

**Experiences, beliefs and attitudes affecting mental health service access
amongst suicidal university students**

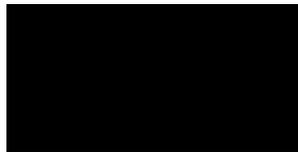
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Thesis Declaration Form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Overview

This thesis focuses on the mental health of university students in the UK, giving particular consideration to students experiencing moderate to severe distress.

Part 1 is a systematic narrative review of literature exploring the effectiveness of Dialectical Behaviour Therapy (DBT) informed interventions for university students. The review summarises a number of promising clinical outcomes from sixteen studies across the world, in addition to suggesting that an adapted form of DBT is acceptable and feasible in university settings.

Part 2 comprises an empirical study which aimed to identify the barriers and predictors of suicidal UK university students accessing mental health support, in addition to exploring students' suggested improvements for services. In this joint project, qualitative analysis of individual interviews with students with a history of suicidal ideation led to the development of an online survey for university students across the UK. Findings indicated that barriers to service use included waiting times and uncertainty around problem severity, whereas stigma and contact with service users were associated with accessing services. A thematic analysis led to the identification of themes clustered into categories related to improved accessibility, increased variety of support options, and safe environments.

Part 3 is a critical appraisal of the research process. This comprises a discussion of pertinent issues arising during the literature review and empirical paper, including the reasons for choosing a research project in this field, service user involvement, conducting mixed-methods research, as well as a reflection on the challenges and dilemmas faced while conducting research with the student population.

Impact Statement

The narrative systematic review, presented in part 1 of this volume, summarise research studies exploring the clinical outcomes and acceptability of Dialectical Behaviour Therapy (DBT) informed interventions for university students. The findings of this review suggested that despite the challenge of synthesising differing treatment outcomes from a variety of DBT-related interventions, DBT skills interventions, and even full DBT programmes, have been successfully implemented with university students. In particular, DBT-informed interventions were found to particularly improve depression, skills use (particularly emotion regulation skills) and other DBT treatment targets including self-harm suicidal ideation.

The implications of this review are two-fold; firstly, this is the first known systematic review of DBT-informed interventions for university students, and as such adds to the current evidence base of DBT as an effective therapeutic intervention among different populations. There are a number of recommendations for future research studies in this area, including for those with more advanced methodological sophistication, such as randomised control trials with standardised treatment protocols. Secondly, the review has a number of clinical implications. Studies across North America, Australia and beyond have found that while resource intensive, it is feasible to adapt and implement DBT in a university mental health setting. Furthermore, even DBT skills groups as a standalone intervention have been effective for university students. These findings could inform the commissioning of interventions for students presenting at university mental health services.

Part two of this volume is an empirical paper describing a study exploring the experiences and perceptions of professional help-seeking in UK university students with a history of suicidal ideation. To my knowledge, this is the first study focusing on the barriers to, and predictors of, suicidal university students accessing support

in the UK. The study findings indicate that amongst UK students, commonly reported barriers to help-seeking were uncertainty around the seriousness of one's needs and long waiting times. Personal contact with service users, perceived need for help, help-seeking intention and stigma were all found to be associated with suicidal students accessing support. These identified barriers and predictors could help inform universities and clinical services in treatment planning and delivery, in order to prevent deterioration in students' mental health, social functioning, academic performance and suicidal behaviours. Through thematic analysis of students' suggestions for improving services that support suicidal individuals, themes relating to accessible, safe and varied provision of support were identified. These suggestions provide universities with direct feedback from those most likely to need and utilise their support services, in order to maximise the opportunities for suicidal students to access and benefit from tailored, effective support.

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Part 1: Literature Review

The effectiveness and acceptability of Dialectical Behaviour Therapy informed interventions for university students

Abstract

Aim: The aim of the present systematic narrative review was to understand the current evidence base related to outcome studies of Dialectical Behaviour Therapy (DBT) informed interventions delivered to university students.

Method: PsycInfo and MEDLINE database and hand searches initially yielded 163 papers. 16 articles meeting inclusion criteria were assessed for quality, and subsequently formally reviewed. The sample characteristics, DBT format and content, and outcomes for each study are presented, before a synthesis of the findings from included studies are discussed.

Results: DBT interventions, from as little as 8-week DBT skills groups, were found to improve DBT-related outcomes including life threatening behaviours, Borderline Personality Disorder symptoms, and functional skills use. DBT was found to improve general wellbeing and mood, social functioning and resilience, but not anxiety or academic functioning. Furthermore, DBT was found to have favourable attrition rates, therapeutic alliance and satisfaction compared to other therapeutic interventions.

Conclusions: Whilst DBT-informed interventions, adapted for a university setting, appear to be effective in a number of clinical and non-clinical outcomes, further controlled research trials utilising standardised treatment protocols may improve adaptations of DBT for university students.

Introduction

The mental health of university students across the world has been a focus of public health research over the past 20 years. University students are inevitably subject to numerous stressors and transitional events, are often geographically separated from previous support networks, and fall within a critical developmental period when mental health problems typically begin to manifest. Campus mental health professionals have been facing the challenge of meeting increasing demands of students presenting with higher levels of distress than amongst previous generations (Galatzer-Levy et al., 2012).

Despite the significant demand for mental health treatment, in particular psychological therapies, amongst students, university counselling services face unique challenges including lack of resources and the academic terms interrupting longer term therapy. There is limited research investigating the effectiveness of different therapies for students, and the feasibility of such interventions being delivered by university counselling services. The majority of literature relating to therapeutic interventions provided by university counselling centres explore the effectiveness of CBT-informed interventions. CBT interventions, including adapted therapies such as computerised CBT (Davies et al., 2014) have shown to be effective in reducing anxiety, depression and stress amongst students (Benor et al, 2009; Hamdan-Mansour et al., 2009; Regehr et al., 2013). While findings suggest that such interventions can be effective in treating students with sub-clinical or mild-moderate mental health problems, less is known about interventions targeting more severe emotional distress in university students. Gallagher (2013) reported that 95% of counselling service directors reported concerns about students presenting with severe and complex mental health issues, including self-harm behaviours, mental health crises and eating disorders, therefore it appears important to consider

evidence related to interventions aimed at alleviating severe distress amongst students.

Dialectical Behaviour Therapy (DBT) was developed by Marsha Linehan (1993a; 1993b) as a treatment for individuals who present with emotional dysregulation, chronic suicidality and self-harm behaviours, including those who meet criteria for Borderline Personality Disorder (BPD). Standard DBT typically involves a year-long programme consisting of weekly group skills training (covering core DBT components mindfulness, emotion regulation, distress tolerance and interpersonal effectiveness), weekly individual therapy sessions and ad-hoc telephone coaching. Therapists also participate in weekly team consultation (a form of peer supervision).

The evidence base for DBT is extensive for individuals with a diagnosis of Borderline Personality Disorder (Linehan et al., 2006) and those with general emotional dysregulation (Neacsiu et al., 2014), individuals with other clinical diagnoses such as eating disorders (Bankoff et al., 2012), and suicidal adolescents (Macpherson et al., 2013). The standard multi-component DBT model may not be easily implemented at university psychological services due to the financial costs of the multiple modes, lengthy and costly training required of therapists, and the time commitment for students. Furthermore, it is often not possible to deliver a traditional year-long treatment to students who are only at university for up to 12 weeks at a time, often with a lengthy summer break. As a consequence of the time and financial costs of implementing a full DBT programme, there have been several studies exploring the effectiveness of DBT adapted to suit different clinical populations and settings. For instance, evidence has suggested that DBT skills groups (without individual therapy or phone coaching elements) are effective in reducing symptoms associated with other mental health conditions such as major depressive disorder (Valentine et al., 2015).

Despite such compelling evidence suggesting that DBT-informed interventions are effective for a variety of clinical populations, there is a paucity of research investigating effectiveness of DBT or DBT-informed skills groups with the university student population, particularly outside of North America.

This systematic review will present a synthesis of empirical literature related to the effectiveness and acceptability of DBT programmes for university students, taught in either skills group or full multimodal formats. This will include details of modifications to the content or format of interventions from Linehan's original model (Linehan, 1993a).

Method

Search strategy

A systematic literature search was carried out using two electronic databases (PSYCinfo and MEDLINE). Search terms related to Dialectical Behaviour Therapy (DBT) were combined with terms associated with university students (see Table 1). The PsycInfo and Medline search identified 161 studies. An additional two studies were identified, through a Google Scholar search, giving a total of 163 articles. Ten articles were identified as duplicates and removed. The titles and abstracts of the remaining 153 articles were screened using the inclusion criteria: (1) Interventional studies, (2) Dialectical Behaviour Therapy or DBT-informed interventions (must include one or more DBT components, not including solely mindfulness), (3) Participants are university students (graduate or postgraduate) aged 18 years old and above. Subsequently, 35 full-text articles were reviewed for eligibility and a further 19 studies were excluded (see Appendix 1 for search strategy flow diagram including exclusion reasons).

The earliest study which met these inclusion criteria was conducted in 2012 (Pistorello et al., 2012). Since all studies were published in 2012 or more recently,

they were felt to be representative of current research knowledge, and therefore no studies were excluded on the basis of publication date.

