Received: 16 May 2022 | Revised: 24 October 2022 | Accepted: 30 October 2022

DOI: 10.1111/sltb.12930

Suicide and Life-Threatening BEHAVIOR

ORIGINAL ARTICLE

The classification of suicide gestures: Examining the validity, measurement, and level of intent of a controversial construct

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Funding information
Fuss Family Fund

Abstract

Introduction: The inclusion of suicide gestures in modern nomenclatures for self-injurious thoughts and behaviors (SITB) is contentious due to their history of pejorative connotations and inconsistent operationalization and measurement. Here we sought to investigate the extent to which participants who endorse this behavior on a standardized SITB measure: (1) describe their behavior in a way that is consistent with contemporary definitions for suicide gestures; (2) accurately classify their behavior when presented with multiple SITB response options; and (3) consistently report their level of intent to die across survey items.

Methods: Participants were 83 adults from a community-based sample who endorsed lifetime suicide gesture(s) in an online survey containing self-report measures assessing their prior SITB engagement, followed by open-ended questions eliciting narrative descriptions of their behaviors.

Results: Approximately 13% of participants who endorsed lifetime suicide gestures provided narrative descriptions that met criteria for the behavior, and around one-third consistently reported zero intent to die in their explicit ratings. Additionally, some participants reported non-zero intent to die from behaviors without direct potential for physical injury.

Conclusions: Overall, this study highlights substantial issues with the validity of current approaches to measuring suicide gestures. Implications for the classification of suicide gestures in clinical and research settings are discussed.

KEYWORDS

classification, intent to die, self-injurious thoughts and behaviors, SITB

INTRODUCTION

Each year an estimated 800,000 people worldwide die by suicide, and many more engage in non-fatal self-injurious thoughts and behaviors (SITB; World Health Organization, 2018). SITB encompass a broad array of phenomena ranging from passive suicidal ideation (e.g., wishing to go to sleep and never wake up) to suicide attempts (i.e., potentially self-injurious behavior in which there is some intent to die). Advancing the understanding, prediction, and prevention of SITB is predicated on establishing and implementing a comprehensive nomenclature with clear, operational definitions for the full range of suicide-related constructs, along with standardized

approaches to their measurement. However, despite decades of research, the field continues to lack a universally agreed upon set of terms and definitions for SITB (Posner et al., 2014; Silverman, 2011, 2016), impeding the clarity of research communications and replications, and ultimately hindering development of effective clinical interventions.

Suicide gestures, also referred to as 'instrumental suicide-related behavior,' are an example of SITB that remain poorly understood, due in part to inconsistencies in their operationalization and measurement (Heilbron et al., 2010). Suicide gestures are defined in contemporary nomenclatures and classification systems as behavior in which an individual has *zero* intent to die[1] and uses the appearance of intending to die to serve a primarily interpersonal function (e.g., to communicate distress, to get support, to obtain psychiatric care; O'Carroll et al., 1996; Nock, 2010). Nationally representative surveys suggest that the estimated lifetime prevalence of suicide gestures is 1.9%, approximating that of suicide attempts (2.7%; Nock & Kessler, 2006). However, some have called for eliminating the suicide gesture category from research and clinical practice (Heilbron et al., 2010) due to (1) the lack of consensus definition and standardized measurement of the behavior, as well as (2) the history of pejorative connotations associated with the "suicide gesture" label.

Although there is no consensus definition for suicide gestures, there is general agreement that the key criterion separating suicide gestures from attempts is that individual must have no intent to die when carrying out the behavior. However, assessing the intent to die from suicidal behaviors is challenging for multiple reasons. For example, individuals may conceal their true intent (e.g., to avoid involuntary hospitalization) or express uncertainty (e.g., ambivalent about dying; Freedenthal, 2007). Due to the difficulties assessing intent, researchers and clinicians sometimes infer intent from circumstantial indicators, such as the lethality of behavior. However, this can result in erroneous conclusions as circumstantial indicators themselves may not reflect an individual's true intent for the behavior. For example, prior research suggests the association between level of intent and medical lethality is moderated by the accuracy of individuals' perceptions of a method's lethality (e.g., the dosage required for poisoning; Beck, 1975; Brown et al., 2004).

