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A Brief Measure of Unbearable Psychache

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Objective: Psychache has been proposed to cause suicide when it becomes unbearable. However, existing measures of psychache do not directly target unbearable psychache. Thus, the purpose of the current study was to provide initial validation for a brief measure of unbearable psychache.

Method: Three items were selected to create the Unbearable Psychache Scale (UP3). Psychometric properties were assessed in two populations: (1) an online sample composed of 1,006 adults (53% male) from various locations in the United States and (2) a sample of 190 psychiatric inpatient adults (47% male) from a hospital in Western Canada.

Results: In both samples, the UP3 demonstrated excellent internal reliability, and strong convergent and predictive validity. Additionally, the UP3 predicted significant variance in suicidal ideation over and above documented correlates of suicidal ideation including general psychache, hopelessness, perceived burdensomeness, and low belongingness.

Conclusions: The UP3 is a brief, psychometrically sound measure of unbearable psychache that may be well-suited for use in research protocols and clinical assessments.

Suicide is a major public health concern, claiming approximately 800,000 lives world-wide every year (World Health Organization [WHO], 2014). In addition, for every death by suicide, it is estimated that more than 20 individuals will make a nonlethal suicide attempt (WHO, 2014). The estimated lifetime prevalence of suicidal ideation crossnationally is 9.2%, with the highest risk of suicide attempt occurring in the first year following the onset of suicidal ideation (Nock et al., 2008). Despite a growing theoretical (Joiner, 2005; Klonsky & May, 2015;

O'Connor, 2011) and empirical (Chesney, Goodwin, & Fazel, 2014; Klonsky, May, & Saffer, 2016; O'Connor & Nock, 2014) knowledge base, epidemiological data and a recent meta-analysis suggest that suicide prediction and prevention have not meaningfully improved over the past several decades (Franklin et al., 2017; WHO, 2014). It is imperative to improve the field's understanding of suicide and suicide risk.

A large literature links the construct of psychache to suicide and suicide risk. First proposed by Shneidman, psychache refers to "the

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hurt, anguish, soreness, aching, psychological pain in the psyche, the mind" (Shneidman, 1993, p. 51). Shneidman suggests that the psychological pain he calls psychache arises when vital psychological needs are blocked or unmet and that if psychache becomes sufficiently severe, it can become "unbearable" or "intolerable," and in turn motivate suicide (Shneidman, 1993, 1998). In Shneidman's words, "suicide occurs when the psychache is deemed by that person to be unbearable" (Shneidman, 1993, p. 51). From this perspective, there is a key distinction between the larger construct of psychache, that can come in many forms, versus psychache that is unbearable, and it is unbearable psychache that motivates suicide (Shneidman, 1993, 1996, 1998).

Since Shneidman's introduction of psychache, a large body of empirical work has emerged assessing the relevance of this construct for suicide (Conejero, Olié, Calati, Ducasse, & Courtet, 2018; Rizvi, Iskric, Calati, & Courtet, 2017; Verrocchio et al., 2016). A recent meta-analysis of 20 studies (Ducasse et al., 2018) supports a robust association between indicators of suicide risk and measures of psychological pain. There is also extensive evidence that the construct of psychache relates to suicidal thoughts and behaviors uniquely, that is, over and above other suicide risk factors. For example, psychache relates to indicators of suicide risk even when controlling for depression and hopelessness (Berlim et al., 2003; Holden, Mehta, Cunningham, & McLeod, 2001). In a large sample of undergraduates, psychache was a stronger statistical predictor of suicide ideation, attempter status, and number of attempts than either depression or hopelessness (Troister & Holden, 2010). In addition, and consistent with Shneidman's theory, psychache appears to explain the relationships of many potential risk factors to suicidal thoughts and behaviors. For example, psychache was found to fully mediate the relationship between socially prescribed perfectionism and a latent construct comprising several measures of suicidal thoughts and behaviors (Flamenbaum & Holden, 2007), and partially mediate the relationship between general distress and suicide ideation (Campos, Gomes, Holden, Piteira, & Rainha, 2017). Moreover, in a longitudinal study assessing high-risk students, psychache accounted for the relationships of both depression and hopelessness to suicide ideation and change in suicide ideation over the course of 2 years (Troister & Holden, 2012).

