



Insomnia and suicide-related behaviors: A multi-study investigation of thwarted belongingness as a distinct explanatory factor

Carol Chu^{a,*}, Melanie A. Hom^a, Megan L. Rogers^a, Ian H. Stanley^a, Fallon B. Ringer-Moberg^a, Matthew C. Podlogar^a, Jameson K. Hirsch^b, Thomas E. Joiner^a

^a Florida State University, Department of Psychology, 1107 West Call St., Tallahassee, FL 32306, USA

^b East Tennessee State University, Department of Psychology, 420 Rogers-Stout Hall, Johnson City, TN 37614, USA

ARTICLE INFO

Keywords:

Insomnia
Sleep disturbance
Thwarted belongingness
Suicidal ideation
Suicidal behavior
Anxiety

ABSTRACT

Background: Insomnia is a robust correlate of suicidal ideation and behavior. Preliminary research has identified thwarted belongingness (c.f. social disconnection) as an explanatory link between insomnia and suicidal ideation.

Objectives: This study replicates and extends previous findings using both cross-sectional and longitudinal designs in four demographically diverse samples. Additionally, the specificity of thwarted belongingness was evaluated by testing anxiety as a rival mediator.

Method: Self-report measures of insomnia symptoms, thwarted belongingness, suicidal ideation and behavior, and anxiety were administered in four adult samples: 469 undergraduate students, 352 psychiatric outpatients, 858 firefighters, and 217 primary care patients.

Results: More severe insomnia was associated with more severe thwarted belongingness and suicidality. Thwarted belongingness significantly accounted for the association between insomnia and suicidality, cross-sectionally and longitudinally, beyond anxiety. Notably, findings supported the specificity of thwarted belongingness: anxiety did not significantly mediate the association between insomnia and suicidality, and insomnia did not mediate the relation between thwarted belongingness and suicidality.

Limitations: This study relied solely on self-report measures. Future studies incorporating objective sleep measurements are needed.

Conclusion: Findings underscore the utility of assessing and addressing sleep disturbances and social disconnection to reduce suicide risk.

To prevent the deaths by suicide of over 800,000 people globally each year (WHO, 2014), efforts have been made to understand suicide risk factors and the processes that contribute to risk. This approach is strategic as it informs the identification of at-risk individuals while also illuminating therapeutic targets for attenuating suicide risk.

A growing body of research indicates that insomnia is a potent contributor to suicidal thoughts and behaviors (Bernert and Joiner, 2007; Bernert et al., 2015). Strikingly, in a meta-analysis of 39 studies revealing a significant relationship between insomnia and suicidality, depression—of which insomnia and suicidal thoughts are key symptoms (APA, 2013)—did not moderate this association (Pigeon et al., 2012). This suggests that insomnia is a particularly robust suicide risk factor and that additional work is needed to understand the underlying mechanisms that account for this relationship. Further, longitudinal studies with follow-up periods ranging from 1 week to 14 years have demonstrated a prospective association between insomnia and subse-

quent suicide ideation (McCall et al., 2010; Wong et al., 2011), suicide attempts (Wong and Brower, 2012), and suicide deaths (Bernert et al., 2014; Wong et al., 2011), beyond depression and hopelessness (Ribeiro et al., 2012).

Despite converging evidence that insomnia predicts suicidality, there remains a relative lack of research investigating the factors underlying this relationship. Researchers have conjectured that emotion dysregulation (Bernert and Joiner, 2007; Bernert et al., 2014) or overarousal (Ribeiro et al., 2014) may explain this association; however, empirical evidence for these assertions is lacking. To better understand these variables, it may be useful to draw from theoretical suicide models.

One such model is the interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010). According to this theory, three key constructs interact to produce suicide risk: *thwarted belongingness* (i.e., social disconnection), *perceived burdensomeness* (i.e., feeling that others

* Corresponding author.

E-mail address: chu@psy.fsu.edu (C. Chu).

would be better off without them), and *acquired capability* (i.e., elevated physical pain tolerance and fearlessness about death). The theory posits that active suicidal desire emerges when individuals experience elevated levels of thwarted belongingness and perceived burdensomeness. Lethal or near-lethal suicidal behaviors are hypothesized to occur when individuals additionally possess elevated acquired capability.

From the perspective of the interpersonal theory of suicide, insomnia may confer suicide risk by increasing or exacerbating feelings of loneliness and thwarted belongingness. For example, the experience of being awake while most others are asleep is likely to be intrinsically isolating and lonely, and hallmark insomnia symptoms include difficulty falling or staying asleep, or waking up too early (APA, 2013). Furthermore, insomnia in particular has been consistently shown to impact daytime functioning (see Sateia et al., 2000 for review), which may decrease motivation to engage with others or ability to do so effectively (Carskadon, 1990; Roberts et al., 2001). This may, in turn, increase feelings of social isolation and disconnection. Indeed, in an investigation across six unique samples, insomnia symptoms were both cross-sectionally and prospectively associated with greater perceptions of loneliness, despite controlling for related psychiatric symptoms, including anxiety (Hom et al., under review).