The historical negative connotations of the term "suicide gesture" come from, in part, clinicians' tendency to use circumstantial indicators to infer a lack of intent to die, and in some cases to overrule patients' explicitly expressed intent. There is a well-documented history of medical professionals dismissing genuine suicidal behavior as manipulative "gestures," based on faulty assumptions and without thoroughly assessing the individual's intent (Joiner, 2007). In addition, because suicide gestures involve deception (i.e., giving the appearance of intent to die that, in reality, is absent), there is a history of disparaging attitudes toward individuals who are perceived to have engaged in these behavior (Tucker & Gorman, 1967). To minimize the use of stigmatizing language and connotations, some have called for the removal of the term 'suicide gesture' from research and clinical use (Heilbron et al., 2010).

Based on this history, more recently developed nomenclatures have omitted the behavior (Posner et al., 2007) or reclassified suicide gestures as nonsuicidal self-injury (NSSI) with an interpersonal function (Silverman et al., 2007a). However, there are problems with both nomenclature approaches. For the former, omitting a category for these behaviors might result in little research on suicide gestures, forgoing an opportunity to advance understanding and clinical care. For the latter, NSSI with an interpersonal function involves intentional self-injury that, at least in part, is meant to impact others (e.g., via someone else seeing and reacting to injury or scars), but not to lead others to believe one is *trying to kill oneself* (i.e., suicide gesture). Thus, a primary distinction between suicide gestures and NSSI is whether the people engaging in the behavior intend for others to believe they are harming themselves or trying to kill themselves. Moreover, it is important to note that while suicide gestures may involve NSSI if there is any destruction of skin tissue, suicide gestures are distinct from NSSI in that they (1) may lack a directly self-injurious component entirely (e.g., an individual empties a bottle of pills on the floor to simulate a suicide attempt without having taken any; Nock, 2008), and (2) involve, by definition, intentional deception (i.e., deliberately engaging in behavior to lead others to believe one is trying to die by suicide when one has no intention of dying by suicide). Although both behaviors could be attempts to communicate or receive support, unless they are measured separately, we cannot know whether they have identical risk factors, causes and functions that would warrant them being combined.

Although, historically, there have been negative connotations associated with suicide gestures, taken literally, the word "gesture" is defined as an action to express an idea or meaning, including a feeling (Oxford English Dictionary, n.d.), it is not inherently pejorative. If there is evidence that people use suicide-apparent behaviors as gestures to communicate pain, receive aid, or to achieve some other goal, then an operationalization of "suicide gestures" focusing on such behaviors in which the individual clearly and explicitly expresses an absence of suicidal intent may be both accurate and non-pejorative. Thus, the inclusion of suicide gestures in nomenclatures, clearly defined and rigorously measured, may help to advance our understanding of these behaviors and their treatment.

Another important question is how to reliably assess such outcomes, and distinguish suicide gestures from adjacent behaviors, such as NSSI with an interpersonal function or suicide threats, where individuals imply that they will engage in self-injurious behavior imminently. Prior research using similarly worded items assessing suicide gestures and threats together across two versions of the Self-Injurious Thoughts and Behaviors Interview (SITBI) both demonstrated poor test–retest reliability for the lifetime presence and frequency of suicide gestures when assessed 6 months apart (Fox et al., 2020; Nock et al., 2007). Thus, advancing the understanding of suicide gestures first requires improved measurement of the construct.

Further investigation of suicide gestures is warranted given their prevalence and potential for negative consequences (e.g., physical injury, damage to interpersonal relationships). Moreover, advancing understanding of suicide gestures may help to improve clinical care and suicide risk assessment. For example, continued research may help clinicians identify and treat such behaviors, which could be particularly important if future research shows that suicide gestures confer risk for more clinically severe behavior (e.g., suicide attempts).

