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Can clinician's risk assessments distinguish those who disclose suicidal ideation from those who attempt suicide?

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ABSTRACT

Participants were 85 individuals who made suicide attempts within two years of their Improving Access to Psychological Therapies (IAPT) assessment, identified using record linkage. Two comparison groups, non-suicidal controls ($n = 1416$) and ideators, ($n = 743$) were compared on variables extracted from the standardized IAPT risk assessment interview. Disclosure of a historical suicide attempt or non-suicidal self-injury (NSSI) distinguished those making an attempt from those with suicidal ideation only, but suicidal intent did not. A third of the participants concealed a historical suicide attempt. The IAPT Phobia Scale classified 49.30% of attempters with 100% specificity. The IAPT Phobia Scale may have clinical value in assessing risk but requires validation. Past suicide attempt and NSSI have better clinical risk assessment utility than current suicidal ideation intensity. Risk assessment relying on disclosure is likely to be flawed and risks support being withheld from those assumed to be at lower risk.

KEYWORDS

Ideation-action; IAPT; risk assessment; suicide; suicide prevention

An estimated 700,000 deaths a year are attributed to suicide globally (World Health Organization, 2021). Despite exponential growth in research and the implementation of suicide prevention strategies (Bryan et al., 2015), suicide rates have remained stubbornly high and our ability to predict suicide has not advanced in 50 years (Franklin et al., 2017). The limited ability of statistical models (Belsher et al., 2019) and clinicians (Lindh et al., 2020) to predict which individuals may sadly die by suicide is not a novel observation. Pokorny (1983) commented that the limited sensitivity and specificity of available measures made predicting suicide at an individual level unfeasible in the context of a low base rate, even in an acute mental health setting with an elevated prevalence of suicidal behavior.

In addition to the confounding effect of the low base rate on suicide prediction, research has shown that most established risk factors predict only suicidal ideation (which in turn predicts an attempt) but fail to differentiate individuals with ideation from those

who act on suicidal thoughts. May and Klonsky's (2016) meta-analysis found only post-traumatic-stress disorder, anxiety disorders, drug use disorders, and sexual abuse history were capable of meaningfully distinguishing suicide attempters and ideators. Congruently, epidemiological studies suggest that while hopelessness and psychiatric disorders (including depression) are consistently associated with suicidal ideation, they negligibly differentiate ideators from attempters (Kessler et al., 1999; Nock et al., 2008). Similar results have been found in social connectedness, anhedonia, entrapment, bullying, and emotion dysregulation (Arango et al., 2016; Dhingra et al., 2016; Khazem & Anestis, 2016; Winer et al., 2016).

It is well established that rates of suicidal ideation and behaviors are considerably elevated within those accessing mental and physical health services. For example, Vuorilehto et al. (2020) found 56–88% of service users with depression disclosed suicidal ideation depending on their care setting and a scoping

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review by Tabb et al. (2017) found a median of 18.6% of service users with diabetes disclosed suicidal ideation. In practice, mental and physical health clinicians are therefore faced with large numbers of patients presenting with suicidal ideation and few empirically supported risk factors predicting subsequent attempts.

The gap in what differentiates those with suicidal ideation from those who attempt suicide has led to calls for research that follows an *ideation-action* framework (Klonsky & May, 2014). Ideation-action theories include O'Connor's (2011) Integrated Motivational-Volitional model of suicidal behavior, Joiner's (2005) interpersonal theory of suicide and Klonsky and May's (2015) three-step theory. They posit that one cluster of factors results in the development of suicidal ideation and a separate cluster of factors enable or drive individuals to act on these thoughts.

One of the most promising factors for distinguishing ideators from attempters is suicidal capability, a key tenet of all ideation-action theories (Klonsky et al., 2017). Suicidal capability refers to habituation to pain, injury, and fear. It is thought to be acquired over time through experiences such as trauma or non-suicidal self-injury (NSSI) and enable suicidal behavior (Joiner, 2005; Klonsky & May, 2015). Electroencephalogram methodology has shown a blunted neural response to threatening imagery in attempters compared to ideators (Weinberg et al., 2017) and acquired capability has been shown to differentiate ideators and attempters in the military, adult community, and national youth samples (Cheek et al., 2016; Chu et al., 2016; Wetherall et al., 2018). Furthermore, the relationship between NSSI and suicide attempt has been found to be strongest in those demonstrating higher persistence through painful and distressing tasks (Law et al., 2017). Consequently, reviews highlight suicidal capability as a key area for future research within an ideation-action framework (Ma et al., 2016; Stewart et al., 2017a).

Although the recent growth in research following an ideation-action framework is promising, three major confounds limit its clinical applicability: lack of longitudinal studies, an absence of studies differentiating the risk of a lifetime and imminent attempt, and limited ecological validity. Klonsky et al.'s (2017) review highlighted only one longitudinal study and most of the research to date also uses a lifetime history of suicide attempt or ideation to compare ideators to attempters. Contemporary theory suggests suicidal behavior is best conceptualized as a specific response to environmental stressors that interact with

biological and intrapsychic mechanisms and vulnerabilities (Rudd, 2006). Distinct suicidal pathways are likely to exist, and an individual may follow multiple different suicidal pathways in response to different life circumstances. For example, Barker et al. (2022) suggested that for some individuals a suicide attempt is an unplanned solution to intolerable emotional distress (with fewer lethal outcomes), corroborating Fawcett's (1997) acute-agitation pathway and May and Klonsky's (2016) finding that anxiety disorders were one of the few factors differentiating ideators from attempters. Barker et al. (2022) suggested that conversely for other individuals a suicide attempt may be a planned response to the chronic absence of emotion and connection (with more lethal outcomes as individuals are better able to resist impulsive suicidal urges and plan more lethal attempts). Given the suicidal process from decision to action has been shown to last less than 10 min in the majority of cases (Deisenhammer et al., 2009), comparing ideators and attempters on the basis of lifetime history is likely to mask important differentiating variables and obscure our understanding of different suicidal pathways. Cross-sectional studies are unlikely to identify acute risk factors immediately precipitating suicide attempts which may be most salient for assessing clinicians.