The reference lists of all relevant articles were checked; however, no articles were identified that hadn't already been obtained through the main search process.

Table 1. Search terms

	Terms	Results
1.	student*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	641230
2.	(undergraduate* or postgraduate* or graduate*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	164997
3.	universit*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	166402
4.	college*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	255280
5.	exp Graduate Students/ or exp Dental Students/ or exp International Students/ or exp Nursing Students/ or exp Medical Students/ or exp Students/ or exp College Students/ or exp Postgraduate Students/ or exp Business Students/ or exp Law Students/	256317
6.	dialectical behavior therapy/	1249
7.	"dialectical behavio?r therapy".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	1999
8.	DBT.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]	1526
9.	6 or 7 or 8	2235
10.	1 or 2 or 3 or 4 or 5	773712
11.	9 and 10	161

Results of Search

As described above, sixteen studies met eligibility criteria and were therefore included in formal quality assessment. Beanlands et al. (2019) and Beanlands et al. (2020) reported findings from the same sample and intervention, however these two papers were included separately in this review as the former paper reported quantitative outcomes and the latter reported qualitative outcomes.

The sixteen papers reported a variety of sample characteristics (above and beyond student status), study designs, treatment protocols, and outcomes. For the purposes of this review, the outcomes have been summarised into the following categories: DBT target-related, psychological wellbeing, cognitive and functional, acceptability and feasibility. Other clinical outcomes that do not fit into these categories are also discussed.

Quality appraisal

The QualSyst tool (Kmet et al., 2004) is a standard quality assessment criteria system for evaluating primary research papers from a variety of fields. The tool includes two different quality appraisal checklists for quantitative and qualitative studies. The checklist for quantitative studies is comprised of 14 items (range 0-28), whereas the qualitative study checklist includes 10 items (range 0-20). Each item is scored '2' to indicate the criterion has been fully met, '1' to indicate the criterion has been partially met, '0' to indicate the criterion has not been met, or 'n/a' to indicate the criterion does not apply to the paper being reviewed. The final score is the total divided by the number of applicable (scored) items. All sixteen studies were appraised according to the QualSyst checklist (see Table 2 for quality scores and Appendix 2 for criteria and full breakdown of scoring for each paper.) and the results of studies with higher quality appraisal scores were given more weight in the main review.

Table 2. Quality ratings according to QualSyst Appraisal Tool (Kmet et al., 2014)

Study	SCORE
<i>Quantitative Studies</i>	
Üstündağ-Budak et al. (2019)	0.91
Lin et al. (2019)	0.92
Muhomba et al. (2017)	0.82
Cheng & Merrick (2017)	1.00
Uliaszek et al. (2016)	0.85
Panepinto et al. (2015)	0.82
Fleming et al. (2015)	1.00
Rizvi & Steffel (2014)	0.73
Chugani et al. (2013)	0.65
Meaney-Tavares & Hasking (2012)	0.91
Engle et al. (2013)	0.35
Pistorello et al. (2012)	0.92
Pistorello et al. (2018)	0.92
Beanlands (2019)	0.95
Lee & Mason (2019)	0.73
<i>Qualitative Studies</i>	
Beanlands et al. (2020)	1.00

Sample characteristics

A full summary of the clinical and demographic sample characteristics is included in Table 3. The vast majority of studies were conducted in American or Canadian universities, with the exception of three studies, in Turkey, Australia, and Taiwan. In line with the inclusion criteria, all participants were university students aged 18 or above. Some studies (e.g. Fleming et al., 2015) had an upper age limit, which may have excluded mature students. Other demographic characteristics of students varied, depending on the aims and clinical interest of the studies. For instance, five

Table 3. Sample demographic information and inclusion/exclusion criteria

Study author	Location, no. universities	Inclusion criteria/ Clinical & demographic characteristics of sample	Specified exclusion criteria
Üstündağ-Budak et al. (2019)	Turkey, 1	<ul style="list-style-type: none"> • 'Adjustment or transition issues' 	<ul style="list-style-type: none"> • Current mental health problem • Taking mental health medication
Lin et al. (2019)	Taiwan, 2	<ul style="list-style-type: none"> • Scores > 21 on Ko's Depression Inventory AND • ≥5 cut-off scores Borderline Personality Disorder Features Scale • Meet criteria for BPD on Modified Schedule of Affective Disorders and Schizophrenia-Lifetime (CMSADS-L) Short Form • 1+ suicide attempt (past 6 months) 	<ul style="list-style-type: none"> • History of schizophrenia, schizoaffective disorder, bipolar disorder, psychotic disorder • Current severe depression and suicide risk needing crisis/inpatient care • Neurological symptoms last 6 months • Substance abuse during last 6 months
Muhomba et al. (2017)	USA, 1	<ul style="list-style-type: none"> • Met criteria for mood and/or anxiety disorder • 3+/5 areas of dysregulation (emotional, behavioural, cognitive, interpersonal, self-dysregulation) 	<ul style="list-style-type: none"> • Active psychosis • Disruptive behaviour that would contraindicate a group intervention
Cheng & Merrick (2017)	USA, 1	<ul style="list-style-type: none"> • Chinese female postgraduate international student, aged 24. • Symptoms consistent with Anorexia-Nervosa binge/purge subtype, depression, family issues, difficulty adjusting to USA 	N/A (case study)
Uliaszek et al. (2016)	Canada, 1	<ul style="list-style-type: none"> • Treatment-seeking students referred by onsite counsellors • No diagnostic criteria for inclusion, but common diagnoses included depression & BPD 	<ul style="list-style-type: none"> • Severe cognitive disturbance • Psychotic disorder
Panepinto et al. (2015)	USA, 1	<ul style="list-style-type: none"> • No diagnostic criteria for inclusion, but common diagnoses included depression, anxiety, adjustment disorders, eating disorders 	<ul style="list-style-type: none"> • Unmanaged active psychotic symptoms • Being a danger to others • Unwilling to fully participate/follow group guidelines

Study author	Location, no. universities	Inclusion criteria/ Clinical & demographic characteristics of sample	Specified exclusion criteria
Fleming et al. (2015)	USA/Canada, 3	<ul style="list-style-type: none"> • DSM-IV criteria for ADHD 	<ul style="list-style-type: none"> • Current substance dependence, suicidality or depression • History of psychotic disorder, bipolar disorder, developmental disorder • Receiving ADHD medication for < 1 month
Rizvi & Steffel (2014)	USA, 1	<ul style="list-style-type: none"> • Significant emotion dysregulation - score 105+ on DERS • Undergraduate students only 	<ul style="list-style-type: none"> • Previous exposure to DBT skills • Meeting criteria for psychotic disorders or life-threatening conditions, e.g. severe anorexia
Chugani et al. (2013)	USA, 1	<ul style="list-style-type: none"> • Diagnosis of cluster B PD or traits significant enough to impair functioning/ focus of clinical attention • Score > 1.5 SD above mean on the General Emotion Dysregulation Measure 	<ul style="list-style-type: none"> • Below average estimated intellect • Active psychosis • Students who previously underwent DBT group
Meaney-Tavares & Hasking (2012)	Australia, 1	<ul style="list-style-type: none"> • Recent diagnosis of BPD • Referred by college-based counsellor or physician • 71% self-reported engaging in weekly or fortnightly self-harm during 3 months pre-intervention • Majority had comorbidities and took medication 	None formally identified
Engle et al. (2013)	USA, 1 ('arts college')	<ul style="list-style-type: none"> • Meets full diagnostic (DSM-IV) criteria for BPD 	None formally identified
Pistorello et al. (2012)	USA, 1	<ul style="list-style-type: none"> • Suicidal ideation at baseline - score of 1 or higher on Q.9 of Beck Depression Inventory (BDI-II) • 1+ act of lifetime NSSI and/or suicide attempt according to Suicide Attempt-Self Injury Interview • Met 3+ criteria on the BPD section of the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II, BPD) 	<ul style="list-style-type: none"> • Psychosis • Need for inpatient care (as judged by assessor) • Prior DBT treatment • Taking part in other psychotherapy

Study author	Location, no. universities	Inclusion criteria/ Clinical & demographic characteristics of sample	Specified exclusion criteria
Pistorello et al. (2018)	USA, 1	<ul style="list-style-type: none"> • University students aged 18-25 • Score 2+ on Counseling Center Assessment of Psychological Symptoms question about suicidal thoughts • Those remaining in treatment and deemed insufficient responders to CAMS/TAU conditions were re-randomized to DBT or CAMS. 	<ul style="list-style-type: none"> • Need for higher level of care; severe psychosis • Inability to remain enrolled in university
Beanlands et al. (2019; 2020)	Canada, 1	<ul style="list-style-type: none"> • Nursing students • No clinical inclusion criteria mentioned 	None formally identified
Lee & Mason (2019)	USA, 1	<ul style="list-style-type: none"> • No formal inclusion criteria • Students receiving counselling services • 49% with anxiety, 27% with depression, 62% with past/current suicidal ideation, 11% reported past suicidal attempt(s), 46% reported history of NSSI 	None formally identified

