and suicidal behavior to synthesize the existing literature ($k = 13$ studies) and point out future directions for research. Results indicated that the association between agitation and suicidal behavior is moderate (Hedge's $g = 0.40$, $p = 0.007$, 95% CI [0.08, 0.72]). Follow-up meta-regressions revealed that age, gender, and year of publication were not significant moderators of the magnitude of this relationship. However, there was evidence of publication bias, as shown by a funnel plot and Egger's test. These findings suggest the importance of future research that examines the nature of the association between agitation and suicidal behavior longitudinally and with novel research designs, as implications for clinical practice and suicide risk assessment may be substantial.

© 2016 Elsevier Ltd. All rights reserved.

Contents

1. Introduction	2
2. Methods	2
2.1. Study selection	2
2.2. Dependent effect sizes	2
2.3. Data extraction and statistical analyses	3
3. Results	4
4. Discussion	5
4.1. Limitations and future directions	5
References	5

☆ This work was in part supported by the Military Suicide Research Consortium (MSRC), an effort supported by the Department of Defense (W81XWH-10-2-0181). Opinions, interpretations, conclusions, and recommendations are those of the authors and are not necessarily endorsed by the Military Suicide Research Consortium or the Department of Defense.

* Corresponding author at: Department of Psychology, Florida State University, 1107 West Call Street, Tallahassee, FL 32306-4301, United States.
 E-mail address: rogers@psy.fsu.edu (M.L. Rogers).

1. Introduction

Over 800,000 lives are lost to suicide each year (World Health Organization [WHO], 2014), making suicide a global health concern. Moreover, in the United States alone, approximately 1.3 million adults make a suicide attempt each year (Centers for Disease Control and Prevention [CDC], 2015). Although research has uncovered a number of risk factors for suicidal thoughts and behaviors, suicide attempt and completion rates have remained stable (Centers for Disease Control and Prevention [CDC], 2015), suggesting a need for additional research to identify why and when individuals attempt and die by suicide.

Importantly, the prediction of imminent suicidal behavior (i.e., lethal and non-lethal suicide attempts with at least some intent to die, as described by Silverman, Berman, Sanddal, O'Carroll, and Joiner [2007]) is imprecise. Though a number of correlates have been established for suicide, including nearly all psychiatric disorders (Harris & Barraclough, 1997), hopelessness (Beck, Steer, Kovacs, & Garrison, 1985), and perceived burdensomeness and thwarted belongingness (Van Orden et al., 2010), accumulating evidence suggests that the majority of these risk factors are, indeed, risk factors for *suicidal ideation*, rather than *suicide attempts* or *death by suicide* (see May & Klonsky, 2016 for meta-analysis). In contrast, few risk factors accurately predict the transition from suicidal thoughts to behaviors (Klonsky & May, 2014). Given that significantly fewer people go on to make a suicide attempt or die by suicide than have thoughts of suicide (Kessler, Borges, & Walters, 1999), this highlights a vital need for the identification of unique indicators of risk factors that immediately precede suicidal behavior.

Overarousal, particularly agitation, is one such factor that has been implicated as an acute risk factor for suicidal behavior (Chu et al., 2015; Ribeiro, Bodell, Hames, Hagan, & Joiner, 2013). Agitation is characterized by increased motor function (e.g., restlessness, fidgeting) and painful mental arousal (e.g., emotional turmoil, anguish) that results in feeling stirred or wound up (Benazzi, Koukopoulos, & Akiskal, 2004; Ribeiro, Bender, Selby, Hames, & Joiner, 2011). Severe psychic anxiety, or agitation, is frequently endorsed by suicide decedents in the week prior to their deaths (Busch, Clark, Fawcett, & Kravitz, 1993; Busch, Fawcett, & Jacobs, 2003; Robins, 1981). A large prospective study also identified agitation as a significant predictor of suicide within a 1-year follow-up (Fawcett et al., 1990). High levels of agitation have also been documented in recent suicide attempters; namely, nearly 90% of patients seeking emergency mental health services immediately following a suicide attempt reported "severe psychic anxiety" within one month of the attempt (Hall, Platt, & Hall, 1999). Similarly, depressive mixed states with psychomotor agitation, or "agitated unipolar depression" (Akiskal, Benazzi, Perugi, & Rihmer, 2005), which are characterized by psychic and motor agitation, intense emotional tension, and/or crowded thoughts (Koukopoulos & Koukopoulos, 1999), have been strongly associated with suicidal behavior, measured both prospectively and posthumously via review of medical records (Balázs et al., 2006; Sani et al., 2011).