The impact of a lack of longitudinal research that considers time-sensitive risk factors, is exemplified in the comparison of active suicidal ideation (with intent or a suicidal plan) compared to passive ideation (death wish without intent). While both active and passive suicidal ideation are associated with suicide attempts and deaths when compared to non-suicidal controls cross-sectionally, a recent systematic review found only two studies directly comparing their predictive validity for lifetime suicide attempt history (Liu et al., 2020). The review's meta-analysis suggested active ideation conferred no additional likelihood of an attempt (Liu et al., 2020). In the absence of longitudinal studies, and given the acute nature of suicidal behavior, it could be argued that one would expect any association to be observable acutely and not in cross-sectional studies. However, in practice, the view that more severe ideation is the key predictor of suicide attempts is a common basis for risk assessments (Blanchard & Farber, 2020; Richards & Whyte, 2011) with little supporting empirical evidence. Arguably the lack of definitive longitudinal studies contributes to the maintenance of this pervasive but empirically discredited risk assessment paradigm.

As a further example of the paucity of longitudinal research, few studies have explored the longitudinal

predictive validity of NSSI and suicide attempt history within an ideation-action framework. Given that both historical suicide attempts and NSSI are key determinants of acquired suicidal capability, with cross-sectional evidence supporting the ability of NSSI to distinguish ideators and attempters (Burke et al., 2018; Stewart et al., 2017b), their longitudinal exploration is an important research gap.

The importance of ecological validity is stark as, contrary to research settings where participants actively sign up to discuss suicidality, a third to half of adults conceal suicidal ideation from their clinician (Blanchard & Farber, 2016; Høyen et al., 2022). The most common reason for non-disclosure was a fear of involuntary admission to a mental health setting but for an important minority, non-disclosure was intended to maintain the ability to enact suicide (Blanchard & Farber, 2020). In psychological autopsy studies, a meta-analysis by Pompili et al. (2016) found less than half of those dying by suicide made any form of suicidal communication prior to their death, despite Laanani et al.'s (2020) finding that 61% of suicide decedents were in contact with a clinician in the month prior to their death. Similarly, Leenaars et al. (2020) found 80% of decedents masked or *dissembled* their suicidal intentions from loved ones, a term coined by Shneidman (1994). This raises the possibility that the risk markers evidenced in research settings are not equivalent to the disclosures in real-world practice on which clinicians' base decisions regarding intervention.

A longitudinal, time-sensitive, and ecologically valid exploration of the ideation-action gap is indicated, and the present paper chooses to address these confounds within an Improving Access to Psychological Therapies (IAPT) setting. IAPT is the predominant primary care mental health care model in the UK, assessing over 1.6 million individuals annually (NHS, 2019a). All service users referred to IAPT attend a triage assessment with the purpose of ascertaining the main difficulties, formulating a treatment plan, and assessing suicide risk. In line with national guidance, the IAPT risk assessment comprises a structured interview asking every service user for details of current and historical behaviors and thoughts, pertaining to both NSSI and suicide (Richards & Whyte, 2011). Any positive response or a statement of denial is noted on a standardized form. Other demographic and clinical information is recorded as standard practice with complete data obtained in 98% of appointments nationally (NHS, 2019b). Additionally, all incidences of self-harm (with or without lethal intent)

are required to be documented through a trust-wide incident reporting database. This includes all incidences occurring within, or reported to, any healthcare service within the trust in which this research took place. This provides a process to track suicidal behaviors longitudinally, post-IAPT assessment, regardless of the assessment outcome.

This record linkage study, therefore, explored the ability of information routinely collected as part of the IAPT risk assessment protocol, to distinguish those reporting suicidal ideation at their IAPT assessment from those making a suicide attempt in the following 24 months. Examined variables included active and passive suicidal ideation, NSSI, and historical suicide attempt.

Materials and methods

Participants

Participants were drawn from two East of England IAPT services. Clinical records of attended IAPT assessments from 01/01/2015 to 01/03/2020 were requested with 79,314 records identified. IAPT assessment records were linked to any incident report categorized as "self-harm" logged between 2015 and 2021. 1430 incident reports were identified pertaining to 235 individuals attending an IAPT assessment within our inclusion period. Incidents were categorized as suicide attempts in line with The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013; DSM-5; APA) criteria by two senior clinicians (Cohen's Kappa > 0.80), based on a review of medical records and incident descriptions. Suicidal intent must have been stated or implied by the participant (for example in a suicide note) or the behavior classified as a suicide attempt in their record. Behaviors with life threatening consequences, defined as scoring four or more on the Beck Lethality Scale (Beck et al., 1975; BLS), were classified as suicide attempts unless suicidal intent was explicitly denied. In the case of multiple attempts, only the highest BLS score was included.

Eighty-five individuals making a suicide attempt within 24 months of their IAPT assessment were identified with an average BLS score of 3.18 ($\sigma = 2.17$) and a median number of attempts of one. The mean time between the IAPT assessment and index attempt was 310 d ($\sigma = 215$) and ranged from two to 726 d. The most common method was overdose (67.06%), followed by hanging (12.94%), cutting (10.59%), jumping (4.71%), drowning (2.35%), and vehicular collision (2.35%).

From the initial pool of 79,314 IAPT assessment records, 2159 records were randomly selected for inclusion in line with an a-priori power calculation. These records were subsequently coded and stratified to form two comparison groups. One group reported no suicidal ideation at the time of the IAPT assessment (non-suicidal controls, $n = 1416$) and the other reported suicidal ideation at assessment, as defined by the Columbia-Suicide Severity Rating Scale (C-SSRS; ideators, $n = 743$).