BPD = Borderline Personality Disorder, ADHD = Attention-Deficit Hyperactivity Disorder, DSM-IV = Diagnostic and Statistical Manual for Mental Disorders, 4th edition, DERS = Difficulties in Emotion Regulation Scale, SD = standard deviation, NSSI = non-suicidal self-injury

studies included participants only if they met criteria for BPD (Lin et al., 2019; Meaney-Tavares & Hasking, 2012; Pistorello et al., 2012; Engle et al., 2013) or more generally cluster B personality disorders (Chugani et al., 2013). One study included only students with a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD; Fleming et al., 2015), whilst Cheng and Merrick's (2017) case study had a primary diagnosis of Anorexia-Nervosa (binge-purge subtype). Other studies included less stringent eligibility criteria such as emotional dysregulation or mood disorders (e.g. Muhomba et al., 2017; Rizvi & Steffel, 2014). Although the evidence base indicates that DBT is an effective treatment for individuals with a diagnosed personality disorder or emotional dysregulation, some studies in this review had no strict clinical inclusion criteria in order to explore the effectiveness of DBT-informed interventions for the student population more generally (Üstündağ-Budak et al., 2019; Uliaszek et al., 2016; Panepinto et al., 2015; Beanlands et al., 2019, 2020; Lee & Mason, 2019). Despite this lack of strict inclusion criteria, students from these particular studies were seeking support from university counselling centres (Uliaszek et al., 2016; Lee & Mason, 2019) and had received diagnoses such as depression and anxiety, or reported past or current suicidal ideation. Beanlands et al. (2019; 2020) invited nursing students to participate in an 8-week DBT skills group intervention, however did not mention whether nursing students had any identified clinical problems or diagnoses. The lack of clinical inclusion criteria may have led to students receiving DBT where it is not clinically indicated.

DBT implementation

The variety in intervention content, format and therapist training across the studies was considerable (see Table 4). Only five studies reported on the outcomes of a largely programmatic DBT intervention (Linehan, 1993a; 1993b), which included weekly group skills training, individual psychotherapy, skills coaching via phone, text or email, as well as a regular therapy team consultation meeting. All of these

Table 4. Format and content of DBT-informed interventions

Paper	Study design	DBT Components included/reported					Duration and specified modifications to full DBT programme	DBT Skills Modules included/reported				Comparison Group Intervention
		1:1	Skills Group	Coaching	Team Consult	+++		M	ER	IFE	DT	
Üstündağ-Budak et al. (2019)	Pre-post RM (Junior vs sophomore groups)		x				Phase 1: 8 x 2hr skills group Phase 2: 12 x 2hr follow-up skills practice group + homework	x	x	x		-
Lin et al. (2019)	RCT DBT vs CBT		x		x		8 x 2hr skills group Closed Facebook group where skills summaries were posted	x	x	x	x	CBT: 8 x 2hr group Structured topics
Muhomba et al. (2017)	Pre-post intervention RM		x				10 x 90m skills group (Some <10, but all skills were covered)	x			x	-
Cheng & Merrick (2017)	Case Study DBT for ED	x	x				1:1 therapy in Mandarin; culturally adapted 10 x 90m skills group (ER focus)	x	x	x	x	-
Uliaszek et al. (2016)	RCT DBT vs PPT		x				11-12 x 2hr skills group + homework	x	x	x	x	PPT: 11-12 2hr group Same time/day as DBT Included homework
Panepinto et al. (2015)	Pre-post intervention RM	x	x	x	x		6 - 13 weekly 90m skills group Content varied depending on no. sessions Biweekly 1:1 sessions (not always DBT)	x	x	S	x	-

Paper	Study Design	DBT Components included/reported					Duration and specified modifications to full DBT programme	DBT Skills Modules included/reported				Comparison Group Intervention
		1:1	Skills Group	Coaching	Team Consult	+++		M	ER	IPE	DT	
Fleming et al. (2015)	RCT DBT vs skills handouts		x	x			8 x 90m weekly skills group + 1x booster 7 x weekly phone coaching Adapted for ADHD behavioural targets	x	x			Skills Handouts: 34-pages reflecting publicly available ADHD self-help materials
Rizvi & Steffel (2014)	M+ER vs ER groups x Pre-post RM		x				8 x 2hr weekly skills group Either 2xM + 6xER OR 8xER	x	x			-
Chugani et al. (2013)	DBT vs TAU Pre-post intervention RM	x	x	x	x		11 x 90m weekly skills group Skills group content adapted for college students and to fit into one semester 1:1 therapy not always DBT-focused Coaching during business hours only	x	x	x	x	TAU: usually weekly 1:1 therapy
Meaney-Tavares et al. (2012)	Pre-post intervention RM		x				8 x 2-hour weekly skills groups Skills groups condensed and adapted to suit college students Students required to attend weekly 1:1 therapy (not part of DBT intervention)	x	x	x	x	-
Engle et al. (2013)	Pre-post intervention RM	x	x	x	x	x	60-90m skills groups Term time only Condensed into one semester Four-session dropout rule negotiable	x	x	x	x	-
Pistorello et al. (2012)	RCT DBT vs TAU	x	x	x	x	x	90mins skills group Term time only, minimum 7 months DT condensed and combined with validation work Allowances made for dropout due to terms (legitimate vs illegitimate DNA)	x	x	x	x	TAU: Same format/duration as DBT Therapeutic focus dependent on therapist's training

Paper	Study Design	DBT Components included/reported					Duration and specified modifications to full DBT programme	DBT Skills Modules included/reported				Comparison Group Intervention
		1:1	Skills Group	Coaching	Team Consult	+++		M	ER	IPE	DT	
Pistorello et al. (2018)	Pilot SMART trial DBT vs CAMS	x	x	x	x		10 x 2hr skills groups Weekly individual therapy 4-16-week programme	x	x	x	x	CAMS: 4 – 16 weeks Individual sessions Collaborative assessment, treatment planning, risk monitoring
Beanlands et al. (2019; 2020)	Pre-post intervention RM		x				8 x 90m skills groups + homework Incorporated nursing examples	x	x	x	x	-
Lee & Mason (2019)	DBT vs reference groups x pre-post RM		x				4 x 90m weekly skills groups	x	x	x		Reference group: Students who were referred but did not attend DBT

RCT = Randomised Control Trial, RM = Repeated Measures, DBT = Dialectical Behaviour Therapy, CBT = Cognitive Behaviour Therapy, PPT = Positive Psychotherapy, TAU = Optimised treatment as usual, 1:1 = Individual therapy, M = Mindfulness, ER = Emotion Regulation, IPE = Interpersonal Effectiveness, DT = Distress Tolerance, DNA = non-attendance, s = sometimes included, ADHD = Attention Deficit Hyperactivity Disorder, S = sometimes included

interventions were adapted necessarily from the original outpatient clinic model in order to fit in with university term durations, and based on previous research demonstrating that shorter programme durations have been effective for students. Nine studies evaluated DBT group skills training as an intervention in itself. Commonly the structure of these groups was between eight and ten 90-minute to two-hour sessions, however Lee and Mason (2019) reported outcomes of a four-week 90-minute skills group.

Despite the skills to provide a fully programmatic DBT intervention involving extensive and intensive training, the experience and training levels of therapists and group skills facilitators in the included studies varied widely. Of the five studies that evaluated full DBT interventions, three specified that clinicians were trained by Behavioural Tech, Martha Linehan's training company. The training and experience of other group skills training facilitators ranged from senior graduate nursing students (Beanlands et al., 2019; 2020), clinical psychology doctoral trainees (eg. Lee & Mason, 2019; Pistorello et al., 2012; 2018; Rizvi & Steffel, 2014) and licensed clinical or counselling psychologists (eg. Üstündağ-Budak et al., 2019; Lin et al., 2019; Panepinto et al., 2015; Pistorello et al., 2018). Three studies specified that the first author or another member of the research team was the group skills facilitator, and it was not always reported whether data was collected blindly, for example by an independent researcher. A comprehensive DBT intervention should include a regular therapist consultation meeting; six of the included studies, five of which reported on comprehensive DBT interventions, reported inclusion of a regular weekly consultation or supervision meeting.

Nine studies explicitly reported that their intervention incorporated all four core modules of DBT skills training (mindfulness, distress tolerance, interpersonal effectiveness, emotion regulation). Two studies evaluated interventions focusing on three core components (excluding distress tolerance), three studies reported

interventions primarily focusing on mindfulness and emotion regulation only (Fleming et al., 2015; Rizvi & Steffel, 2014; Pistorello et al., 2018), whereas Muhomba et al. (2017) evaluated an intervention focusing on mindfulness and distress tolerance only.