More recently, research has identified psychache as a primary motivation for suicide attempts. Across several samples of attempters diverse in age and clinical severity, psychache and hopelessness were found to be the most frequently and strongly endorsed motifor attempting suicide—more strongly endorsed than other motivations emphasized in suicide theory, including escape, perceived burdensomeness, and thwarted belongingness (May & Klonsky, 2013; May, O'Brien, Liu, & Klonsky, 2016). These findings underscore the potential importance of psychache for understanding suicidal thoughts and behaviors.

While the above literature has tremendously advanced the theory and science of psychache, it also suffers from a key limitation: The measures of psychache utilized do not sufficiently target the "unbearable" form of psychache hypothesized to cause suicide. Instead, and as elaborated below, most existing measures of psychache combine items indexing unbearable psychache with items indexing general psychache, and/or peripherally relevant cognitions or experiences. If it is indeed unbearable psychache that leads to suicide ideation and attempts, as Shneidman suggests, it may be useful to have a measure that directly measures unbearable psychache separately from more general forms of psychache (e.g., everyday sources of psychological hurt, mild or moderate experiences of psychological distress). A brief, direct

¹For the purposes of summarizing relevant literature, the construct of psychological pain will be used interchangeably with psychache as defined by Shneidman. We recognize that other conceptualizations of psychological pain are utilized in the literature, and refer readers interested in a discussion of these nuances to Meerwijk and Weiss (2011) and Tossani (2013).

measure of unbearable psychache can facilitate theory testing and potentially improve understanding, prediction, and ultimately prevention of suicide. Thus, the purpose of the present research is to develop a brief measure that specifically targets "unbearable" psychache.

Several existing measures of psychache and related constructs provide a context for the current work (Bryan et al., 2014; Mee et al., 2011; Olié, Guillaume, Jaussent, Courtet, & Jollant, 2010; Orbach, Mikulincer, Sirota, & Gilboa-Schechtman, 2003; Shneidman, 1999; Tillman et al., 2017; The WHOQOL Group, 1998). One of the most commonly used and widely cited measures of psychache is the Psychache Scale (Holden et al., 2001). Originally developed and validated in a sample of undergraduate students (Holden et al., 2001), the Psychache Scale has consistently demonstrated strong correlations with suicidal ideation in a variety of samples, including high-risk samples (Chin & Holden, 2013; DeLisle & Holden, 2009; Patterson & Holden, 2012; Troister, Davis, Lowndes, & Holden, 2013; Troister & Holden, 2010, 2012, 2013). It is notable, however, that items on the Psychache Scale assess general experiences of psychache, and not just the unbearable or intolerable form of psychache that Shneidman links to suicide. For example, items include "I feel psychological pain," which may be a relatively common psychological experience, as opposed to items that indicate unbearable pain such as "I can't take my pain any more."

Another measure, the Orbach and Mikulincer Mental Pain Scale (OMMPS; Orbach et al., 2003), was developed to capture a wide range of experiences relevant to mental pain. The OMMPS assesses nine factors: irreversibility, loss of control, narcissistic wounds, emotional flooding, freezing, estrangement, confusion, social distancing, and emptiness (Orbach et al., 2003), and has demonstrated the ability to distinguish suicide attempters from nonattempters (Gvion et al., 2014; Levi et al., 2008). While clearly useful for the study of pain and suicide, the measure, by design, covers a wide range of

factors relevant to mental pain and does not include a scale targeting pain experienced as unbearable.