In this study, we pursued three aims to facilitate accurate measurement and classification of suicide gestures. The first aim was to understand whether people who endorse standard questionnaire items on suicide gestures provided narrative descriptions of behaviors that researchers would classify as suicide gestures. The second aim was to determine how accurately participants classified their behavior as a suicide gesture when provided with multiple response options for adjacent behaviors (i.e., NSSI, aborted suicide attempt, interrupted suicide attempt, and suicide attempt). Finally, given that the absence of intent to die is a necessary criterion when classifying suicide gestures, a third post-hoc goal (see below for explanation) was to examine whether participants endorsing a suicide gesture consistently reported zero intent to die.

METHOD

Participants

The current sample was used in a prior study examining the validity of commonly used questions to assess SITB (Millner et al., 2015). Participants were recruited via Craigslist postings from April through September 2013. Postings were targeted to recruit people with and without SITB histories to collect data on a range of thoughts about death and suicide-related behaviors. Informed consent was conducted online, and participants had to be at least 18 years of age and correctly answer three consent-related questions to participate. Participants who completed the study entered a raffle for a $350 Amazon gift certificate. The study was approved by the Harvard University Institutional Review Board.

Of the 2371 participants who entered the survey 1231 participants provided usable data regarding their history of suicidal behaviors (see Millner et al., 2015 for details), of which nearly a quarter (n = 302) reported lifetime histories of suicide gestures. The present study focused on a subsample (27.5%; n = 83) of these participants, comprised of participants who endorsed a suicide gesture as their most severe lifetime self-injurious behavior. Table 1 presents sociodemographic characteristics for these participants.

Measures

Online survey

Self-report data were collected anonymously via Qualtrics. Questions were worded similarly to those in the Self-Injurious Thoughts and Behaviors Interview (SITBI) and inspired revisions that were later included

TABLE 1 Sociodemographic characteristics

Variable	*N* = 83	
Age	M	SD
	29.58	10.89
	Mdn	Range
	27.00	56.00
	%	*n*
Sex		
Male	14.5	12
Female	85.5	71
Race		
White	68.7	57
Other or mixed race	28.9	24
No response	2.4	2
Ethnicity		
Latinx	14.5	12
Not latinx	84.3	70
No response	1.2	1
Location		
Northeast (9 states)	28.9	24
South (17 states)	20.5	17
Midwest (12 states)	26.5	22
West (13 states)	22.9	19
No response	1.2	1

in the SITBI-R. Nearly all items on both the SITBI and SITBI-R have demonstrated high validity and reliability (Fox et al., 2020; Nock et al., 2007), although the suicide gesture items on both SITBIs have shown poor psychometric properties.

Lifetime self-injurious behaviors section

This section contained questions assessing the lifetime presence of five self-injurious behaviors, each with a definition of the behavior embedded in the wording of the question: (a) non-suicidal self-injury (i.e., "Have you ever done something to hurt yourself on purpose without intending to die [e.g., cutting yourself, hitting yourself, or burning yourself]?"), (b) suicide gesture (i.e., "Have you ever done something to make it look like you were trying to kill yourself, when you did not intend to die [e.g., let people know that you were in distress, get revenge or a reaction]?"), (c) aborted suicide attempt (i.e., "Have you ever started to take steps to kill yourself and, at the last minute, you stopped because you decided not to kill yourself [e.g., you went to a bridge but did not jump off, took out pills but did not take them, took out a gun but did not pull the trigger]?"), (d) interrupted suicide attempt (i.e., "Have you ever started to take steps to kill yourself and, at the last minute, someone or something else stopped you [e.g., you went to a bridge, but someone stopped you before you jumped off, took out pills but someone stopped you before you took them, took out a gun but someone stopped you before you pulled the trigger]?"), (e) suicide attempt (i.e., "Have you ever tried to kill yourself; meaning you engaged in a potentially deadly behavior to end your life with some intention of dying [e.g., you went to a bridge and jumped off, took out pills and you took them, took out a gun and pulled the trigger]?").