DBT target related outcomes

As a behavioural therapy, DBT targets include reducing life-threatening behaviours, reducing therapy-interfering behaviours, and decreasing quality of life interfering behaviours while increasing skills acquisition, strengthening and generalisation. Studies that focused on outcomes related to DBT targets are shown in Table 5. Two high quality randomised control trial (RCT) studies (Lin et al., 2019; Pistorello et al., 2012) used self-reported occurrence and frequency of life-threatening behaviours (self-harm behaviours, suicidal ideation and suicidal behaviour) as outcomes. Pistorello and colleagues (2012) reported that those undergoing comprehensive DBT had significantly greater reductions in suicidal behaviours reported on the Suicidal Behaviors Questionnaire (SBQ23; Linehan, 1981) and significantly fewer instances of non-suicidal self-injury reported on SBQ and the Suicide Attempt Self-Injury Interview (SASII; Linehan et al., 2006) than treatment as usual (TAU). While Pistorello and colleagues (2012) found no difference in reliable change in suicidal behaviours between DBT and TAU at 12 months, they found a significant difference at the 18-month follow up, such that a greater proportion of students receiving DBT achieved reliable change compared to those receiving treatment as usual. In their trial comparing a DBT skills group with CBT skills group, Lin et al. (2019) found that students from both groups had significantly reduced suicide re-attempts and suicidal ideation. They found no differences in suicidality until a 32-week follow-up, at which point those in the DBT group reported significantly lower suicidal ideation than those in the CBT group.

Table 5. Studies reporting on DBT target related outcomes

Paper	Study design	DBT Target-Related Outcomes								
		BPD Features	Life Threatening Behaviour	Therapy Interfering Behaviour	DBT Skills Use	Emotion Regulation	Mindfulness	Interpersonal Relations	Distress Tolerance	Life Problems
Lin et al. (2019)	RCT DBT vs CBT	x	x	x	-	x	-	-	-	-
Muhomba et al. (2017)	Pre-post intervention RM	-	-	-	x	x	-	-	-	-
Cheng & Merrick (2017)	Case study – DBT for ED	-	-	-	x	-	-	x	-	-
Uliaszek et al. (2016)	RCT DBT vs PPT	-	-	-	x	x	x	x	x	x
Panepinto et al. (2015)	Pre-post intervention RM	-	-	-	-	-	-	-	-	x
Fleming et al. (2015)	RCT DBT vs skills handouts	-	-	-	-	-	x	-	-	-
Rizvi & Steffel (2014)	M+ER vs ER groups x Pre-post RM	-	-	-	x	x	x	-	-	-
Chugani et al. (2013)	DBT skills vs TAU groups x Pre-post intervention RM	-	-	-	x	x	-	-	-	-

Paper	Study Design	DBT Target-Related Outcomes								
		BPD Features	Life Threatening Behaviour	Therapy Interfering Behaviour	DBT Skills Use	Emotion Regulation	Mindfulness	Interpersonal Relations	Distress Tolerance	Life Problems
Meaney-Tavares et al. (2012)	Pre-post intervention RM	x	-	-	-	-	-	-	-	-
Engle et al. (2013)	Pre-post intervention RM	-	-	x	-	-	-	-	-	-
Pistorello et al. (2012)	RCT DBT vs TAU	x	x	-	-	-	-	-	-	-
Beanlands et al. (2019; 2020)	Pre-post intervention RM	-	-	-	-	-	x	-	-	-
TOTAL		3	2	2	5	5	4	3	1	2

RCT=Randomised Control Trial, RM = Repeated Measures, DBT = Dialectical Behaviour Therapy, CBT = Cognitive Behaviour Therapy, PPT = Positive Psychotherapy, TAU = Treatment as usual, BPD = Borderline Personality Disorder, ED = Eating Disorder

There is a substantial evidence base for DBT interventions amongst people with Borderline Personality Disorder (BPD; Linehan et al., 2006) and three studies included in this review sought to understand whether DBT was effective in reducing BPD symptoms amongst university students meeting the diagnostic criteria. Three high quality studies reported that DBT interventions were effective in reducing BPD symptoms. Lin et al. (2019) found that both DBT and CBT skills groups significantly reduced BPD features on the BPD features scale (BPDFS; Wu et al., 2016) over the course of therapy, and that group differences only emerged from the 32-week follow-up, at which time those in the DBT skills group had significantly lower BPD features. Pistorello and colleagues (2012) also found a greater reduction in BPD criteria met for those undertaking comprehensive DBT compared to treatment as usual, during treatment (up to 12 months) but not at 18-month follow-up. Meaney-Tavares & Hasking (2012) reported a significant reduction in BPD symptoms from the first to the final session of group skills training, and reported that 40% of participants achieved reliable change.

DBT skills use has been found to mediate treatment success (Neacsiu, Rizvi & Steffel, 2010) and is considered an important treatment aim. DBT skills use was measured using the DBT Ways of Coping Checklist (DBT-WCCL; Neacsiu et al., 2010) in four studies included in this review. In their RCT comparing a DBT skills group with a positive psychotherapy (PPT) group, Uliaszek et al. (2016) found that functional skills use significantly increased for those in both DBT and PPT groups. Whilst there was a significant reduction in dysfunctional coping from pre-treatment to mid-treatment for those in the DBT group, such that there was significantly lower dysfunctional coping compared to the PPT group, this difference was not sustained post-treatment. Uliaszek et al. (2016) reported that 70% of students received individual therapy in addition to the skills groups, and a greater proportion of those in the DBT group received individual therapy. Little else is known about the nature of

individual therapy received, and individual therapy may have differentially affected skills use. Three further studies found significantly reduced dysfunctional coping and significantly increased functional coping (skills use) over the course of 8 – 10-week DBT skills groups (Muhomba et al., 2017; Rizvi & Steffel, 2014; Chugani et al., 2013), although all three of these studies had methodological limitations relating to lack of appropriate control conditions, such that it is challenging to draw more concrete conclusions about whether DBT skills groups are superior to other evidence-based therapy groups in relation to skills use.

Whilst Cheng and Merrick (2017) did not use a formal measure of DBT skills use in their single case study (culturally adapted full DBT programme), they commented that “[Client C-Y] reported DBT helped develop mindfulness skills, learn emotion regulation skills, and increase ability to communicate her needs and wants. She reported that the validation she received from group made her feel less lonely, and was able to develop a dialectical perspective”. Furthermore, in their qualitative analysis of transcripts from focus groups with nursing students who attended DBT skills groups, Beanlands et al. (2020) identified skills acquisition as a theme. They added that interpersonal effectiveness skills practice was particularly valued, although this may only be representative of nursing students’ views.

Interventions in the reviewed studies included a focus on one or more of the four DBT modules (except solely mindfulness). Depending on the study aims, design and intervention content, different measures of the individual skill acquisition were used.

Four studies investigated how DBT interventions, varying from 8-week skills groups to comprehensive DBT programmes, affected students’ mindfulness skills (Uliaszek et al., 2016; Fleming et al., 2015; Rizvi & Steffel, 2014; Beanlands et al., 2019) on measures including the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), Toronto Mindfulness Scale (TMS; Lau et al., 2006) and Kentucky

Inventory of Mindfulness Skills (KIMS; Baer et al., 2004). All four studies found a significant increase in mindfulness skills over the course of treatment. Interestingly, Rizvi and Steffel (2014) found no additive benefit of specific mindfulness training, such that emotion regulation skills training in itself (with all references to mindfulness removed) was enough to significantly improve mindfulness skills. However, the lack of control, including students being allocated to groups based on convenience, may have led to some systematic differences between the two groups prior to intervention, and therefore less weight should be given to this finding. In their respective RCT studies, Uliaszek et al. (2016) found no difference in mindfulness skills between DBT and positive psychotherapy (PPT), whereas Fleming et al. (2015) found that those undergoing DBT had significantly greater increase in mindfulness skills compared to those using psychoeducational skills handouts. This suggests that a face-to-face, experiential element may be important in students acquiring mindfulness skills. Whilst Fleming et al. (2015) and Beanlands et al. (2019) studies were rated as having greater methodological control than that of Uliaszek et al. (2016), as reflected in their higher quality appraisal scores, their findings may only be representative of students with ADHD or nursing students respectively and this limits generalisability to the wider student population.

Five studies examined whether DBT interventions change emotion regulation skills of students, four of which used the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) to assess emotion dysregulation (Muhomba et al., 2017; Uliaszek et al., 2016; Rizvi & Steffel, 2014; Chugani et al., 2013). All four of these studies, which evaluated interventions with a minimum of eight weeks of DBT skills groups, reported a significant reduction in emotional dysregulation. In studies comparing interventions, Chugani et al. (2013) reported that while both DBT skills group and treatment as usual (individual therapy) reduced emotion dysregulation, the mean difference for the DBT group was more than double that of the TAU group.

However, this study had a number of methodological issues, including lack of randomisation, researcher blinding and an equivalent control group, that make interpreting this finding challenging. Uliaszek et al. (2016) found no significant difference in emotion dysregulation reduction between DBT skills group and PPT group. In their RCT, Lin et al (2019) found that those in a DBT skills group had significantly greater reduction in emotional suppression and significantly greater increases in emotional acceptance, compared to a cognitive therapy group, at 32-week follow-up. Lin & colleagues (2019) study had the greatest level of control, as reflected in the high-quality appraisal score, and therefore this finding should be considered above those of the other studies. Therefore, DBT interventions have been found to improve emotion regulation, over and above equivalent therapies.