A third measure is the Suicide Cognitions Scale (SCS; Bryan et al., 2014). Notably, the SCS contains a subset of items that assesses "unbearability," defined as the perceived inability to tolerate or cope with emotional pain. A recent short form of the SCS (SCS-S) was developed and validated in a sample of chronic pain patients (Bryan et al., 2017), and includes an unbearability scale composed of three items: (1) "I can't cope with my problems any longer," (2) "It is impossible to describe how badly I feel," and (3) "I can't imagine anyone being able to withstand this kind of pain" (Bryan et al., 2017). Of existing measures, these items come closest to targeting the specific construct of unbearable psychache. However, they have limitations for this purpose. For example, the first item does not explicitly mention pain or the experience of pain, and may be endorsed due to a perceived lack of ability to cope rather than an experience of unbearable pain. The second item may capture an inability to verbalize or describe how one feels, similar to alexithymia, rather than the specific experience of unbearable pain. Perhaps due to these item limitations, this subscale has exhibited a weak correlation with current suicidal ideation compared to other measures of psychache (Bryan et al., 2017). Thus, while the SCS and SCS-S are useful measures for assessing current and future suicide risk—and have demonstrated the ability to predict suicidal ideation, differentiate suicide attempters from nonattempters, and predict future suicide attempts (Bryan et al., 2014)—they may not be the best choices to capture the specific construct of unbearable psychache.

A final measure that warrants discussion is the Mee-Bunney Psychological Pain Assessment Scale (MBPPAS; Mee et al., 2011). The MBPPAS was developed to assess the frequency and intensity of psychological pain. In addition to displaying strong psychometric properties, this relatively brief 10-item measure has been shown to account for variance in suicidality that is not explained by

depression or hopelessness (Mee et al., 2011). Another strength of the MBPPAS is that unlike other measures, the range of psychological pain assessed specifically includes the construct of unbearable psychological pain. However, the MBPPAS items' rating scale extends beyond the specific construct of unbearable psychache. Specifically, items are rated on a scale covering a range of psychological pain, from mild to moderate to unbearable. Thus, the measure captures variability in the lower end of psychological pain experience that is less relevant to Shneidman's emphasis on unbearable psychache, and may be less relevant, or not at all relevant, for the development of suicidal ideation. In sum, the MBPPAS is an excellent measure for the study of general psychache, but was not designed to focus on unbearable psychache.

The measures described above have helped establish foundational knowledge regarding psychological pain and suicide. A new measure that directly assesses unbearable psychache would be a valuable complement given this construct's theoretical and empirical importance. A secondary advantage of such a measure is that it could be relatively brief, given the narrow scope of the construct, and thus easy to incorporate into research and clinical settings where time is limited and valuable.

Therefore, the current study aims to develop a new, brief measure of unbearable psychache, and provide initial information about this measure's reliability and validity. To develop this new measure, items indicating unbearable psychological pain were selected from the Psychache Scale (Holden et al., 2001) and summed to create a brief measure of unbearable psychache. We then examined the properties of the brief measure in two diverse samples: a large online USbased sample (oversampled for histories of suicide ideation and attempts) and adult psychiatric inpatients. Specifically, we examined reliability and validity of the measure, including the extent to which it predicted suicidal ideation directly and over and above known correlates of suicidal ideation such as perceived burdensomeness, thwarted

belongingness, and hopelessness (Abramson et al., 2000; Beck, Steer, Kovacs, & Garrison, 1985; Chu et al., 2017; Joiner, 2005).

METHODS

Scale Development and Validation

Item Selection. Items conceptually reflective of unbearable psychache were selected from the original 13-item Psychache Scale (Holden et al., 2001) to construct a scale of unbearable psychache. The Psychache Scale was chosen for three reasons: (1) It was designed to assess psychache as conceptualized by Shneidman, (2) it is one of the most widely used and oft-cited measures of psychache, and (3) some of its items clearly and specifically describe unbearable psychache. Three items from the Psychache Scale were identified as bearing the closest semantic similarity to "unbearable" or "intolerable" psychological pain. These items were as follows: item 10 "I can't take my pain any more," item 11 "Because of my pain, my situation is impossible," and item 12 "My pain is making me fall apart," all rated on a scale ranging from 1—strongly disagree to 5 strongly agree. These items were determined to be most reflective of unbearable psychache, in contrast to other items assessing the more general experience of psychache (e.g., "I feel psychological pain").