Lifetime self-injurious behaviors follow-up questions

Participants who endorsed a suicide gesture as their most severe lifetime self-injurious behavior were asked to provide narrative responses to open-ended questions probing the: (1) *form* (e.g., "What method did you use to make it look like you were trying to kill yourself?" and "What exactly happened? Please give as many specific details as possible about the period leading up to your decision to do this and what you did"); (2) *function* (e.g., "Why did you make it look like you tried to kill yourself?"); and (3) *outcome* of the behavior (e.g., "Did you sustain any injuries or have any physical problems as a result?"). Participants also completed an explicit self-report item assessing their level of intent to die during their most recent suicide gesture with four response options: "A large part of me intended to die," "A small part of me intended to die," "I wasn't sure whether I intended to die," or "No part of me intended to die." This item contained the following wording: "Think back to the time(s) you made it look like you were trying to kill yourself, when, in fact, you did NOT intend to die. Did *any* part of you intend to die from the action?"

Coding of narrative descriptions

We coded participants' responses to open-ended questions to assess how accurately participants classified their behavior as a suicide gesture. Initially, we incorporated self-reported explicit level of intent to die when coding behaviors, given that the definition of a suicide gesture requires zero intent to die (O'Carroll et al., 1996). However, several participants appeared to misinterpret the meaning of 'intent to die,' as they endorsed intent for behaviors that lacked a directly self-injurious component (e.g., telling a therapist about a suicide plan). Therefore, we did not use this item to help determine whether self-reported behaviors should be classified as suicide gestures and relied solely on the described behaviors (i.e., explicitly stated intent to die in participants' narrative descriptions). Instead, we examined responses to the explicit level of intent item under a new third aim.

Analysis began with three researchers (AMH-N, JS, AJM) reading participants' responses and developing a codebook. Codebook development drew on inductive and deductive methods as recommended by Bauer (2000), along with principles derived from Consensual Qualitative Research (CQR; Hill, 2015; Hill et al., 1997, 2005), which aim to increase validity and reliability of coded outcomes. An inductive approach was used to determine key ideas emerging from participant responses to be included in the codebook, while a deductive approach was employed when consulting existing literature and theory to best to organize, label, and define codes. The final codebook consisted of four broad categories: (1) the type of behavior described (e.g., suicide attempt, suicide gesture, NSSI); (2) the function of the behavior (e.g., interpersonal, intrapersonal, both, intention to die); (3) resultant physical injury (e.g., presence, absence, unclear); and (4) the level of confidence the participant conveyed for their primary reported function (e.g., high, medium, low; see Supporting Information for complete codebook).

Possible codes for behavior type included: 'suicide attempt' (i.e., potentially self-injurious behavior in which the primary intention is to die); 'passive suicide attempt' (i.e., refraining from taking actions needed to stay alive, e.g., refusing medical care or food/water, with a desire/

wish to die); 'aborted suicide attempt' (i.e., a suicide attempt is conducted where the primary intention is to die, but the attempt is aborted for some reason); 'suicide gesture' (i.e., suicide-apparent behavior with an interpersonal function in the absence of explicitly expressed intent to die); 'suicide threat' (i.e., communicating, verbally or non-verbally, that one will carry out a suicidal behavior in the *future*); 'NSSI' (i.e., intentionally self-injurious behavior in any form where the individual does not intend to die from the action); 'direct communication' (i.e., stating to another person clearly that one is thinking of or planning suicide); 'indirect communication' (i.e., expressing suicidal ideation, either in person or through another medium, without expressly stating a suicide plan); 'reckless behavior' (i.e., engaging in dangerous behaviors, such as driving while under the influence of intoxicants or picking fights, with suicidal ideation present); 'suicidal ideation' (i.e., suicidal thoughts or planning not acted on nor communicated to anyone else); 'other' (i.e., any other form of self-injurious thinking or behavior that is not covered by the above categories; see Supporting Information for full coding definitions).

Coding was completed by four trained research assistants and one auditor (JS). Each research assistant independently coded responses. For each narrative description, coders selected one code within each of the four broad categories. If a description contained more than one behavior, each was coded separately. Among the 83 participants who endorsed a suicide gesture as their most severe lifetime self-injurious behavior, 77.1% ($n = 64$) provided sufficient narrative information for coding and referred to self-injurious behavior, with six participants providing a narrative of two separate behaviors and one participant providing a narrative of three separate behaviors, resulting in a total of 72 coded behaviors. To ensure accuracy of narrative data, participants' responses were coded for the degree of confidence they conveyed for their primary reported function, with the majority (72.2%; $n = 52$) coded as 'high confidence.'