Of the eleven studies which specified including a distress tolerance component, only one study (Uliaszek et al. 2016) directly assessed the impact of DBT skills on distress tolerance, using the Distress Tolerance Scale (Simons & Gaher, 2005). They found that both DBT group skills training and PPT group both had significantly reduced distress intolerance scores, with DBT having a much larger effect size. Cheng and Merrick described how their case had reduced difficulties in interpersonal relations following a culturally adapted DBT programme, according to the Interpersonal Relations subscale of the Outcome Questionnaire (OQ-45; Lambert et al., 1996). Otherwise, change in interpersonal effectiveness was not directly measured, other than as part of inventory measures (see below).

Two studies (Uliaszek et al., 2016; Panepinto et al., 2015) used the Life Problems inventory (LPI; Rathus et al., 2015) as a global measure of several DBT skills targets, including confusion about self, impulsivity, emotion dysregulation, and interpersonal chaos. Both studies found a highly significant reduction in LPI scores for those undertaking DBT interventions. Uliaszek et al. (2016) also found a highly significant reduction in LPI scores for those undertaking PPT, although the reduction

in DBT group scores had a larger effect size. Engle et al. (2013) aimed to understand the impact of comprehensive DBT versus treatment as usual on therapy-interfering behaviours such as psychiatric or substance-related hospitalisations and mental health or medical absences. They found that DBT was consistently more effective than treatment as usual in avoiding hospital admissions and reducing psychiatric or medical leave. However, their study was observational in nature, and as such, no statistical analysis was completed and generalisable conclusions cannot easily be drawn. Whilst the study was found to be of lower quality due to lack of control, the findings are nonetheless useful, particularly given the high ecological validity of this study.

Outcomes related to psychological wellbeing

A summary of measures relating to psychological wellbeing used in the reviewed studies is presented in Table 6. Eleven studies recorded outcomes related to psychological wellbeing, four of which were randomised control trials. Of these four, only one RCT found significant group differences in psychological wellbeing outcomes: Pistorello et al. (2012) reported significantly greater reduction in depression scores for DBT compared to treatment as usual. This difference emerged from 6 months into treatment until follow-up. This finding may reflect that Pistorello and colleagues evaluated a comprehensive DBT programme, whereas the other RCTs evaluated DBT skills groups only.

Common outcomes measured were depression, anxiety, stress or a combination of these in global measures such as mental health symptom inventories. Five studies (Cheng & Merrick, 2017; Uliaszek et al., 2016; Panepinto et al., 2015; Rizvi & Steffel, 2014; Lee & Mason, 2019) used a variety of measures to assess global distress or general emotional symptoms. These included the Symptomatic Distress subscale of the OQ-45 (Lambert et al., 1996), Symptom

Table 6. Studies reporting on cognitive, functional and psychological wellbeing outcomes

Paper	Study design	Cognitive & Functional Outcomes										Psychological Wellbeing Outcomes							
		Attention	Executive Functioning	Cognitive Errors	Cognitive Reappraisals	Academic Functioning	Social Functioning	Occupational Functioning	Global Functioning	Resilience	Adaptive Coping	Depression	Anxiety	Stress	Global Psychiatric Symptoms	Happiness/Wellbeing	Self-Compassion	Life Satisfaction	
Üstündağ-Budak et al. (2019)	Junior vs. sophomore groups Pre-post RM	-	-	-	-	-	-	-	-	-	-	-	x	x	x	-	-	-	-
Lin et al. (2019)	RCT DBT vs CBT	x	-	x	x	-	-	-	-	-	-	-	x	-	-	-	-	-	-
Cheng & Merrick (2017)	Case Study DBT for ED	-	-	-	-	-	x	-	-	-	-	-	-	-	-	x	-	-	-
Uliaszek et al. (2016)	RCT DBT vs PPT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	x
Panepinto et al. (2015)	Pre-post intervention RM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-
Fleming et al. (2015)	RCT DBT vs skills handouts	x	x	-	-	x	-	-	-	-	-	-	x	x	-	-	-	-	-

Paper	Study Design	Cognitive & Functional Outcomes										Psychological Wellbeing Outcomes						
		Attention	Executive Functioning	Cognitive Errors	Cognitive Reappraisals	Academic Functioning	Social Functioning	Occupational Functioning	Global Functioning	Resilience	Adaptive Coping	Depression	Anxiety	Stress	Global Psychiatric Symptoms	Happiness/Wellbeing	Self-Compassion	Life Satisfaction
Rizvi & Steffel (2014)	M+ER vs ER groups x Pre-post RM	-	-	-	-	-	X	X	-	-	-	X	X	X	X	-	-	-
Meaney-Tavares et al. (2012)	Pre-post intervention RM	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-
Pistorello et al. (2012)	RCT DBT vs TAU	-	-	-	-	-	X	-	X	-	-	X	-	-	-	-	-	-
Beanlands et al. (2019; 2020)	Pre-post intervention RM	-	-	-	-	-	-	-	-	X	-	X	X	X	-	X	X	-
Lee & Mason (2019)	DBT vs reference groups x pre-post RM	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
Total		2	1	1	1	1	3	1	1	2	1	7	5	3	5	2	1	1

RCT = Randomised Control Trial, RM = Repeated Measures, DBT = Dialectical Behaviour Therapy, CBT = Cognitive Behaviour Therapy, PPT = Positive Psychotherapy, TAU = Treatment as usual, ED = Eating Disorder

Checklist-90 (Derogatis, 1983), Brief Symptom Inventory (Derogatis, 1993), Positive Affect and Negative Affect Schedule (Watson & Clark, 1999), and the Behaviour Health Measure-20 (Kopta & Lowry, 2002) respectively. Despite the use of different measures and subsequent challenge in comparing these outcomes, all five studies using general symptom measures found a significant improvement in symptoms and reduced distress over the course of treatment, although effect sizes varied. Of these studies, interventions varied from four 90-minute skills groups to a comprehensive DBT programme. Even interventions consisting only of group skills training found large effect sizes for changes in positive and negative affect (Rizvi & Steffel, 2014).

Three studies (Üstündağ-Budak et al., 2019; Rizvi & Steffel; Beanlands et al., 2019), all of which evaluated a DBT skills group in a pre-post intervention study design, used the Depression, Anxiety & Stress Scale (DASS-42 or DASS-21; Lovibond & Lovibond, 1995). Two of three studies reported a significant reduction in overall DASS scores, whereas Beanlands et al. (2019) reported a significant reduction on the stress subscale, but found no change in the anxiety and depression subscales. Given that this study had no clinical inclusion criteria, the lack of change on depression and anxiety subscales may be a reflection of the absence of clinical levels of anxiety and depression. In their qualitative analysis of focus group transcripts following a DBT skills group for nursing students, Beanlands et al. (2020) identified the theme of 'Experiencing Stress and De-stressing'. They explained that while a number of students had reported that the sessions had enabled them to better manage stress, and identified Mindfulness as an especially useful skill in relieving stress. However, some students also reported that committing to the group sessions, in addition to their academic work, was a stressor in itself.

Three studies (Fleming et al., 2015; Meaney-Tavares & Hasking, 2012; Pistorello et al., 2012) examined the effect of DBT on depression scores, according to the Beck Depression Scale (BDI-II; Beck et al., 1996). These studies all found a

significant reduction in depression scores, with differing effect sizes. Lin et al. (2019) also found a significant reduction in depression scores over time, according to Ko's Depression Inventory (Chien et al., 2007), although as alluded to previously, there were no differences between CBT and DBT groups in relation to reduction in depression scores. While Pistorello et al. (2012) found significantly reduced depression scores over time, significantly greater reduction in depression scores for the DBT group compared to TAU group emerged only from 6 months of treatment through to 18-month follow up. Two studies with differing methodologies and interventions reported that there were no differences in Beck Anxiety Inventory scores (BAI; Beck & Steer, 1993) over time (Meaney-Tavares et al. 2012; Fleming et al., 2015). Fleming et al. (2015) also found no difference in anxiety scores between those undertaking DBT group skills training compared to self-guided skills handouts.

Other studies reporting on outcomes related to psychological wellbeing offered mixed results. In their study of DBT skills training for nursing students, Beanlands et al. (2019) reported a marginally significant increase in wellbeing (WHO-5 Wellbeing Index; World Health Organisation, 1998) and a highly significant increase in self-compassion (Self-Compassion Scale; Neff, 2003). In a thematic analysis of focus groups transcripts following the same intervention, Beanlands et al. (2020) identified that participants reported a sense of enhanced wellbeing, and linked this with skills acquisition in addition to feeling accepted and validated by the group. As part of their battery of measures assessing wellbeing in their RCT comparing DBT with positive psychotherapy (PPT), Uliaszek et al. (2016) reported consistently higher life satisfaction (Satisfaction with Life Scale; Diener et al., 1985) for patients in the DBT group compared to those in the PPT group across time points. However, neither treatment was found to significantly improve life satisfaction over time. They found no significant improvements in happiness and wellbeing

(Positive Psychotherapy Inventory; Guney, 2011) for either therapy, and no difference between groups.

Cognitive and Functional outcomes

A summary of cognitive and functional measures amongst the reviewed studies is also presented in Table 6. Eight studies reported cognitive and functional outcomes, three of which were randomised control trials (Fleming et al., 2015; Lin et al., 2018; Pistorello et al., 2012). Overall, these suggested promising results for DBT on a variety of cognitive and functional outcomes.