Ethical approval

This study was approved by the University of East Anglia Faculty of Medicine and Health (2020/21-133) and NHS Health and Health Research Authority (21/HRA/3611).

Procedure and measures

Clinical records from participant's IAPT assessments were coded by six clinicians with the following variables extracted (Cohen's Kappa > 0.80 for all variables). Coders received training from the first author and had prior research methods training. Records without evidence of enquiry regarding all variables below were excluded ($n = 68$). Excluded and included participants did not significantly differ across any variable ($p > .05$). Unless otherwise specified, all variables reflect a disclosure at the time of assessment. For example, passive suicidal ideation encompasses participants who disclosed that they were experiencing passive suicidal ideation at the time of their assessment.

Suicidal ideation

The suicidal ideation subscale of the C-SSRS has good validity and consistency, is sensitive to change over time and is suggested as a gold standard assessment measure (Posner et al., 2011). The C-SSRS was used to define suicidal ideation as denied, passive (without intent, including imagery), active (with intent), or plan (details fully or partially worked out), occurring within two weeks of assessment. Any ideation occurring more than two weeks prior to assessment was defined as historical suicidal ideation.

NSSI

NSSI was defined as "the intentional destruction of body tissue without suicidal intent and for purposes not socially sanctioned" (Klonsky, 2007, p. 6). Participants must have denied suicidal intent for the

behavior or self-classified this behavior as "self-harm" rather than a suicide attempt in line with the IAPT risk interview schedule (Richards & Whyte, 2011). NSSI was defined as current if enacted within the two weeks preceding the assessment date or historical if occurring earlier than this.

Historical suicide attempt

The suicide attempt was defined as self-inflicted harm with any degree of intent to end one's own life in line with DSM-V (American Psychiatric Association, 2013) criteria. Suicidal intent must have been stated, or the behavior classified as a suicide attempt by the participant.

Clinical measures

The Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder Assessment (GAD-7) are screening measures for depression and generalized anxiety disorder with excellent reliability and validity (Kroenke et al., 2001; Spitzer et al., 2006). The Work and Social Adjustment Scale (WASAS) is evidenced to measure difficulties in daily functioning with excellent psychometric properties (Zahra et al., 2014). The IAPT Phobia Scale (NHS, 2011) contains three single-item screening questions rating the degree of avoidance from feared situations and has not been psychometrically validated.

Statistical analysis

All analysis was conducted using the Statistical Package for the Social Sciences (26.0). Three groups (non-suicidal controls, ideators, and suicide attempters) were compared on demographic and clinical variables. Categorical variables were analyzed with Chi-square tests with a Phi (Φ) coefficient of 0.10, .30, and 50 representing small, medium, and large effect sizes (Rosenthal, 1996). As assumptions of homogeneity of variance, and normality of distribution, were violated, non-parametric Kruskal-Wallis H tests were used to assess group median differences for age, PHQ-9, GAD-7, and IAPT Phobia Scale scores. Effect sizes were calculated using Rosenthal and Rubin's (2003) methodology with $r = 0.10$, $r = 0.30$ and $r = 0.50$ being considered as small, medium, and large effect sizes by convention (Brydges, 2019). One-Way ANOVA analyzed group differences in WASAS score with effect size calculated using Cohen's d . Holm-Bonferroni (Holm, 1979) corrections for multiple comparisons were applied to all reported p -values.

Variables included in the IAPT risk assessment were entered into a binary logistic regression to predict group membership between ideators and attempters. Finally, we analyzed any participant in the suicide attempter group who subsequently attended a second IAPT assessment to elucidate the proportion who disclosed their suicide attempt to the assessing clinician.

Results

Descriptive characteristics are presented in Table 1. No group differences were found in the proportion of participants reporting their ethnicity as White, $X^2(2, N=1961) = 0.96, p = .620$, with 283 participants declining to disclose their ethnicity. Participants reporting suicidal ideation were negligibly younger, $U=485,607.50, p = .037, r=0.06$, less likely to be employed or in education or training, $X^2(1, N=2135) = 17.00, p < .001, \Phi=0.089$, and more likely to be male, $X^2(1, N=2159) = 6.754, p = .028, \Phi=0.056$, than non-suicidal controls. Compared to ideators, participants making suicide attempts were less likely to engage in IAPT treatment, $X^2(1, N=828) = 23.51, p < .001, \Phi=0.17$, and less likely to be in employment, education, or training, $X^2(1, N=817) = 8.88, p = .003, \Phi=0.10$. Suicide attempters were also negligibly younger ($U=51,033.50, p = .037, r=0.06$), less likely to engage in IAPT treatment, $X^2(1, N=1501) = 29.24, p < .001, \Phi=0.14$, and less likely to be in

employment, education, or training, $X^2(1, N=1478) = 23.46, p < .001, \Phi=0.13$, than non-suicidal controls. No other group differences were significant.

Non-suicidal controls and ideators statistically differed on all clinical variables presented in Table 2. Compared to non-suicidal controls, a greater proportion of ideators reported historical suicidal ideation, $X^2(1, N=2159) = 25.78, p < .001, \Phi=0.11$, historical suicide attempts, $X^2(1, N=2159) = 90.64, p < .001, \Phi=0.21$, current NSSI, $X^2(1, N=2159) = 80.45, p < .001, \Phi=0.19$, and historical NSSI, $X^2(1, N=2159) = 87.83, p < .001, \Phi=0.20$. Ideators also endorsed higher scores on measures of anxiety, $U=381,928.00, p < .001, r=0.23$, depression $U=254,472.50, p < .001, r=0.43$, and the IAPT Phobia Scale, $U=422,289.50, p < .001, r=0.10$, reporting negligibly greater impairment in daily functioning on the WASAS, $t(2022) = 13.37, p < .001, d=0.063$.