Given these findings, the rationale for including agitation in suicide risk assessment protocols (e.g., Chu et al., 2015) is clear; however, the nature of the association between agitation and suicidality requires further elucidation. It may be that agitation is a correlate of suicidal ideation; indeed, both psychomotor agitation and suicidal thoughts comprise two of the nine symptom criteria for a diagnosis of major depressive disorder (American Psychiatric Association, 2013). In concordance with this viewpoint, symptoms of agitation coinciding with depressive episodes are associated with more severe suicidal ideation (Akiskal et al., 2005). However, agitation may also be associated specifically with suicidal behavior, particularly in those who possess a capability to enact lethal self-harm (Ribeiro et al., 2015a; Ribeiro, Yen, Joiner, & Siegler, 2015b). Understanding these relationships, as well as any factors that influence the magnitude of these relations, is important for clinicians in order to accurately identify, monitor, and treat patients at high risk of engaging in suicidal behavior.

Thus, to elucidate the nature of the association between agitation and suicidal behavior, we conducted a meta-analytic review of the literature to examine the strength of the relationship between agitation and suicidal behavior (i.e., suicide attempts and death by suicide). We included retrospective, cross-sectional, and prospective studies in our review in an effort to determine whether agitation represents a correlate or risk factor of suicidal behavior. A meta-analysis also allows us to examine whether a number of potential moderator variables attenuate or accentuate the magnitude of this association, as well as whether the findings reported in the literature to date have been influenced by publication bias. As such, we aimed to determine whether the strength of the association between agitation and suicidal behavior was influenced by demographic variables (i.e., age, gender), study design, levels of depression, levels of suicidal ideation, or the year in which the manuscript was published. Finally, by examining the literature on the association between agitation and suicidal behavior, we aimed to highlight areas in which future research is warranted.

2. Methods

2.1. Study selection

We identified studies by searching on PsycINFO, PubMed, and Web of Science (until November 2015), using the following search term: *agitat* AND suicid**. Using these search terms enabled us to get a comprehensive list of articles, as the asterisk (*) includes all words that contain the prefix (e.g., "agitat*" returns both "agitated" and "agitation"; "suicid*" returns "suicidal behavior," "suicide attempts," and "suicide"). This is especially important because some studies may only report results based on suicidal ideation in the abstract, but also include analyses with suicide attempts in the published manuscript. Throughout this process, we identified 738 unique published reports. Titles and abstracts of these 738 studies were reviewed by two authors (MR and FR) to determine eligibility for inclusion; 530 studies clearly did not meet our inclusion criteria, detailed below. Of note, we utilized the STrengthening of Reporting of OBServational studies in Epidemiology (STROBE) checklist criteria in selecting articles for inclusion based on abstracts (von Elm et al., 2007).

Inclusion criteria required that studies (1) were original, empirical articles (i.e., not theoretical, systematic reviews, or meta-analyses); (2) were written in English; (3) included a quantitative measure of both agitation (either self-report or clinical observation) and suicidal behavior (i.e., non-lethal suicide attempts, death by suicide) and examined a direct association between these two variables in the published manuscript; and (4) included necessary statistical information to calculate effect sizes. Importantly, studies examining retrospective, cross-sectional, and prospective associations between agitation and suicidal behavior were all included in the meta-analysis. In an effort to ensure that our outcome variable was not overly broad, we restricted the studies in the meta-analysis to those that examined the presence/absence/frequency of suicidal behavior; studies examining suicidal ideation, characteristics of suicidal behavior (e.g., medical lethality), or non-suicidal self-injury were excluded. See Fig. 1 for a description of the study selection process; included studies are described in Table 1. Thirteen studies met all of the requirements for inclusion ($\kappa = 0.94$).

2.2. Dependent effect sizes

No studies included multiple effects based on different measures of agitation or of varying type of suicidal behavior (i.e., attempt versus completion). When two studies reported multiple effects on the same measure from multiple comparisons (e.g., multiple attempters versus single attempters versus non-attempters), we calculated combined means, standard deviations, and sample sizes of the attempter and/or non-attempter groups (e.g., combining multiple attempters and single

Download English Version:

<https://daneshyari.com/en/article/7263736>

Download Persian Version:

<https://daneshyari.com/article/7263736>

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