In relation to cognitive outcomes, executive functioning was found to be significantly improved for students with ADHD undergoing a comprehensive DBT programme, compared to self-guided skills handouts only (Fleming et al., 2015). The same study also found slightly greater improvements in attention, according to Conners' Continuous Performance Test (CCPT-2; Conners, 2000), for those undertaking DBT group skills training rather than self-guided skills learning. In their RCT comparing DBT and CBT skills groups, Lin et al. (2019) found that both DBT and CBT significantly increased attention deployment according to the Emotion Regulation Scale (ERS; Gross, 1998) attention deployment subscale, with no differences between groups. However, those undertaking CBT were found to have significant greater reduction in cognitive errors on the Cognitive Error Questionnaire (CEQ-S; Chang et al., 1996) in addition to significantly greater cognitive reappraisals at 20- and 32-week follow-up (according to the ERS subscale), compared to those in the DBT skills group.

Self-reported social adjustment (Social Adjustment Scale-Self-Report; Weissman & Bothwell, 1976) was found to significantly improve for students receiving a comprehensive DBT intervention, but not in a comparable treatment as usual control group (Pistorello et al., 2012). Furthermore, Rizvi and Steffel (2014)

reported a significant reduction in social and occupational functioning impairments (Work & Social Adjustment Scale, Mundt et al., 2002) following their DBT-informed emotion regulation skills groups, and found that there was no additive effect of mindfulness. Cheng and Merrick (2017) found that following DBT skills group and individual therapy, their case study student reported fewer difficulties in social roles, according to the social roles subscale of the OQ-45, however, it is difficult to generalise this finding to university students due to the unique nature of the case described. Two studies reported that DBT skills groups significantly improved resilience scores in students (Beanlands et al., 2019; Lee & Mason, 2019). Meaney-Tavares and Hasking (2012) reported a significant increase in problem solving, seeking professional help and protecting self, and a significant decrease in self-blame (Coping Scale for Adults; Frydenberg & Lewis, 1997) following an eight-week DBT skills group. In their RCT comparing comprehensive DBT with treatment as usual, Pistorello et al. (2012) found that global functioning was a moderator of treatment, such that DBT was particularly effective for suicidal students who were lower functioning prior to treatment.

Only one study measured academic performance, and reported no significant change in grade point average for those undertaking DBT group skills training and additional coaching compared to self-guided skills handouts only (Fleming et al., 2015).

Other clinical outcomes

Fleming et al. (2015) were interested in outcomes specifically for students with ADHD and this was reflected in their choice of outcomes measures. These included Barkley Adult ADHD Rating Scale–IV (BAARS-IV; Barkley, 2011) as a measure of ADHD symptoms, in addition to the ADHD Quality of Life Questionnaire (AAQoL; Brod et al., 2006). In relation to inattention symptoms, participants receiving DBT group skills training showed greater treatment response and clinical

recovery rates compared to self-guided skills handouts. Quality of life improvements were significantly greater for those receiving DBT group training compared to those receiving skills handouts only. DBT significantly outperformed SH at post-treatment, although this was not sustained at three-month follow-up.

Cheng and Merrick's (2017) case study also presented positive outcomes for an adapted form of DBT for a Chinese international student with an eating disorder at an American university. They described that the student "found that her life expanded in such a way that she was no longer only preoccupied with her emotions and eating. [She] started to recognize and nurture other aspects of her life and develop a more positive self-evaluation".

Acceptability and feasibility outcomes

A summary of acceptability and feasibility outcomes studied amongst the reviewed papers is presented in Table 7. The majority of studies referenced the acceptability and feasibility of DBT-informed interventions of varying intensity, content and duration, namely through a discussion of attendance and attrition rates or informal feedback from participants or therapists. Due to the varied range of study designs, therapy programme formats and durations, studies defined attrition differently. Some studies simply reported overall attendance (e.g. Lee & Mason, 2019), while others specified that participants missing, for example, three or more consecutive sessions (Muhomba et al., 2017), or 50% of overall sessions (Uliaszek et al., 2016), should be considered dropped out. Of the nine studies that documented attrition rate, drop outs ranged from 0% (Beanlands et al., 2019; 2020) to 48% (Muhomba et al., 2017), with an average attrition rate of 22%. Studies comparing therapeutic interventions reported favourable acceptability outcomes for DBT compared to other treatment programmes. For instance, a DBT skills group intervention was found to have a marginally lower attrition rate than a comparable

Table 7. Acceptability and feasibility of DBT-informed interventions

Paper	Study Design	Dropout Definition/Dropout Rate	Other acceptability/feasibility measures
Üstündağ-Budak et al. (2019)	Junior vs sophomore groups Pre-post RM	Dropout: missing 2+ sessions 0% dropout from intervention Average attendance 7/8 sessions F/U attended by 71%	-
Lin et al. (2019)	RCT DBT vs CBT	Dropout: missing 2+ sessions DBT: 14% dropout, 0 lost to F/U CBT: 20% dropout, 1 lost to F/U No significant group differences in dropout	-
Muhomba et al. (2017)	Pre-post intervention RM	Dropout: missing 3+ consecutive sessions 48% drop out Outcomes only collected from those attending 5+ sessions overall	-
Cheng & Merrick (2017)	Case Study DBT for ED	Case did not drop out	Researcher commentary
Uliaszek et al. (2016)	RCT DBT vs PPT	Dropout: missing >50% sessions DBT: 15% dropout PPT: 44% dropout Significant difference between groups	-
Panepinto et al. (2015)	Pre-post intervention RM	Dropout: initially missing 3+ sessions, however strategy later relaxed 42% dropout rate (completed post-DBT assessments)	-
Fleming et al. (2015)	RCT DBT vs skills handouts	DBT skills: 11% did not start, 6% dropout (did not complete post-DBT measures) Skills handouts: 0% drop out	Participant quantitative & qualitative feedback
Rizvi & Steffel (2014)	M+ER vs ER groups x Pre-post RM	Dropout: not completing treatment 13% dropout (did not complete post-interventions assessments) 29% drop out at F/U	Participant qualitative feedback Researcher commentary
Chugani et al. (2013)	Pre-post intervention RM	Dropout rate not specified Those unable/unwilling to attend DBT received TAU (reference group)	Researcher commentary

Paper	Study Design	Dropout Definition/Dropout Rate	Other acceptability/feasibility measures
Meaney-Tavares et al. (2012)	Pre-post intervention RM	Dropout: not completing treatment 26% dropout	Researcher commentary
Engle et al. (2013)	Pre-post intervention RM	Dropout: missing 4 consecutive sessions Dropout rate not specified	Researcher commentary
Pistorello et al. (2012)	RCT DBT vs TAU	Dropout: missing 4 consecutive sessions DBT: 35% before 7 months TAU: 48% before 7 months No group differences in dropout rate during treatment or at F/U	Researcher commentary
Pistorello et al. (2018)	Pilot SMART trial DBT vs CAMS	CAMS>CAMS: 1 of 2 completed & deemed sufficient responder CAMS>DBT: 2 of 2 completed & deemed sufficient responder TAU>CAMS: 5 of 5 completed, all deemed sufficient responders TAU>DBT: 3/5 completed, 2/3 deemed sufficient responders	Feasibility: Recruitment to intervention Treatment Fidelity Acceptability: Client Satisfaction Questionnaire – participants Client Satisfaction Questionnaire – clinicians Participant Feedback
Beanlands et al. (2019; 2020)	Pre-post intervention RM	84% of those which enrolled completed intervention (31/36). Session attendance not reported. 31/31 completed post-intervention quantitative measures 26/31 completed post-intervention qualitative measures	Treatment Acceptability & Preference (TAP) Satisfaction with Treatment Measure (SWTM) Focus Group (Beanlands et al., 2020)
Lee & Mason (2019)	DBT vs reference groups x pre-post RM	67% completed 4/4 sessions 11% completed 3/4 sessions 17% attended 2/4 sessions 6% attended 1/4 sessions	-

RCT = Randomised Control Trial, RM = Repeated Measures, DBT = Dialectical Behaviour Therapy, CBT = Cognitive Behaviour Therapy, PPT = Positive Psychotherapy, TAU = Treatment as usual, ED = Eating Disorder, F/U = follow up

CBT skills group intervention (Lin et al., 2019) and significantly lower attrition than positive psychotherapy (Uliaszek et al., 2016). Similarly, DBT was found to have lower attrition than treatment as usual (Pistorello et al., 2012).

Pistorello et al., (2012) suggested that students may be more likely to drop out of treatment than typical outpatients due to interruption in treatment during term breaks or moving away. They also suggested that students may drop out due to clinical recovery, adding that students' higher level of functioning compared to community patients suggests an ability to maintain functionality during treatment breaks. Panepinto et al. (2015) observed that graduate students tended to be more likely to persist in the DBT skills group compared to undergraduates.