Similarly, suicide attempters significantly differed to non-suicidal controls on all clinical variables except the proportion reporting suicidal ideation without a historical suicide attempt. A greater proportion of suicide attempters reported historical suicide attempts, $X^2(1, N=1501) = 88.86, p < .001, \Phi=0.24$, current NSSI, $X^2(1, N=1501) = 52.44, p < .001, \Phi=0.19$, and historical NSSI, $X^2(1, N=1501) = 53.15, p < .001, \Phi=0.19$, compared to non-suicidal controls. They were also more likely to return higher scores on measures of anxiety, $U=40,863.50, p < .001, r=0.13$, depression, $U=30,286.00, p < .001, r=0.20$, and

Table 1. Descriptive characteristics.

	Non-suicidal control <i>n</i> = 1416	Suicidal ideation <i>n</i> = 743	Suicide attempt <i>n</i> = 85	<i>p</i> value
Age†	37.00 (25.00) ^a	35.00 (25.00) ^b	35.00 (29.00) ^b	.002
% Engaging in IAPT Treatment	52.54% ^a	50.07% ^a	22.35% ^b	<.001
Employed, in Education, or Training (16+ hr)	67.60% ^a	58.52% ^b	41.25% ^c	<.001
% White	92.60% ^a	92.45% ^a	95.65% ^a	.620
% Male	31.07% ^a	36.61% ^b	38.82% ^{a,b}	.019

Each different superscript letter denotes a significant intergroup difference for a particular variable.

†Median (Interquartile range) is presented as data is not normally distributed.

Table 2. Clinical variables.

	Non-suicidal control <i>n</i> = 1416	Suicidal ideation <i>n</i> = 743	Suicide attempt <i>n</i> = 85	<i>p</i> value
Historical suicidal ideation (without attempt)	21.32% ^a	31.12% ^b	24.71% ^{a,b}	<.001
Historical suicide attempt	9.75% ^a	25.17% ^b	43.53% ^c	<.001
NSSI	6.07% ^a	18.44% ^b	27.06% ^b	<.001
Historical NSSI	14.62% ^a	31.76% ^b	44.71% ^c	<.001
PHQ-9†	13.00 (8.00) ^a	20.00 (8.00) ^b	20.00 (8.00) ^b	<.001
GAD-7†	13.00 (8.00) ^a	16.00 (7.00) ^b	17.00 (7.00) ^b	<.001
WASAS	16.95 (9.28) ^a	22.75 (9.02) ^b	20.65 (9.82) ^b	<.001
IAPT phobia scale†	1.00 (4.00) ^a	2.00 (5.00) ^b	11.00 (11.00) ^c	<.001
Active suicidal ideation	–	16.55% ^a	15.29% ^a	.766
Suicide plan	–	3.50% ^a	7.06% ^a	.056

Each different superscript letter denotes a significant intergroup difference for a particular variable.

†Median (Interquartile range) is presented as data is not normally distributed.

phobias, $U = 13,002.50$, $p < .001$, $r = 0.29$, and reported negligibly greater impairment in daily functioning, $t(1416) = 3.22$, $p < .003$, $d = 0.04$.

Compared to ideators, attempters were more likely to report a previous suicide attempt, $X^2(1, N = 828) = 13.03$, $p < .001$, $\Phi = 0.13$, and previous NSSI, $X^2(1, N = 828) = 5.77$, $p = .016$, $\Phi = 0.08$. A greater, but non-significant proportion of suicide attempters also reported current NSSI, $X^2(1, N = 828) = 3.64$, $p = .057$, $\Phi = 0.07$. In terms of clinical measures, suicide attempters scored higher on the IAPT Phobia Scale, $U = 8016.50$, $p < .001$, $r = 0.36$, with no other significant differences between groups.

Those reporting active suicidal ideation did not differ between ideators and attempters, $X^2(1, N = 828) = .088$, $p = .766$, $\Phi = 0.010$. Non-suicidal controls are not included as they were grouped according to an absence of suicidal ideation, and rates of passive suicidal ideation are not reported as by definition all ideators were required to have a minimum of passive ideation. Double the proportion of participants in the attempter group reported a suicidal plan, with this difference approaching statistical significance, $X^2(1, N = 828) = 2.60$, $p = .056$, $\Phi = 0.11$.

A binary logistic regression was conducted examining the ability of clinical variables collected as part of the IAPT risk assessment to predict membership of the ideator or attempter groups. One variable was required to be dropped to maintain acceptable power and risk of overfitting in line with Harrell et al.'s (1984) recommendation. As such, the PHQ-9 score was omitted to as no difference was found in median scores between groups. Multicollinearity was tested using spearman correlation coefficients with no correlations exceeding a threshold of $r = 0.80$.

The overall model was significant, $X^2(8) = 28.81$, $p = .004$. It predicted 55.49% of the total variance in suicide attempt within two years of assessment using the Nagelkerke R^2 method. The model correctly classified 99.41% of those not making a suicide attempt and 53.62% of those that did. Of the variables drawn from the IAPT risk assessment, only historical suicide attempt(s) significantly contributed to the model, Wald $X^2(1) = 5.78$, $p = .016$, with those making historical suicide attempts 2.85 times more likely to make an attempt within two years of assessment. IAPT Phobia Scale scores additionally predicted an increased likelihood of suicide attempt, Wald $X^2(1) = 80.16$, $p < .001$, with a one-point increase predicting an increase in the likelihood of suicide attempt by a factor of 1.66. The unique variance contributed by the IAPT Phobia Scale score accounted for 48.84% of the

53.62% total variance in suicide attempt probability explained by the overall model. Conversely, a one-point increase in GAD-7, Wald $X^2(1) = 5.21$, $p = .022$, and WASAS, Wald $X^2(1) = 15.66$, $p < .001$, scores predicted a small decrease in the likelihood of suicide attempt, both by a factor of 1.09. Suicidal plan, active suicidal ideation, historical suicidal ideation (without attempt), NSSI and historical NSSI did not significantly contribute to the model.