Scale Validation. Three items identified in the previous step were summed to create the Unbearable Psychache Scale, henceforth referred to as the UP3. Internal reliability of the measure was then examined in two samples (described below). Next, correlation analyses between the UP3, the original 13-item Psychache Scale, and current suicidal ideation were conducted in each sample to examine convergent and predictive validity of the new measure. Finally, multiple regression analyses were conducted in each sample to determine the contribution of the new 3-item measure of unbearable psychache to the prediction of suicidal ideation over and above the other psychache items (sum of the

remaining 10 items) as well as suicide relevant constructs (perceived burdensomeness, thwarted belongingness, and hopelessness).

Sample 1

Procedure. Participants were recruited online through the crowdsourcing platform Amazon's Mechanical Turk (MTurk) as part of a larger study on suicide ideation and attempts. Previous research utilizing MTurk for participant recruitment and data collection has suggested that samples collected via MTurk may be more diverse and representative compared with convenience samples and yield data that are comparable in reliability (Behrend, Sharek, Meade, & Wiebe, 2011; Buhrmester, Kwang, & Gosling, 2011). Participants received a small amount of financial compensation for completing the online questionnaires.

Participants. Participants were obtained in two stages. First, participants were recruited regardless of suicide history (n = 906). Second, to ensure sufficient numbers of participants with histories of suicidal ideation or attempts, a screening questionnaire was utilized to recruit only participants who endorsed a history of ideation or attempts (n = 191). This resulted in a potential sample of 1,097 participants. The final sample consisted of 1,006 adults who completed measures of the current study, responded correctly to at least two of three validity questions in the survey, and completed the survey just once. Participants demographics were as follows: $M_{\text{age}} = 31.64$, *SD* = 10.35; 53% Male; 76% Caucasian; 85% Heterosexual. Participants were from different locations in the United States, including Southeast (25%), Far West (19%), Great Lakes (16%), Mid-Atlantic (15%), Southwest (10%), Plains (5%), New England (4%), Rocky Mountains (4%), and Mid-East (3%). Regarding history of suicide, 24% of participants reported a history of suicide ideation and no history of attempts, and 13% of participants reported a history of suicide ideation and one or more attempts.

Measures. Psychache Scale (Holden et al., 2001). The Psychache Scale is a 13item self-report measure used to assess current psychological pain based on Shneidman's (1993) description of psychache: the chronic, free-floating, nonsituation-specific, psychological pain caused by the frustration of vital psychological needs. The first nine items of the scale ask respondents to rate the frequency with which they experience each item, ranging from 1—never to 5—always. The last four items ask respondents to endorse how strongly they agree or disagree with the experience described in each item, ranging from 1-strongly disagree to 5strongly agree. Psychometric properties of the Psychache Scale have been established in previous research demonstrating excellent scale reliability and good validity (Holden et al., 2001; Mills, Green, & Reddon, 2005).

Beck Scale for Suicide Ideation (BSS-5; Beck & Steer, 1991). The BSS-5 is a shortened version of the original 19-item self-report measure. Previous factor-analytic work has found the original BSS to be comprised of separate factors (Beck, Brown, & Steer, 1997; Beck, Kovacs, & Weissman, 1979; Dhingra, Klonsky, & Tapola, 2018) and has distinguished suicidal desire from the larger construct of suicide ideation. The BSS-5 is compiled of the first five items of the 19item BSS and indexes the subconstruct of suicidal desire, including wish to live, wish to die, reasons for living and dying, desire to make a suicide attempt, and passive suicidal desire. Each item is rated on a scale ranging from 0 to 2 where higher scores indicate greater suicidality. The BSS-5 has demonstrated good internal reliability in previous research (Shahnaz, Saffer, & Klonsky, 2018). In the current sample, Cronbach's alpha for the BSS-5 was .91.

Beck Hopelessness Scale—Short Form (BHS-SF; Beck, Weissman, Lester, & Trexler, 1974). The BHS-SF is a 4-item version of the Beck Hopelessness Scale (Beck et al., 1974) used to assess hopelessness within the past week. Respondents rate each item as true or false with total scores ranging from 0 to 4. This short form has demonstrated good

psychometric properties in previous research (Aish, Wasserman, & Renberg, 2001; Yip & Cheung, 2006). In the current sample, Cronbach's alpha for the BHS-SF was .86.