Several empirical studies offer further support for thwarted belongingness as an explanatory link in the relationship between insomnia and suicidality. For instance, in a study by Chu et al. (2016b) of 552 South Korean undergraduates, thwarted belongingness significantly mediated the cross-sectional relationship between insomnia and suicidal ideation. Importantly, these researchers also found that insomnia symptoms did not account for the relationship between thwarted belongingness and suicidal ideation, highlighting the specificity of the mediator and providing evidence for the proposed direction of the pathway between insomnia and suicidal ideation. Though not directly evaluating the mediating role of thwarted belongingness, Golding et al. (2015) found that among older adults, insomnia and suicide risk were not significantly related when controlling for all three interpersonal theory constructs, suggesting that they may help to explain the association. However, a two-sample investigation of undergraduates by Nadorff et al. (2014) produced mixed results. While the results of the first study were the same as those reported by Golding and colleagues (2014), in the second study, this association remained significant after controlling for these variables (Nadorff et al., 2014).

These equivocal results are based primarily on cross-sectional studies using undergraduate samples; thus, their generalizability and utility is limited. As a result, research is needed to replicate these findings in additional samples and studies employing prospective approaches. Delineation of this relationship has the potential to inform the development of targeted prevention and intervention strategies and enhance our understanding of the well-established relationships between sleep, social disconnection, and suicide risk.

This study examines thwarted belongingness as an explanatory link in the relationship between insomnia and suicidality across four distinct adult samples. Consistent with previous research, we hypothesized that: (1) insomnia would be significantly associated with thwarted belongingness and suicidal ideation both cross-sectionally (Studies 1, 2, 3) and prospectively (Study 4); and, (2) thwarted belongingness would be a significant mediator of the relations between insomnia and suicidality. Consistent with previous studies (Hom et al., under review; Kurina et al., 2011), we covaried anxiety, as anxiety and overarousal symptoms are frequently related to feelings of thwarted belongingness and may also confer risk for insomnia and suicidality (Chu et al., 2015a; Ribeiro et al., 2014).

To strengthen findings, in all four samples, we evaluated the specificity of thwarted belongingness as a mediator in two ways. First, we examined whether insomnia severity (independent variable) and thwarted belongingness (mediator) were interchangeable in their roles. Specifically, we tested whether insomnia mediates the relation-

ship between thwarted belongingness and suicidality. We predicted that insomnia and thwarted belongingness would not be interchangeable as independent variable and mediator, respectively. Next, we tested our hypotheses against an alternative explanatory mechanism: anxiety, which has been linked to both sleep problems and suicidal symptoms (c.f. overarousal; Ribeiro et al., 2012; 2014). Specifically, we investigated whether anxiety was a rival mediator. We postulated that anxiety would not account for the relationship between these variables, which would support the robustness of thwarted belongingness as the mediator.

1. Study 1

First, we examined our hypotheses among U.S. undergraduate students in an effort to replicate previous findings among South Korean undergraduates (Chu et al., 2016b). We predicted that thwarted belongingness would significantly account for the association between sleep problems and suicidality.

1.1. Method

1.1.1. Participants

Participants were 469 U.S. undergraduates (Table 1 for details).

1.1.2. Procedure

Data for this study were obtained from a larger web-based investigation of the role of non-disclosure in suicidal symptom reporting. All participants provided informed consent prior to completing the self-report measures and were compensated with course credit. This study was approved by the university's Institutional Review Board (IRB).

1.1.3. Measures

1.1.3.1. Insomnia. The Insomnia Severity Index (ISI; Bastien et al., 2001) is a 7-item self-report measure that assesses the severity of insomnia symptoms, distress caused by the sleep disturbance, and its effect on functioning. Items are rated on a 5-point Likert scale. Bastien and colleagues (2001) demonstrated that the ISI has high internal consistency and concurrent validity. The ISI exhibited good internal consistency ($\alpha=0.84$).

1.1.3.2. Thwarted belongingness. The Interpersonal Needs Questionnaire, Thwarted Belongingness Subscale (INQ-TB; Van Orden et al., 2012) is a 9-item measure of thwarted belongingness and a subscale of the 15-item INQ measure. Each item is rated on a 7-point Likert scale ranging from 1 to 7. The INQ-TB has sound psychometric properties and construct validity across samples, including outpatients, community members, and students (Van Orden et al., 2012). The INQ-TB exhibited excellent internal consistency ($\alpha=0.90$).

1.1.3.3. Suicidal ideation. The Beck Scale for Suicide Ideation (BSS; Beck et al., 1979) is a 21-item measure of severity of suicidal ideation. Items are rated on a 3-point Likert scale ranging from 0 to 2. The first 19 items are used to compute the total score as items 20 and 21 assess prior suicidal behaviors. Internal consistency of the BSS was adequate ($\alpha=0.76$).

1.1.3.4. Anxiety. The Depression and Anxiety Stress Scales (DASS; Lovibond and Lovibond, 1995) is a 21-item measure of depression, anxiety and stress over the past week. Each item is rated on a 4-point

Download English Version:

<https://daneshyari.com/en/article/5722071>

Download Persian Version:

<https://daneshyari.com/article/5722071>

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