Beanlands et al. (2019) also used formal measures of acceptability including the Treatment Acceptability and Preference (TAP; Sidani et al., 2009) and the Satisfaction with Treatment Measure (SWTM; Sidani et al., 2017). They reported that responses on the TAP indicated that participants found the intervention to be effective, appropriate and convenient. Similarly, SWTQ responses were rated as 'high satisfaction' across most domains. Overall, participants reported a positive attitude toward the intervention and high levels of satisfaction with the suitability and perceived benefits of DBT skills groups. In their RCT comparing DBT skills group with positive psychotherapy group, Uliaszek et al. (2016) used the Working Alliance Inventory (WAI) to give additional information about treatment acceptability. They found that WAI scores were significantly higher for DBT group than the positive psychotherapy group.

Pistorello et al. (2018) used various measures to assess the acceptability and feasibility of DBT compared to Collaborative Assessment and Management of Suicidality (CAMS) as part of their pilot sequential, multiple assignment, randomised trial. The study commented on recruitment to intervention and treatment fidelity as feasibility outcomes, however, as DBT was in the second phase of treatment,

information about student recruitment into the different intervention pathways are not specific to DBT. However, DBT and CAMS were compared in relation to treatment adherence, and DBT therapists were found to have adequate treatment adherence to the manualised programme (Linehan, 1993; 2015a), whereas CAMS clinicians were found to demonstrate high levels of adherence with the CAMS manual (Jobes, 2006). In order to collect further information about acceptability of interventions, Pistorello and colleagues (2018) found that participants across all 4 treatment conditions (two DBT, two CAMS) were moderately to highly satisfied with the sequence of treatments according to responses on the Client Satisfaction Questionnaire (CSQ-8; Attkisson & Zwick, 1982), although this was inconclusive due to a very small sample in the second (final) phase of treatment. During exit interviews, participants most commonly reported valuing the “tailored” nature of interventions to their specific needs, acquiring coping skills, as well as learning to help themselves. A number of participants also stated that they liked their therapist. Again, Pistorello and colleagues (2018) did not specify which of these participants had received DBT or CAMS interventions. In their RCT comparing DBT with ADHD-related skills handouts, Fleming et al. (2015) collected quantitative and qualitative reports of acceptability. Participants rated DBT as significantly more acceptable than skills handouts (a large effect size was found). The researchers found that a 90-minute session length was deemed appropriate but the nine-session treatment length may have been too brief, whereas participants receiving skills handouts gave a neutral rating for the helpfulness of the handouts. Those in the DBT skills condition rated usefulness of each treatment component, in order from highest to lowest as following: mindfulness, structuring environment, planning, listing tasks, organisation, emotion regulation, managing daily life rhythms, pros and cons, information about ADHD. In relation to treatment length, whilst other studies found an eight-session group skills training to be acceptable with good clinical outcomes, the study by Fleming et al. (2015) was well controlled and of better quality than other studies.

A number of papers gave a more informal commentary regarding acceptability and feasibility from the researchers' perspective. In their case study of culturally adapted DBT for an international student with an eating disorder, Cheng and Merrick (2017) commented on a number of factors that complicated their ability to draw conclusions. These included the DBT skills group not being tailored for eating disorders, was not in the student's native language, and that individual therapy over 18 months is not typical for a university counselling centre and was therefore interrupted by academic term dates. A number of papers commented on the challenges of implementing DBT interventions in a university setting. For instance, Rizvi and Steffel (2014) reported problems recruiting onto their brief skills intervention which they suggested were related to difficulties identifying times at which students were commonly available around academic classes and the possibility that students were dissuaded by the stigma of seeking therapy, as has been found in numerous studies (eg. Eisenberg et al., 2009). Similarly, Chugani et al. (2013) reported that the effect of therapy was limited by fluctuating work schedules. Engle et al. (2013) made reference to the sometimes prohibitively expensive nature of a full DBT programme, however argued that not providing DBT may actually be more costly when considering the impact of students' poorly managed mental health contributing to disrupted academic and personal functioning. The cost of implementing a fully programmatic DBT intervention may not be possible for university counselling services, however, a DBT skills training group may be a more feasible compromise. Indeed, Meaney-Tavares and Hasking (2012) reported that adapting the content of group skills training to suit students was relatively straightforward.

Rizvi and Steffel (2014) collected qualitative feedback from students participating in brief emotion regulation and mindfulness skills interventions. Quotes from participants included "I enjoyed the skills that we were working on... I think they

will be really important to reduce these negative emotions in my mind” and “The group has drastically changed the quality of my life... I have been much more able to cope with situations...”. Rizvi and Steffel (2014) also reported that participants suggested improvements such as larger groups and more sessions. Beanlands et al. (2020) conducted a more in-depth thematic analysis of feedback from a focus group with nursing students, which sheds further light on acceptability of a DBT skills group intervention. They reported that nursing students felt validated and accepted by the group, as well as sessions leading to a helpful shift in their perspectives. However, some students also reflected that they felt too tired to engage in sessions due to stressors such as academic commitments.

Discussion

Findings and clinical implications

This review presented the findings of empirical studies examining the effectiveness and acceptability of DBT skills training for university students. Overall, the studies presented in this review show positive outcomes for university students (with and without formal mental health diagnoses), particularly in relation to DBT-targets including reduced suicidal ideation and behaviour, increased emotion regulation and increased adaptive skill use, but also in reducing mood difficulties, and increasing social functioning and resilience. Attrition rates were found to be lower than for other treatment approaches, and on direct measures of acceptability and satisfaction, students found DBT-informed interventions to be satisfactory.

A comprehensive DBT programme may be considered resource-intensive, particularly for university counselling centres. Indeed, Linehan’s original 12-month programme (Linehan et al., 1993a; 1993b) would not be compatible with the academic year, including semester breaks where students may spend time away

from campus. Interventions in the reviewed studies commonly included a number of adaptations from the original model, including taking into account the academic terms and the students' workload. Even DBT skills training groups of between four and twelve weeks, which could be implemented over one or two semesters, showed promising clinical outcomes for students.

Although students may experience specific psychological disorders, university counselling services typically treat a broader range of problems and do not necessarily focus on treating specific diagnoses (Association for University and College Counselling Center Directors, 2014). Whilst some studies in this review included samples that met certain diagnostic criteria (such as BPD) and therefore have limited generalisability for students without these diagnoses, other studies were interested in the effectiveness and acceptability of DBT for students more generally, for instance, those with emotion regulation or adjustment problems. These preliminary findings suggest that the effectiveness of DBT-informed interventions can extend beyond students with suicidal ideation and BPD. Building on research demonstrating the effectiveness of DBT with other clinical conditions in a non-student population, this review also demonstrated the effectiveness of DBT-informed interventions in reducing symptoms related to ADHD and an eating disorder in students.

The studies included in this review have found that while resource intensive, it is feasible to adapt and implement DBT in a university mental health setting. Furthermore, even DBT skills groups as a standalone intervention have been found to be effective for university students in relation to a variety of clinical and functional outcomes. Research suggests that traditional university counselling model of six sessions is not enough for students with more severe mental health problems (Center for Collegiate Mental Health, 2017). DBT appears to be an effective intervention for this subgroup of students, and provision should be made where

possible for students with high levels of emotional distress, including but not exclusively those diagnosed with BPD. In cases where universities do not have the resources to implement a modified full DBT programme, an eight- to twelve-week skills group may be a cost-effective alternative. Chugani (2015) suggested that some flexibility in treatment options may be useful, such as to provide either adapted (for example, DBT skills group only) or comprehensive DBT treatment, depending on the severity of a student's clinical presentation.

Whilst this review focused on clinical and non-clinical outcomes in a student population, other studies involving counselling service staff members have shed further light on the acceptability and feasibility of DBT-informed interventions in student mental health services. Chugani and Landes (2016) surveyed 107 college counselling centre (CCC) employees about the barriers and suggested facilitators of DBT implementation in CCCs. Barriers included productivity demands and lack of individual therapists, time for team consultation, and willingness to offer phone coaching. Suggested strategies for implementation included the development of community partnerships, use of virtual teams, supporting of programmes with campus data, and adapting DBT strategically to suit students' needs and demands. Kannan et al. (2019) conducted a qualitative analysis of staff experiences of DBT within CCCs and developed four themes through an extensive analysis process: (1) A comprehensive DBT model is impacted by CCC resources, and DBT is integrated and adapted to fit with existing clinical services, (2) DBT fits well with centres' approaches to clinical care and serves a broad range of student needs, including those with more serious mental health concerns, (3) Skills training groups are a main focus of DBT programmes in CCCs due to the tangible benefits of skill development to students, and (4) Clinician perceptions of DBT and satisfaction with implementing DBT can have a substantial impact on the success of DBT programmes. These findings suggest that university counselling staff perspectives

are largely in line with the findings of the present review, and substantiates findings suggesting group skills training should be a priority, with a full multimodal DBT programme being delivered if university resources allow.