As the IAPT Phobia Scale predicted a large proportion of unique variance it was entered into a second binary model as a sole predictor. This model was significant, $X^2(6) = 33.30$, $p < .001$. It predicted 46.36% of the total variance in a suicide attempt, correctly classifying 49.30% suicide attempters and 100% of ideators with a one-point increase enhancing the odds of a suicide attempt by 1.53.

Thirty-one suicide attempters attended a second IAPT assessment after their attempt date as they engaged in a second episode of care. At these assessments, 20 (64.52%) disclosed having previously made a suicide attempt, a further six (19.35%) disclosed historical suicidal ideation (but denied making an attempt) and five (16.13%) denied a history of both suicide attempt and suicidal ideation.

Discussion

This study aimed to identify factors available to clinicians at IAPT assessment, that distinguished those with suicidal ideation, from those who made a suicide attempt within the following two years. Active suicidal ideation was no more common in attempters than ideators and did not significantly contribute to the regression model, suggesting the disclosure of active ideation confers no additional risk of future suicide attempt comparative to passive ideation. These results are consistent with Liu et al.'s (2020) meta-analysis that found no difference in the predictive validity of passive versus active ideation on a lifetime history of a suicide attempt. Taken together, this evidence suggests the distinction of active and passive ideation does not distinguish ideators from attempters and may be of limited value in assessing the risk of those disclosing suicidal thoughts. Conversely, passive ideation should be given equal weighting to active ideation when assessing suicide risk in line with the National Action Alliance for Suicide Prevention's (2014) recommendation.

Attempters were less likely than ideators and non-suicidal controls to engage in IAPT treatment. No difference was observed in the level of functional impairment or severity of anxiety or depression

between ideators and attempters, consistent with May and Klonsky's (2016) meta-analysis. The lower proportion of suicide attempters engaging in treatment with IAPT is therefore unlikely to be explained by the complexity of psychological need. Our data does not show if attempters were more likely to be referred to alternative services or less likely to be offered treatment (without alternative) than the other groups. As such, the IAPT triage assessment may either effectively screen risk (enabling referral to appropriate services), or exclude those vulnerable to suicide from treatment, potentially contributing to future suicidality. This is particularly salient given the majority of those who die by suicide have minimal contact with psychiatric services in the year prior to their death (Walby et al., 2018) and an IAPT assessment may therefore represent the sole opportunity for psychological service to intervene. Future research on the journey and outcomes of those discharged from IAPT after the assessment is therefore indicated.

Most attempters did not disclose suicidal plans at assessment. Compared to ideators, double the proportion of attempters disclosed a suicidal plan. However, the sample size was small and this analysis only approached significance. These findings suggest most of those attempting suicide will not disclose suicidal plans, and most of those that do will not attempt suicide. However, it is likely that a disclosure of a suicidal plan should be considered a risk marker with further replication required. It is possible that the low rate of suicidal plan disclosure is explained by suicidal plans being formed after the assessment rather than being indicative of an unwillingness to report. However, this study does evidence that a third of service users concealed (or masked) a historical suicide attempt. This adds to a growing body of evidence that individuals often mask suicidal intent from clinicians and loved ones (Blanchard & Farber, 2020; Leenaars et al., 2020) and to the authors knowledge is the first in-vivo study showing the masking of suicide attempt specifically.

Both historical suicide attempt and historical NSSI distinguished ideators and attempters with modest effect sizes, and disclosure of current NSSI approached significance. This is congruent with ideation-action theories that posit the habituation to the physiological pain and emotional fear response associated with the suicidal act is necessary (or at least implicated) in its initiation (Klonsky et al., 2017). Both a history of NSSI and suicide attempts would be expected to increase tolerance of intrinsic existential fear and enable one to proceed with potentially fatal acts. To

the authors knowledge, this study is the first to show historical NSSI and suicide attempts are capable of distinguishing ideators and attempters longitudinally, with our regression model suggesting the presence of a historical suicide attempt nearly tripled the odds of a suicide attempt within two years of assessment. This is consistent with a range of literature suggesting a lifetime history of a suicide attempt is a robust predictor of future attempt (Bostwick et al., 2016).

A history of suicidal ideation (without previous attempt) did not differentiate attempters and ideators. Historical suicidal ideation was also only marginally more common in attempters than non-suicidal controls and was more common in ideators than attempters. This suggests that while a history of suicidal ideation is likely to increase the risk of future suicidal ideation, in those reporting suicidal thoughts, disclosure of previous ideation without suicidal acts may indicate one is relatively less likely to act in the next two years. This further highlights the value of comparing current to past indicators when assessing suicide risk. More research is needed to examine the logically opposite framing of this finding; that those experiencing ideation for the first time may be at greater risk of acting.

Congruent with May and Klonsky's (2016) meta-analysis, measures of anxiety and depression, and daily functioning, differentiated non-suicidal controls from ideators but not ideators from attempters. Interestingly the IAPT Phobia Scale differentiated ideators and attempters with median scores over five times higher in the attempter group. To the authors knowledge, the scale has not been psychometrically tested or explored in any study of suicidality. Although titled a *phobia* scale, it asks the degree to which one would avoid situations that risk social embarrassment, panic attacks, and those involving specific phobias. As such, one might consider it a measure of avoidance as scoring highly across these domains indicates a propensity to employ avoidance as a primary coping strategy. The suicidal act might be considered the ultimate avoidance in that one forgoes their future in exchange for relief from pain and suffering.