Fleiss' κ analyses revealed substantial agreement between the four independent coders for the following coding categories: behavior type ($\kappa = 0.75$ [95% CI, 0.63–0.86], $p < 0.001$); function ($\kappa = 0.69$ [0.52–0.86], $p < 0.001$); and physical injury ($\kappa = 0.89$ [0.78–0.99], $p < 0.001$). There was moderate agreement between the coders regarding participants' confidence in their reported function of the behavior ($\kappa = 0.60$ [0.38–0.82], $p < 0.01$). The four coders then met in teams of two to negotiate discrepancies in their codes and reach a consensus. Following team coding, the auditor reviewed codes and made a final decision in cases where no agreement was reached (35 instances – 12.2% of codes). Overall, 288 classifications were assigned across the four coding categories for 83 participants' responses.

Analytic plan

For the first study aim, we examined whether coders identified any behavior as a suicide gesture, perhaps warranting the inclusion of such behaviors in nomenclatures and assessment tools. For the second aim, we investigated the extent to which participants accurately classified their behavior by calculating the percentage coded as having engaged in suicide gestures out of the total number of participants who endorsed the suicide gesture item in the *Lifetime Self-Injurious Behaviors Section* of the survey. For the third aim, we examined the consistency of self-reported level of intent to die among those endorsing lifetime suicide gestures by (1) calculating the percentage of participants who reported 'zero intent to die' in an explicit self-report follow-up probe, and (2) comparing participants' explicit ratings of intent with coded narrative descriptions of their behaviors.

RESULTS

Suicide gesture description and classification accuracy

As displayed in Table 2, 12.5% ($n = 9$ of 72) of participants who endorsed a lifetime suicide gesture were coded as having engaged in behavior consistent with a suicide gesture (i.e., accurately classified their behavior). The majority (88.9%; $n = 8$) of the behaviors involved primarily interpersonal functions, and the remaining 11.1% ($n = 1$) were carried out with both interpersonal and intrapersonal functions. Nearly half (44.4%; $n = 4$) lacked self-injurious behavior entirely (e.g., spreading a bottle of pills around on the floor to give the appearance of having overdosed without having taken any), one-third (33.3%; $n = 3$) resulted in some degree of physical injury (e.g., skin cutting with tissue destruction) and the remaining 22.2% ($n = 2$) were unclear.

Participants who misclassified their behavior as a suicide gesture (87.5%; $n = 63$ of 72) were coded as having engaged in an array of suicide-related behaviors (see Table 2) ranging in severity from suicidal ideation to NSSI to suicide attempts. The majority (60.3%; $n = 38$) of the behaviors involved primarily interpersonal functions, and approximately a quarter (25.4%; $n = 16$) involved both interpersonal and intrapersonal functions. Around half (52.4%; $n = 33$) resulted in some degree of physical injury,

TABLE 2 Coded narrative descriptions of behaviors among participants endorsing lifetime suicide gestures ($n = 72$)

Behavior type	%	*n*	Definition
NSSI	38.9	28	Intentionally self-injurious behavior in any form where the individual does not intend to die from the action
Suicide gesture	12.5	9	Suicide-apparent behavior with an interpersonal function in the absence of explicitly expressed intent to die
Suicide threat	11.1	8	Communicating, verbally or non-verbally, that one will carry out a suicidal behavior in the future
Indirect communication	11.1	8	Expressing suicidal ideation, either in person or through another medium, without expressly stating a suicide plan
Direct communication	8.3	6	Stating to another person clearly that one is thinking of or planning suicide
Suicide attempt	4.2	3	Potentially self-injurious behavior in which the primary expressed intention is to die
Suicidal ideation	4.2	3	Suicidal thoughts or planning that are neither acted on nor communicated to anyone else
Passive suicide attempt	2.8	2	Refraining from taking actions needed to stay alive, e.g., refusing medical care or food/water, with a desire to die
Aborted suicide attempt	2.8	2	A suicide attempt is conducted where the primary expressed intention is to die, but the attempt is aborted for some reason
Reckless behavior	2.8	2	Engaging in dangerous behaviors, such as driving while under the influence of intoxicants or picking fights, with suicidal ideation present
Other	1.4	1	Any other form of self-injurious thinking or behavior that is not covered by the above categories that still meets the qualifying criteria

Abbreviation: NSSI, Nonsuicidal self-injury.