Interpersonal Needs Questionnaire (INQ-10; Bryan, 2011; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). The INQ-10 is a 10-item version of the Interpersonal Needs Questionnaire (Bryan, 2011; Hill et al., 2015; Van Orden et al., 2008) designed to measure perceived burdensomeness (i.e., the extent to which one believes they are a burden on others) and thwarted belongingness (i.e., the extent to which one's need to feel connected with others is unmet). Items are rated on a 7-point Likert scale ranging from 1—not at all true for me to 7—very true for me with higher scores indicating greater levels of these constructs. In the current sample, Cronbach's alpha for the perceived burdensomeness scale was .95 and for the thwarted belongingness scale was .88.

Demographic and suicide history. Standard demographic information, including age, gender, race/ethnicity, and sexual orientation, was collected on a self-report form. History of suicide ideation and suicide attempt was assessed using 3 items from the Youth Risk Behavior Surveillance Survey (YRBS; Brener et al., 2002; Kolbe, Kann, & Collins, 1993). These YRBS items have demonstrated excellent reliability and validity in previous research (Brener et al., 2002; May & Klonsky, 2011).

Sample 2

Procedure. Participants were recruited from a psychiatric inpatient unit in a hospital located in Western Canada. Patients who had been admitted to the unit were provided with information regarding the study. Those interested in participating provided informed consent and completed a full battery of measures assessing suicidality and related variables, which included measures of the current study. All interested patients participated in the

study within 21 days of hospital admission and were compensated with a \$10 gift card upon completion of the full battery of measures.

Participants. This sample consisted of 190 adult psychiatric inpatients ($M_{\rm age} =$ 35.76, SD = 12.72; 53% Female; 60% Caucasian, 16% Indian/South Asian, 10% Indigenous, 8% Other, 6% South East Asian; 88% Heterosexual). Regarding suicide history, 22% of participants reported a lifetime history of suicide ideation and no history of attempts, and 57% of participants reported a lifetime history of suicide ideation and one or more attempts. Exclusion criteria included either cognitive or language barriers that impeded the individual's ability to complete the study measures, and severe psychosis or medical instability as documented in the patient's electronic record.

Measures. Psychache, suicidal ideation, and hopelessness were assessed with the same measures (Psychache Scale, BSS-5, and BHS-SF) as utilized in Sample 1; see above for measure descriptions. In this sample, Cronbach's alpha was .91 for the BSS-5 and .81 for the BHS-SF. The 15-item version of the Interpersonal Needs Questionnaire (INQ-15; Van Orden, Cukrowicz, Witte, & Joiner, 2012; Van Orden et al., 2008) was used to measure perceived burdensomeness and thwarted belongingness in this sample. Cronbach's alpha for the perceived burdensomeness scale was .93 and for the thwarted belongingness scale was .84.

Demographic suicide history. Demographic information was assessed with the same measure as Sample 1; see above. History of suicide ideation was assessed using an item taken directly from the Self-Injurious Thoughts and Behaviors Interview—Short Form (SITBI-SF; Nock, Holmberg, Photos, & Michel, 2007). History of attempt was assessed using a revised version of an item from the SITBI-SF ("How many times have you made an actual suicide attempt in which you had at least some intent to die?").

RESULTS

Scale Validation

The three items (items 10-12) identified during item selection were summed to create the Unbearable Psychache Scale (UP3; see Appendix). The remaining 10 items of the Psychache Scale were summed to serve as a measure of general psychache to be utilized in hierarchical regression analyses to determine unique explanatory variance in suicidal desire of the 3-item Unbearable Psychache Scale over and above general psychache. Finally, correlational and hierarchical regressions were used to examine the UP3 with other suicide variables. In Sample 1, pairwise deletion was used to handle missing data for analyses (ns = 910-1,006). There were no missing data in Sample 2; thus, the full sample was utilized for analyses (n = 190).