Avoidance has been robustly linked with suicidality and is a key maintenance factor in post-traumatic stress disorder (Ehlers & Clark, 2000), which in turn was one of the few factors found to differentiate attempters and ideators in May and Klonsky's (2016) meta-analysis. A recent meta-analysis found experiential avoidance was associated with both NSSI and suicidal experiences with medium to large effect sizes

(Angelakis & Gooding, 2021). Experiential avoidance refers specifically to the avoidance of distressing internal experiences such as pain, emotions, images, and thoughts (Hayes et al., 1996). As such, it could be considered a mechanism of action for acquired capability by decreasing the salience of the protective fear response. Fawcett et al. (1997) highlight the avoidance of acute anxiety as a suicidal pathway while Barker et al. (2022) suggest that chronic experiential avoidance may numb individuals to acute anxiety, preventing reactive suicide attempts and driving better planned and more lethal attempts which are less likely to be interrupted. This latter group are reflective of Shneidman's (1994) suggestion that an important minority of those dying by suicide completely conceal their suicidal intentions and Leenaar's et al. (2020) finding those masking their suicidal intent to some degree are in the majority. Blanchard and Farber's (2020) study lends further qualitative support with suicide attempt survivors themselves expressing the wish to retain the ability to enact suicide as a reason for concealing their suicidality from clinicians.

Regardless of the merit of avoidance as the mechanism by which the IAPT phobia scale may distinguish ideators and attempters, the scale itself warrants further investigation. This unvalidated measure correctly classified nearly half of the suicide attempters with perfect specificity as a sole predictor in our regression model, with a two-point increase tripling the odds of a suicide attempt. The phobia scale outperformed the predictive validity any established risk factor within the IAPT risk assessment schedule. Replication is therefore required to understand the clinical value of the scale in suicide risk assessment, in addition to research seeking to understand the constructs measured and psychometric properties.

A limitation of this study was that only suicide attempters encountering services are captured. These attempts are likely to be higher in severity, reflected in the mean observed BLS score, and an unknown number of low-lethality attempters not receiving medical attention will have been excluded. Furthermore, our suicide attempt inclusion criteria required suicidal intent, and given the inconsistent reporting of past suicidality, some attempters concealing intent will have been excluded. However, the sample was relatively large and closely mirrored national IAPT assessment demographics which NHS Digital (2021) report to be 32.51% male, 70.30% in employment, training or education, and 56.12% aged under 35. Additionally, ecological validity was high with no selection bias. While validated measures were not used for all

variables, all variables studied are routinely available to IAPT clinicians suggesting direct clinical utility. Data is longitudinal and limited to suicide attempts occurring within two years of assessments, offering clinicians insight into suicide risk within a limited timeframe. The demographics of those attending IAPT assessments do not mirror suicide attempts nationally by age or gender, so caution should be taken in generalizing these results outside of IAPT. However, within IAPT settings results are likely to be robust and generalizable and to the authors knowledge this is the first empirical examination of suicide risk within IAPT.

Overall, the variables contained within the IAPT risk assessment schedule failed to meaningfully differentiate attempters from ideators, except for the IAPT phobia scale. Historical NSSI and historical suicide attempts did weakly differentiate ideators and those making attempts within two years of assessment but active compared to passive ideation did not. The IAPT risk assessment does not adequately identify individuals at imminent risk of suicide and as such this study supports the suggestion of Michel (2021) that risk assessment paradigms based on the identification of risk factors rather than a holistic formulation are flawed. Noninvasive suicide interventions and psychoeducation should be offered to all individuals attending IAPT assessment, regardless of risk profile. This is especially true as risk assessment relying on disclosure is flawed, given a third of service users may withhold historical suicidality and those making suicide attempts are less likely to engage in treatment. Mental health services should consider implementing a system where those with recorded incidents of suicide attempt are flagged to assessing clinicians and future research should consider whether non-disclosure of a historical suicide attempt may be a marker of future attempt likelihood. The IAPT phobia scale independently predicted suicide attempt within two years of assessment in our regression model with excellent specificity and relatively high sensitivity. As such, future research should also seek both to replicate its predictive validity and validate its psychometric properties as a measure of avoidance.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, (JB), upon reasonable request.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). APA.
- Angelakis, I., & Gooding, P. (2021). Experiential avoidance in non-suicidal self-injury and suicide experiences: A systematic review and meta-analysis. *Suicide and Life-Threatening Behavior, 51*(5), 978–992.
- Arango, A., Opperman, K. J., Gipson, P. Y., & King, C. A. (2016). Suicidal ideation and suicide attempts among youth who report bully victimization, bully perpetration and/or low social connectedness. *Journal of Adolescence, 51*, 19–29. <https://doi.org/10.1016/j.adolescence.2016.05.003>
- Barker, J., Oakes-Rogers, S., & Leddy, A. (2022). What distinguishes high and low-lethality suicide attempts in older adults? A systematic review and meta-analysis. *Journal of Psychiatric Research, 154*, 91–101.
- Beck, A. T., Beck, R., & Kovacs, M. (1975). Classification of suicidal behaviors: I. *The American Journal of Psychiatry, 132*(3), 285–287.
- Belsher, B. E., Smolenski, D. J., Pruitt, L. D., Bush, N. E., Beech, E. H., Workman, D. E., Morgan, R. L., Evatt, D. P., Tucker, J., & Skopp, N. A. (2019). Prediction models for suicide attempts and deaths: a systematic review and simulation. *JAMA Psychiatry, 76*(6), 642–651.
- Blanchard, M., & Farber, B. A. (2016). Lying in psychotherapy: Why and what clients don't tell their therapist about therapy and their relationship. *Counselling Psychology Quarterly, 29*(1), 90–112.
- Blanchard, M., & Farber, B. A. (2020). "It is never okay to talk about suicide": Patients' reasons for concealing suicidal ideation in psychotherapy. *Psychotherapy Research, 30*(1), 124–136.
- Bostwick, J. M., Pabbati, C., Geske, J. R., & McKean, A. J. (2016). Suicide attempt as a risk factor for completed suicide: Even more lethal than we knew. *American Journal of Psychiatry, 173*(11), 1094–1100.
- Bryan, A. O., Theriault, J. L., & Bryan, C. J. (2015). Self-forgiveness, posttraumatic stress, and suicide attempts among military personnel and veterans. *Traumatology, 21*(1), 40.
- Brydges, C. R. (2019). Effect size guidelines, sample size calculations, and statistical power in gerontology. *Innovation in Aging, 3*(4), igz036.
- Burke, T. A., Ammerman, B. A., Knorr, A. C., Alloy, L. B., & McCloskey, M. S. (2018). Measuring acquired capability for suicide within an ideation-to-action framework. *Psychology of Violence, 8*(2), 277.
- Cheek, S. M., Nestor, B. A., & Liu, R. T. (2016). Substance use and suicidality: Specificity of substance use by injection to suicide attempts in a nationally representative sample of adults with major depression. *Depression and Anxiety, 33*(6), 541–548.
- Chu, C., Podlogar, M. C., Hagan, C. R., Buchman-Schmitt, J. M., Silva, C., Chiurliza, B., Hames, J. L., Stanley, I. H., Lim, L. I., & Joiner, T. E. (2016). The interactive effects of the capability for suicide and major depressive episodes on suicidal behavior in a military sample. *Cognitive Therapy and Research, 40*(1), 22–30.
- Deisenhammer, E. A., Ing, C. M., Strauss, R., Kemmler, G., Hinterhuber, H., & Weiss, E. M. (2009). The duration of the suicidal process: How much time is left for intervention between consideration and accomplishment of a suicide attempt? *The Journal of Clinical Psychiatry, 69*(1), 5230.
- Dhingra, K., Boduszek, D., & Klonsky, E. D. (2016). Empirically derived subgroups of self-injurious thoughts and behavior: Application of latent class analysis. *Suicide and Life-Threatening Behavior, 46*(4), 486–499.
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy, 38*(4), 319–345.
- Fawcett, J., Busch, K. A., Jacobs, D., Kravitz, H. M., & Fogg, L. (1997). Suicide: A four-pathway clinical-biochemical model. *Annals of the New York Academy of Sciences, 836*(1), 288–301.
- Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., Musacchio, K. M., Jaroszewski, A. C., Chang, B. P., & Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin, 143*(2), 187.
- Harrell, F. E. Jr, Lee, K. L., Califf, R. M., Pryor, D. B., & Rosati, R. A. (1984). Regression modelling strategies for improved prognostic prediction. *Statistics in Medicine, 3*(2), 143–152.
- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*(6), 1152.
- Holm, S. (1979). A simple sequentially rejective multiple test procedure. *Scandinavian Journal of Statistics, 6*(2), 65–70.
- Høyen, K. S., Solem, S., Cohen, L. J., Prestmo, A., Hjemdal, O., Vaaler, A. E., Galynker, I., & Torgersen, T. (2022). Non-disclosure of suicidal ideation in psychiatric inpatients: Rates and correlates. *Death Studies, 46*(8), 1823–1831.
- Joiner, T. E. (2005). *Why people die by suicide*. Harvard University Press.
- Kessler, R. C., Borges, G., & Walters, E. E. (1999). Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Archives of General Psychiatry, 56*(7), 617–626.
- Khazem, L. R., & Anestis, M. D. (2016). Thinking or doing? An examination of well-established suicide correlates within the ideation-to-action framework. *Psychiatry Research, 245*, 321–326.