46.0% ($n = 29$) resulted in no physical injury, and the remaining 1.6% ($n = 1$) were unclear.

Consistency of self-reported level of intent to die

Among participants who endorsed a lifetime suicide gesture ($n = 83$), around one-third (32.5%; $n = 27$) consistently reported zero intent to die in the explicit self-report follow-up probe, around one-third (31.3%; $n = 26$) reported a small or large part of them intended to die (i.e., non-zero intent), around one-third (30.1%; $n = 25$) reported that they were unsure of their intent to die and an additional 6.0% ($n = 5$) did not provide a response. Comparison of participants' explicit intent to die ratings with their coded narrative responses revealed additional discrepancies. Among participants who engaged in suicide gestures ($n = 9$), around half (55.6%; $n = 5$) reported zero intent to die, around a quarter (22.2%; $n = 2$) reported non-zero intent to die, and around a quarter (22.2%; $n = 2$) reported they were unsure of their intent to die. Additionally, participants who reported non-zero intent to die ($n = 22$) engaged in a diverse range of behaviors (see Figure 1), in part because the explicit intent item was not used in coding their behavior. Among them, more than half (54.5%; $n = 12$) engaged in non-suicidal behavior (i.e., NSSI, suicide gesture, or suicide threat), and around a quarter (27.3%; $n = 6$) engaged in behavior without direct potential for physical injury (i.e., direct communication, indirect communication, or suicidal ideation). Overall, participants provided discrepant responses across measures assessing their level of intent to die from suicide-related behaviors.

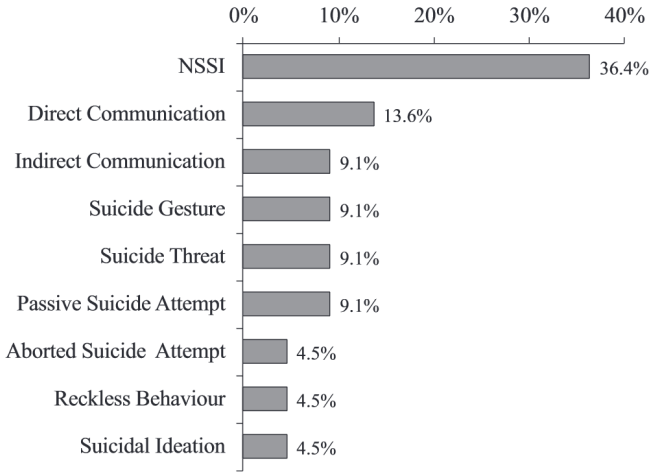

FIGURE 1 Coded narrative descriptions of behaviors among participants endorsing lifetime suicide gestures and reporting non-zero intent to die ($n = 22$). NSSI, Nonsuicidal self-injury.

DISCUSSION

There were three main findings from this study. First, some individuals did engage in behaviors that would be classified by researchers as suicide gestures (i.e., engaging in behavior intending to lead others to believe one is trying to die by suicide when one has no intention of dying by suicide); however, the base rate was low. Second, there was a high rate of misclassification of suicide gestures such that most who endorsed engaging in a suicide gesture did not actually do so according to expert coders. Third, participants who endorsed suicide gestures inconsistently reported their level of intent to die across survey items and endorsed intent for suicide-related behaviors without direct potential for physical injury. We elaborate on each of these findings below and provide recommendations for researchers and clinicians.