Sample 1. Descriptive statistics and bivariate correlations for all key study variables are reported in Tables 1 and 2, respectively. Due to the large number of participants with scores of 0 on suicidal desire, the BSS-5 was transformed using a square root transformation (three times) to reduce skewness and kurtosis to acceptable levels. The perceived burdensomeness scale was also transformed using a square root transformation (one time) to reduce skewness and kurtosis to acceptable levels. Subsequent analyses were performed using transformed variables. (Of note, bivariate correlations and regression analyses were also run with the original untransformed variables; results were nearly identical to those reported below, and complete results are available from the authors upon request).

The Psychache Scale and the newly constructed measure of unbearable psychache demonstrated excellent internal reliability (Psychache Scale α = .97; UP3 α = .93). The measure of unbearable psychache additionally displayed strong convergent validity with the original Psychache Scale and strong predictive validity with the BSS-5 (see Table 2). Consistent with the correlation reported in Table 2, the UP3 accounted for 28% of the

variance in suicidal desire on its own (p < .001). In addition, hierarchical regression analyses revealed that the UP3 predicted a significant amount of variability in suicidal desire over and above general psychache. The overall model accounted for 30% of the variability in suicidal desire with the 3-item UP3 accounting for an additional 4% ($f^2 = 0.05$) of unique variance over and above general psychache (UP3: $\beta = .33$; general psychache: $\beta = .24$; ps < .001). Finally, the UP3 was entered into a regression model along with measures of hopelessness, perceived burdensomeness, thwarted belongingness, and the interaction term of perceived burdensomeness and thwarted belongingness. All variables with the exception of perceived burdensomeness ($\beta = .04$; p = .28) and thwarted belongingness ($\beta = .06$; p = .07) were significant predictors of suicidal desire (UP3: β = .22; hopelessness: β = .29; interaction term: $\beta = .18$; ps < .001). This overall model accounted for 40% of the variability in suicidal desire, with the UP3 explaining an additional 2% ($f^2 = 0.04$) of unique variance over and above the other measures (p < .001).

Sample 2. Descriptive statistics and bivariate correlations for all key study variables are reported in Tables 1 and 2, respectively. Skewness and kurtosis were at acceptable levels for all variables in this sample. Both the Psychache Scale and the new measure of unbearable psychache demonstrated excellent internal reliability (Psychache Scale $\alpha = .96$; UP3 $\alpha = .93$). As in Sample 1, the measure of unbearable psychache displayed strong convergent validity with the original Psychache Scale and strong predictive validity with the BSS-5 (see Table 2). Consistent with the correlation reported in Table 2, the UP3 accounted for 49% of the variance in suicidal desire on its own (p < .001). Hierarchical regression analyses revealed that the UP3 predicted a significant amount of variability in suicidal desire over and above general psychache. The overall model accounted for 54% of the variability in suicidal desire with the 3-item unbearable psychache measure accounting for an additional 4% ($f^2 = 0.10$) of unique variance over

TABLE 1
Means, Standard Deviations, and Ranges for Key Study Variables in Both Samples

	Samp	Sample 1 (online sample)			Sample 2 (inpatient sample)		
Measures	M	SD	Range	M	SD	Range	
Psychache Scale	28.16	13.45	13–65	34.89	15.41	13–65	
UP3	5.79	3.28	3-15	7.89	4.20	3-15	
BSS-5	0.51	1.51	0-10	2.16	3.03	0-10	
BHS-SF	1.01	1.45	0–4	1.16	1.44	0-4	
Perceived burdensomeness	9.35	6.83	5-35	16.95	11.00	6-42	
Thwarted belongingness	17.73	8.00	5-35	31.27	12.87	9–63	

Note: Descriptive statistics reported here are based on untransformed variables.

UP3, Unbearable Psychache Scale; BSS-5, Beck Scale for Suicide Ideation—shortened version; BHS-SF, Beck Hopelessness Scale—Short Form.