- Klonsky, E. D. (2007). Non-suicidal self-injury: An introduction. *Journal of Clinical Psychology*, 63(11), 1039–1043.
- Klonsky, E. D., & May, A. M. (2014). Differentiating suicide attempters from suicide ideators: A critical frontier for suicidology research. *Suicide and Life-Threatening Behavior*, 44(1), 1–5.
- Klonsky, E. D., & May, A. M. (2015). The three-step theory (3ST): A new theory of suicide rooted in the “ideation-to-action” framework. *International Journal of Cognitive Therapy*, 8(2), 114–129.
- Klonsky, E. D., Qiu, T., & Saffer, B. Y. (2017). Recent advances in differentiating suicide attempters from suicide ideators. *Current Opinion in Psychiatry*, 30(1), 15–20.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9), 606–613.
- Law, K. C., Khazem, L. R., Jin, H. M., & Anestis, M. D. (2017). Non-suicidal self-injury and frequency of suicide attempts: The role of pain persistence. *Journal of Affective Disorders*, 209, 254–261. <https://doi.org/10.1016/j.jad.2016.11.028>
- Liu, R. T., Bettis, A. H., & Burke, T. A. (2020). Characterizing the phenomenology of passive suicidal ideation: A systematic review and meta-analysis of its prevalence, psychiatric comorbidity, correlates, and comparisons with active suicidal ideation. *Psychological Medicine*, 50(3), 367–383.
- Ma, J., Batterham, P. J., Calear, A. L., & Han, J. (2016). A systematic review of the predictions of the Interpersonal-Psychological Theory of Suicidal Behavior. *Clinical Psychology Review*, 46, 34–45. <https://doi.org/10.1016/j.cpr.2016.04.008>
- May, A. M., & Klonsky, E. D. (2016). What distinguishes suicide attempters from suicide ideators? A meta-analysis of potential factors. *Clinical Psychology: Science and Practice*, 23(1), 5–20.
- National Action Alliance for Suicide Prevention. (2014). *A prioritized research agenda for suicide prevention: An action plan to save lives*. National Institute of Mental Health and the Research Prioritization Task Force.
- NHS. (2011). *IAPT data handbook*. Retrieved February 9, 2022, from <https://webarchive.nationalarchives.gov.uk/ukgwa/20160302160058/http://www.iapt.nhs.uk/silo/files/iapt-data-handbook-v2.pdf>
- NHS. (2019a). *The improving access to psychological therapies manual* (3rd ed.). The National Collaborating Centre for Mental Health.
- NHS. (2019b). *Psychological therapies, annual report on the use of IAPT services 2018–19*. NHS England.
- NHS Digital. (2021). *Annual report on the use of IAPT services 2020–2021*. App.powerbi.com. Retrieved February 17, 2022, from <https://app.powerbi.com/view?r=eyJrIjoiNmViYTdjM2MtODk0Yi00NTAxLWE5MTUtMGJhZDZhMW-M3OWI1IiwidCI6IjUwZjYwNzFmLWJiZmUtNDAxYS04ODAzLTY3Mzc0OGU2MjllMiIsImMiOj9>
- Nock, M. K., Borges, G., Bromet, E. J., Cha, C. B., Kessler, R. C., & Lee, S. (2008). Suicide and suicidal behavior. *Epidemiologic Reviews*, 30(1), 133–154.
- O'Connor, R. C. (2011). *Toward an integrated motivational – volitional model of suicidal behavior*. In R. C. O'Connor, S. Platt, & J. Gordon (Eds.), *International handbook of suicide prevention: Research, policy and practice*. (pp. 181–198). Wiley-Blackwell.
- Pokorny, A. D. (1983). Prediction of suicide in psychiatric patients: report of a prospective study. *Archives of General Psychiatry*, 40(3), 249–257.
- Pompili, M., Murri, M. B., Patti, S., Innamorati, M., Lester, D., Girardi, P., & Amore, M. (2016). The communication of suicidal intentions: a meta-analysis. *Psychological Medicine*, 46(11), 2239–2253.
- Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., Currier, G. W., Melvin, G. A., Greenhill, L., Shen, S., & Mann, J. J. (2011). The Columbia-Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *The American Journal of Psychiatry*, 168(12), 1266–1277.
- Laanani, M., Imbaud, C., Tuppin, P., Poulalhon, C., Jollant, F., Coste, J., & Rey, G. (2020). Contacts with health services during the year prior to suicide death and prevalent conditions a nationwide study. *Journal of Affective Disorders*, 274, 174–182. <https://doi.org/10.1016/j.jad.2020.05.071>
- Leenaars, A. A., Dieserud, G., & Wenckstern, S. (2020). The mask of suicide. *Archives of Suicide Research*, 26, 1072–1093.
- Lindh, Å. U., Beckman, K., Carlborg, A., Waern, M., Renberg, E. S., Dahlin, M., & Runeson, B. (2020). Predicting suicide: A comparison between clinical suicide risk assessment and the suicide intent scale. *Journal of Affective Disorders*, 263, 445–449.
- Michel, K. (2021). Suicide models and treatment models are separate entities. What does it mean for clinical suicide prevention? *International Journal of Environmental Research and Public Health*, 18(10), 5301.
- Richards, D., & Whyte, M. (2011). *Reach out: National programme student materials to support the delivery of training for psychological wellbeing practitioners delivering low intensity interventions*. Rethink Mental Illness.
- Rosenthal, J. A. (1996). Qualitative descriptors of strength of association and effect size. *Journal of Social Service Research*, 21(4), 37–59.
- Rosenthal, R., & Rubin, D. B. (2003). Requalent: A simple effect size indicator. *Psychological Methods*, 8(4), 492.
- Rudd, M. D. (2006). Fluid vulnerability theory: A cognitive approach to understanding the process of acute and chronic suicide risk. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 355–368). American Psychological Association
- Shneidman, E. S. (1994). Clues to suicide, reconsidered. *Suicide and Life-Threatening Behavior*, 24(4), 395–397.
- Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097.
- Stewart, S. M., Eaddy, M., Horton, S. E., Hughes, J., & Kennard, B. (2017a). The validity of the interpersonal theory of suicide in adolescence: A review. *Journal of Clinical Child and Adolescent Psychology*, 46(3), 437–449.
- Stewart, J. G., Esposito, E. C., Glenn, C. R., Gilman, S. E., Pridgen, B., Gold, J., & Auerbach, R. P. (2017b). Adolescent self-injurers: Comparing non-ideators, suicide ideators, and suicide attempters. *Journal of Psychiatric Research*, 84, 105–112.