First, qualitative coding of participants' narrative responses revealed that some individuals who endorse suicide gestures engage in behavior consistent with contemporary definitions for suicide gestures. Some researchers have argued that suicide gestures should be excluded from modern SITB nomenclatures, due to their controversial history (Heilbron et al., 2010). However, we argue that discarding the term may deter research on these behaviors, hindering efforts aimed at improved understanding and treatment. Thus, we advocate for continued inclusion of suicide gestures in SITB nomenclatures. When assessing for this behavior, we recommend that researchers and clinicians rely primarily on individuals' explicit self-reports indicating their lack of intent to die in conjunction with narrative descriptions of their behavior, as opposed to inferring an absence of intent solely from circumstantial indicators. Importantly, patients may not fully understand the term 'intent' or may have difficulty identifying the intent behind their behavior, due to their ambivalence about dying. Thus, researchers and clinicians might be best served by asking patients open-ended questions about the goals of their behavior as well as collecting narrative descriptions. For patients who engaged in a behavior with a high likelihood of death (e.g., gunshot to the head), where death is the most likely intention, but nevertheless deny an intent to die, it may be reasonable to focus on the behavior itself for classification purposes. Below, we discuss how such mixed intentions might affect the classification of the behavior in question.

Second, our results suggest that accurate measurement of suicide gestures remains a challenge. Prior research has demonstrated poor reliability for items assessing suicide gestures, even on instruments with high reliability for nearly all other SITB (Fox et al., 2020; Nock et al., 2007). In the current study, to improve participants' classification of their behavior, we presented five SITB together (NSSI, suicide gestures, aborted and interrupted suicide attempts, and suicide attempts), each with the definition of the respective behavior embedded in the question. Yet, we found substantial levels of misclassification among participants who endorsed lifetime suicide gestures, with most (~87%) coded as having engaged in a range of other suicide-related behaviors, the majority of which, like suicide gestures, were carried out to serve primarily interpersonal functions (e.g., suicide threats to prevent a romantic partner from leaving, NSSI with another person purposely observing it). Thus, it is understandable that participants may have been unsure how best to classify these behaviors and, in the absence of more suitable response options, may have erroneously endorsed a suicide gesture as the closest approximation of their behavior. It is important to note that self-report measures have produced misclassification and inconsistent responses across a range of SITB including suicide attempts (Hom et al., 2016, 2019; Millner et al., 2015), suicidal ideation, and suicide planning (Ammerman et al., 2021), though not to the degree observed in the present study among suicide gestures. Thus, additional research aimed at developing new instruments that facilitate participants' understanding of suicide gestures, and their distinctions from adjacent behavior, is warranted. Future research would do well to test whether providing additional response options with more precise language to assess a wider range of SITB, particularly those carried out with primarily interpersonal functions, helps participants more accurately classify their behavior.

Third, we found evidence to suggest that some participants who self-reported suicide gestures may have misinterpreted the meaning of 'intent to die.' For example, even though the intent item itself was in reference to a behavior with zero intent to die, only a third of all participants said that the behavior in question was carried out without any intent. Additionally, around a third of participants reported ambivalent intent to die, which has been observed across SITB (e.g., suicide attempts; Hausmann-Stabile et al., 2012; Rimkeviciene et al., 2016). Like the results here, a prior study found that roughly half of people who endorsed overdosing without intent to die later reported non-zero likelihood of dying from the behavior and a desire to die while overdosing, reflecting ambivalent intent (Fox et al., 2016). Future studies would do well to investigate multiple intentions for suicide-related behaviors, ambivalent desire to live or die, and their impact on classification and suicide risk. Moreover, some respondents described behaviors carried out with non-zero intent to die that could not result in physical injury (e.g., reporting suicidal ideation or planning to a therapist). One possibility that could account for this discrepancy is that participants may have conflated 'intent to die' with a desire to die, or *intent to act*, which refers to the severity

of an individual's suicidal thinking (Posner et al., 2014). Thus, future research should focus on improving the validity of explicit self-report measures of intent to die from self-injurious behaviors. For example, questions may first need to clarify through qualitative assessment whether a self-injurious behavior was carried out, followed by self-report items explicitly assessing level of intent.