TABLE 2
Correlations Between Key Study Variables in Both Samples

Measures	1	2	3	4	5	6
1. Psychache Scale	_	.89	.54	.63	.60	.61
2. UP3	.90	_	.53	.63	.61	.58
3. BSS-5	.73	.70	_	.56	.49	.44
4. BHS-SF	.75	.72	.77	_	.56	.61
5. Perceived burdensomeness	.73	.67	.75	.68	_	.57
6. Thwarted belongingness	.69	.61	.63	.58	.69	_

Note: Upper triangle reports Pearson correlation coefficients (r) from Sample 1 (online sample). Lower triangle reports Pearson correlation coefficients (r) from Sample 2 (inpatient sample). All correlations are significant at p < .001. Results reported here are based on transformed variables (results are similar with untransformed variables, as explained in the Results section).

UP3, Unbearable Psychache Scale; BSS-5, Beck Scale for Suicide Ideation—shortened version; BHS-SF, Beck Hopelessness Scale—Short Form.

and above general psychache (UP3: $\beta = .36$; general psychache: $\beta = .41$; ps < .001). Finally, the UP3 was entered into a regression model along with measures of hopelessness, perceived burdensomeness, thwarted belongingness, and the interaction term of perceived burdensomeness and thwarted belongingness. All variables were significant predictors of suicidal desire (UP3: $\beta = .17$; hopelessness: $\beta = .39$; perceived burdensomeness: $\beta = .21$; thwarted belongingness: β = .13; interaction term: β = .20; ps < .05). This overall model accounted for 74% of the variability in suicidal desire, with the UP3 explaining an additional 1% ($f^2 = 0.04$) of unique and significant variance over and above the other measures (p = .006).

DISCUSSION

A critical step in reducing death by suicide is to refine and improve the assessment of suicide and closely related constructs. A considerable amount of evidence identifies psychological pain as fundamental to understanding aspects of suicidality, including increased risk (Ducasse et al., 2018; Rizvi et al., 2017; Verrocchio et al., 2016). Unbearable psychache is often described in the literature as leading to suicide. However, of existing measures that assess psychache and related constructs, none have a clear and specific focus on unbearable psychache. Therefore, the purpose of the present study was to evaluate the

reliability and validity of a brief measure of unbearable psychache.

The newly developed measure of unbearable psychache (UP3) demonstrated strong psychometric properties, including excellent internal reliability and strong convergent validity. The properties of this threeitem measure were comparable to those of the well-established and lengthier measure of psychological pain from which the items were drawn, the Psychache Scale (Holden et al., 2001). Moreover, the UP3 generated robust correlations with suicidal desire accounted for unique information in suicidal desire over and above general psychache, as well as several documented correlates of suicidal ideation including hopelessness, perceived burdensomeness, and thwarted belongingness. Notably, these findings regarding the reliability, validity, and predictive utility of the UP3 were consistent across two separate and distinct samples: one from an online USbased platform and one from an inpatient psychiatric hospital in Canada.

While preliminary in nature, these findings offer several important implications for theoretical advancement, research, and clinical assessment. First, findings align with both historical and contemporary theories of suicide in supporting the importance of unbearable psychological pain for suicidal desire. For example, Shneidman's (1993) theory of suicide states that the construct of unbearable psychache is the primary cause of suicide. More recently, Klonsky and May's Three-Step Theory of suicide (3ST; Klonsky & May's, 2015) highlights the importance of unbearable psychological pain, in conjunction with hopelessness, for the development of the desire to die. Findings from the current study regarding the UP3's strong association with suicidal desire and predictive utility of suicidal desire over and above that of general psychache provide empirical support for suggestions that unbearable psychache is closely linked to suicidal desire. In the present study, the UP3 also exhibited a relationship to hopelessness, perceived burdensomeness, and thwarted belongingness. Future research should examine the extent to which these

variables may influence each other and contribute to suicide risk.