- Tabb, K., Perez-Flores, N., Wang, Y., & Huang, H. (2017). The burden of suicidal ideation among persons with type II diabetes: A scoping review. *Journal of Psychosomatic Research, 103*, 113–118.
- Vuorilehto, M., Valtonen, H., Melartin, T., Sokero, P., Suominen, K., & Isometsä, E. (2020). Method of assessment determines prevalence of suicidal ideation among patients with depression. *European Psychiatry, 29*(6), 338–344.
- Walby, F. A., Myhre, M. Ø., & Kildahl, A. T. (2018). Contact with mental health services prior to suicide: A systematic review and meta-analysis. *Psychiatric Services, 69*(7), 751–759.
- Weinberg, A., May, A. M., Klonsky, E. D., Kotov, R., & Hajcak, G. (2017). Decreased neural response to threat differentiates patients who have attempted suicide from non-attempters with current ideation. *Clinical Psychological Science, 5*(6), 952–963.
- Wetherall, K., Cleare, S., Eschle, S., Ferguson, E., O'Connor, D. B., O'Carroll, R. E., & O'Connor, R. C. (2018). From ideation to action: Differentiating between those who think about suicide and those who attempt suicide in a national study of young adults. *Journal of Affective Disorders, 241*, 475–483.
- Winer, E. S., Drapeau, C. W., Veilleux, J. C., & Nadorff, M. R. (2016). The association between anhedonia, suicidal ideation, and suicide attempts in a large student sample. *Archives of Suicide Research, 20*(2), 265–272.
- World Health Organization. (2021). Suicide. WHO. Retrieved January 5, 2022, from <https://www.who.int/news-room/fact-sheets/detail/suicide>
- Zahra, D., Qureshi, A., Henley, W., Taylor, R., Quinn, C., Pooler, J., Hardy, G., Newbold, A., & Byng, R. (2014). The work and social adjustment scale: Reliability, sensitivity and value. *International Journal of Psychiatry in Clinical Practice, 18*(2), 131–138.