Additionally, given our findings demonstrating that individuals engage in SITB with multiple/mixed functions (e.g., non-zero level of intent to die and an interpersonal function, or both interpersonal and intrapersonal functions), it may be beneficial for future instruments to assess multiple functions for each behavior endorsed, and probe which function is primary, to increase classification accuracy. For example, the long form of the first edition of Self-Injurious Thoughts and Behaviors Interview assesses multiple functions of suicide attempts (Nock et al., 2007). Researchers and clinicians may do well to reclassify behaviors in accordance with an individual's primary reported function. For instance, an individual who endorses a suicide gesture and reports non-zero intent to die as the primary function with a secondary interpersonal function may be reclassified as having made a suicide attempt. Conversely, an individual who endorses a suicide attempt and indicates a primarily interpersonal function with a secondary non-zero intent to die may be reclassified as having engaged in a suicide gesture. This may facilitate accurate classification and ultimately aid in the provision of tailored interventions that target core functions of suicidal behaviors. For instance, in therapies for suicidal behaviors, such as Dialectical Behavior Therapy (DBT), improving interpersonal effectiveness is a treatment target and is considered a key component (Linehan, 1987). Given that suicide gestures often involve primarily interpersonal functions, future research may investigate the extent to which DBT is effective in reducing instances of suicide gestures as a means of communicating distress, thereby meaningfully improving quality of life for this subset of individuals. However, this possibility is predicated on accurate classification of suicide gestures and suicidal behaviors more broadly.

This study had several limitations. First, the study included only a small sample of respondents, particularly when accounting for the 19 participants who did not provide sufficient narrative information to code their behavior. Second, the study sample was relatively homogeneous with respect to gender identity, race, and ethnicity, which limits the generalizability of results. Additional research with more diverse samples is needed to understand how sociocultural factors may differentially shape suicide gestures. Third, the study relied on retrospective self-report, which has multiple shortcomings. One is that participants may not remember details of past SITB (e.g., timing, severity, intent to die). Related, several participants appeared to still be determining the function behind their SITB when responding to the survey (e.g., "I think it was a cry for help"). Thus, the reported function and/or level of intent to die may have differed from that which occurred at the time of the behavior. Nonetheless, we rigorously coded participants' narrative responses for their level of confidence in their reported function, with most responses coded as 'high confidence.'

Despite its limitations, this study is among the first to use qualitative coding to confirm that at least some individuals who endorsed a suicide gesture engaged in actions consistent with contemporary definitions for the behavior. Additionally, our study probed participants' intent to die explicitly following endorsement of a suicide gesture. This represents a notable strength, as most SITB measures assess intent indirectly through participants' endorsement of individual behaviors. Together these strengths allowed us to gain insight into key challenges in the assessment of suicide-related behaviors, as well as potential modifications to existing instruments that may increase classification precision. Given that the accurate assessment of SITB is critical to advancing the understanding of suicidal behaviors, future research aimed toward improving the measurement of suicide gestures will greatly advance our ability to predict, prevent, and treat this maladaptive and harmful behavior.

ACKNOWLEDGEMENTS

The study was approved by the Harvard University Institutional Review Board and informed consent was conducted online.

FUNDING INFORMATION

AJM received grants from the Fuss Family Fund at Harvard University.

CONFLICTS OF INTERESTS

The authors have no disclosures or conflicts of interest to report.

DATA AVAILABILITY STATEMENT

All coded data are available at https://osf.io/bfq5v/ and the complete data set is available upon request.

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ENDNOTE

[1] In the present study we utilize the definition for 'intent to die' outlined by Silverman et al. (2007b), involving: "(1) a desire or wish to end life as a conscious experience; (2) knowledge (accurate or inaccurate) of risk associated with a behavior; (3) some perception that means or methods are available to achieve the desired outcome; and (4) some knowledge about how to use the means or methods" (p. 255). This definition was selected given its clarity and widely accepted usage in contemporary clinical and research literature.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Huckins-Noss, A. M., Stubbing, J., Fox, K. R., Nock, M. K., & Millner, A. J. (2022). The classification of suicide gestures: Examining the validity, measurement, and level of intent of a controversial construct. *Suicide and Life-Threatening Behavior*, *00*, 1–10. https://doi.org/10.1111/sltb.12930