A second implication of the current study applies to future research protocols. While previous research has stressed the importance of unbearable psychache, existing measures tended to assess psychache and related constructs more broadly. The UP3 represents a brief, user-friendly, specific measure of unbearable psychache that may be of use to a wide variety of studies on suicide and suicide risk. Moreover, this brief three-item measure can be completed in less than a minute and can thus be easily incorporated into studies without significantly lengthening the research protocol.

The UP3 may also be useful in clinical assessment settings. Clinical assessment often occurs in time-limited contexts; consequently, self-report measures are frequently neglected due to their lengthy nature, despite advisement for their inclusion in risk assessment (Chu et al., 2015). The UP3 offers clinicians a tool that is very brief, yet clinically relevant for case formulation, treatment planning, and suicide risk assessment. Furthermore, results from the current study make a case for the inclusion of unbearable psychache in clinical risk assessments. Unbearable psychache was just as strongly associated with suicidal desire as other suicide-related variables (i.e., hopelessness, perceived burdensomeness, and thwarted belongingness) that have been emphasized in recommendations for suicide risk assessment (Chu et al., 2015). Unbearable psychache also accounted for unique information in suicidal desire over and above these other variables. In addition, recent research suggests unbearable psychache is a primary motivation for suicide (May & Klonsky, 2013; May et al., 2016) and that psychache is a more important predictor of suicidal ideation than depression or hopelessness (Montemarano, Troister, Lambert, & Holden, 2018). Thus, taken together with other work, our findings suggest that incorporating unbearable psychache in risk assessments may provide clinicians with essential information pertaining to suicide risk.

A strength of the current study is that the psychometric properties of the UP3 were investigated in distinct samples: one community and one clinical. Consistent findings regarding the reliability and validity of the UP3 in these two samples provide support for the generalizability and value of the UP3 across a range of clinical risk. At the same time, it will be important to further investigate the UP3 in additional samples.

Limitations of the current study suggest several avenues for future research. First, items comprising the UP3 were selected from a preexisting measure of psychache. It is possible that other items, and perhaps a longer measure, may be better suited for assessing the construct of unbearable psychache. Efforts to more precisely and validly assess unbearable psychache should continue, including clarification of its relationship to more general psy-Shneidman alternates describing unbearable psychache as the high end of the general psychache continuum (1993) versus being qualitatively distinct from general psychache (1998). The distinction between these constructs is still unclear; thus, further work is needed to examine whether unbearable psychache represents a more severe form of general psychache or is a categorically distinct construct.

Second, convergent validity of the UP3 was assessed with a measure of general psychache. Future validations of the UP3 could

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further assess convergent validity against additional measures that include items indexing unbearable psychache, such as the MBPPAS (Mee et al., 2011). Third, incremental validity of unbearable psychache was tested against variables comprising the Interpersonal Theory of Suicide (ITS; Joiner, 2005). The ITS predicts that hopelessness about perceived burdensomeness thwarted belongingness is required for active ideation; however, this interaction was not examined in the current study. To further assess incremental validity of the UP3 in predicting suicidal desire, future studies should include the interaction of hopelessness about these interpersonal states. Fourth, only one preexisting measure of psychache was used in this study. Future studies should include other measures of psychological pain and related constructs in addition to the UP3 to better understand the empirical and conceptual relationships of unbearable psychache, general psychache, mental pain, and other similar constructs to each other and to suicide ideation, attempts, and death. Finally, the current study's main outcome of interest was suicidal desire. To better understand the importance of unbearable psychache to suicide more broadly, future research should examine how unbearable psychache may relate to other aspects of suicidality, including the transition from thinking to acting on suicidal thoughts.

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APPENDIX

ITEMS FROM THE PSYCHACHE SCALE (HOLDEN ET AL., 2001) USED TO ASSESS UNBEARABLE PSYCHACHE

The following statements refer to your psychological pain, not your physical pain. Please indicate the extent to which you disagree or agree with each of the statements using the following scale:

1 = Strongly disagree 2 = Disagree 3 = Unsure 4 = Agree 5 = Strongly agree

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
1. I can't take my pain any more	1	2	3	4	5
2. Because of my pain, my situation is impossible	1	2	3	4	5
3. My pain is making me fall apart	1	2	3	4	5