Limitations of reviewed studies

The primary limitations of the reviewed studies include a lack of randomised control trials (RCTs); only four papers included RCT methodology (Pistorello et al., 2012; Fleming et al., 2015; Uliaszek et al., 2016; Lin et al., 2019). Furthermore, non-randomised interventional studies rarely included adequate control groups for comparison, such that any effects found may be due to heterogeneity between groups rather than any effect of the intervention itself. For instance, some studies included a comparison group comprising students choosing not to undertake the DBT intervention (Chugani et al., 2013). While pre- and post-test designs may be appropriate for preliminary explorations of DBT amongst students, it would be preferable to evaluate the effectiveness and acceptability of DBT-informed interventions relative to other treatment approaches. Furthermore, whilst Cheng and Merrick (2017) presented an interesting case study of culturally-adapted DBT for an international student with an eating disorder, their findings were complicated by a number of factors and are very difficult to generalise beyond their specific case.

There were also significant deviations from the standard DBT content and delivery. This makes it much more difficult to compare outcomes in a meaningful way. The number of intervention contact hours varied widely across studies, ranging from four 90-minute group skills sessions to eleven group skills sessions in addition to individual therapy and telephone coaching. However, the number of hours does not appear to correlate directly with outcomes, which could be explained by the differences in the intervention protocols or delivery rather than a dosage effect. As many of the papers allude to, standardised DBT according to Linehan's (1993a, b)

protocol is often not feasible in the context of university mental health services, due to the term dates and students' competing time demands. However, despite studies reporting adaptations from the original DBT manuals, treatment fidelity was only measured formally in one study (Pistorello et al., 2018). Reporting treatment adherence gives valuable information regarding the feasibility of an adapted version of therapy, and would be a useful additional measure in future research adapting DBT for university students. The lack of consistency in outcomes measures across studies resulted in difficulties quantitatively comparing outcomes.

The majority of the studies were undertaken at universities in the USA and Canada. This may be a reflection of the origins, clinical interest and existing evidence base of DBT in these countries, however, it should be noted that students from North America have unique challenges and cultural understandings which affect the way in which they engage with and respond to therapeutic interventions. In order to generalise the results of these studies to university students internationally, it is important that future research focuses on student populations from other countries.

Limitations of this review

Whilst conducting this literature review, at times it was difficult to find an appropriate balance between a liberal enough search process for a constructive review of the existing literature, and having a sufficiently stringent inclusion criteria that any conclusions drawn are somewhat generalisable. While the reviewed literature provides some preliminary evidence to suggest the effectiveness of adapted DBT-informed interventions on a number of clinical and non-clinical outcomes for students, discrepancies between intervention content, structure and format and research methodologies, as well as methodological limitations, made it difficult to draw firmer conclusions and make definitive treatment recommendations in this review.

Whilst the inclusion of the QualSyst critical appraisal tool was helpful in understanding the quality of methodology and reporting in the reviewed papers, the tool did not always helpfully capture the clinical importance of the studies. For example, Engle and colleagues' (2013) naturalistic evaluation of a functioning DBT programme had high ecological validity and useful clinical information, however scored poorly using the QualSyst tool. Similarly Cheng & Merrick (2017) were given the maximum score, however, the case study design limits the generalisability of findings to the wider student population. Furthermore, ideally a systematic review would include multiple quality assessment raters, however this was beyond the scope of this review within the context of a DClinPsy thesis.

Recommendations for future research

This review highlights a number of gaps in available research on the effectiveness of DBT informed approaches for university students. As discussed, the lack of control in the majority of studies as well as the lack of studies outside North America, makes it extremely difficult to generalise to other groups of university students. Only one study reviewed mentioned academic performance as an outcome of DBT skills training (Fleming et al., 2015). Further studies focusing on the effect of DBT-informed interventions on students' academic performance would add to current knowledge about non-clinical outcomes of DBT, and may be of particular interest to universities and service commissioners. Further research should build on current knowledge by replicating randomised control trials, or well-controlled pre-post- intervention studies, which give thorough descriptions of the content and format of DBT (whether a comprehensive DBT programme or DBT-informed skills groups), in order that knowledge about the effectiveness and acceptability of DBT for university students can be more conclusive.

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Part 2: Empirical Paper

**Experiences, beliefs and attitudes affecting mental health service access
amongst suicidal university students**

Abstract

Introduction: In recent years, there have been sustained concerns about suicide amongst UK university students. Despite increasing demand for services for students in severe emotional distress, students may not be accessing support services. This study aimed to identify barriers to, and predictors of, mental health service access for suicidal university students in the UK. Finally, this study also explored ways in which support for suicidal students could be improved.

Methods: A mixed-methods approach was employed in this two-phase study. Content and thematic analyses of interview transcripts were considered alongside current literature in order to develop (in collaboration with students) an online survey asking UK university students about their life experiences, attitudes about mental health stigma and help-seeking, and utilisation of support services. Students also gave suggested improvements for services supporting suicidal students.

Results: Commonly reported barriers to help-seeking amongst students were uncertainty around the seriousness of one's needs and long waiting times. Personal contact with service users, perceived need for help, help-seeking intention and stigma were all found to be associated with suicidal students accessing support. Students commonly suggested services should ensure accessible, safe and varied provision to support students with suicidal ideation.

Conclusions: This study has highlighted personal experiences and attitudes which predict service use, including previous social contact with service users, perceived stigma, and self-stigma. A number of frequently endorsed personal and institutional barriers preventing suicidal students accessing services were identified. These findings were discussed in the context of students' suggestions for improved service provision.

Introduction

Suicide is the second main cause of death in young people aged 15-29 worldwide (WHO, 2018), and a significant proportion of individuals within this age bracket are university students. It is widely documented that the onset of mental health problems usually peaks before the age of 24 (Kessler et al., 2007). Students usually fall into this critical period of development during their studies, and this, in combination with experiencing a unique set of transitional stressors such as increased independence and responsibilities, moving away from support networks, academic and financial pressures, makes students particularly vulnerable to developing mental health problems. In the UK, students have also contended with rising tuition fees and higher cost of living, such that an average student faces debt of £50,000 upon graduation (Belfield et al., 2017). Indeed, financial stress, in addition to pressure around academic performance and success following graduation has previously been linked to poorer mental health in students (Beiter et al., 2015; Richardson et al., 2017). One cohort study found that UK students' levels of psychological distress increase on entering university (Bewick et al., 2010).

In recent years, there have been sustained concerns about suicide amongst university students across the world. In a large study of over 26,000 students at 70 different American universities, Drum et al. (2009) found that 18% of undergraduate and 15% of graduate students had "seriously considered attempting suicide" in their lifetime. Furthermore, 6% of undergraduate and 4% of graduate students had "seriously considered attempting suicide" in the preceding 12 months. Recent evidence suggests that the prevalence of more severe mental health problems, including self-harm and suicide, among university students is actually increasing (Sivertsen et al., 2019; Storrie et al., 2010). In England and Wales, at least 95 students took their own lives in 2016-2017 (Universities UK, 2018).

Studies have reported that certain sub-groups of students are more at risk of suicide; including males (Gunnell et al., 2020), those with symptoms of depression (Konick & Gutierrez, 2005), those with limited or low-quality social support (Hefner & Eisenberg, 2009), and those from Lesbian, Gay, Bisexual or Trans (LGBT) backgrounds (Shadick et al., 2015). Substance use, including excessive alcohol consumption, has often been found to be a risk factor for suicide in the general population (Kelly et al., 2002; Schneider, 2009), and given that a large proportion of students have reported using substances to cope with their problems (Pereira et al., 2019), students using substances should also be considered particularly high risk sub-group. There is some evidence that these risk factors intersect, for example depressive symptoms are more predictive of suicidality in females, whereas alcohol use is a greater risk factor for males (Lamis & Lester, 2013). In a large UK survey, reports of persistent thoughts of self-harm were similarly high across all three academic years, indicating that emotional distress extends beyond the adjustment stressors associated with starting university (Pereira et al., 2019).

Despite the increasing prevalence of severe emotional disturbances, self-harm and suicidality amongst university students, numerous studies have reported that students are not accessing the necessary treatment. The avoidance of professional help-seeking, otherwise known as the help-negation effect, is a well-established phenomenon among students with mental health problems, but particularly for those with suicidal ideation and behaviour (Han et al., 2018; Yakunina et al., 2010). In line with this, findings have suggested that as psychological distress (Ryan et al., 2010) and suicidal ideation (Deane et al., 2001) increase, intention to seek help decreases. Previous findings have suggested that up to 80% of students who completed suicide had never participated in counselling services on campus Gallagher (2004). Furthermore, fewer than half of students who reported suicidal ideation or other serious mental health issues received *any*

professional services or treatment (Eisenberg et al., 2012; Verger 2010). This suggests that students are not effectively accessing preventative, and potentially life-saving, interventions leading to deterioration in mental health until crisis point. Given that mental health treatments on campus are generally free (in the UK) or heavily subsidised (for instance, in the USA) for students, researchers have focused on a number of other possible explanations for students not accessing the necessary mental health treatment.

One theoretical framework that has often provided the basis for explaining mental health help-seeking (Schomerus et al., 2009; Tomczyk et al., 2020, Zorrilla et al., 2019), including amongst suicidal individuals (Skogstad et al., 2006), is the Theory of Planned Behaviour (TPB; Ajzen, 1991). The TPB posits that a person's attitude towards a behaviour, social norms related to the behaviour, and perceived control over the behaviour determines an individual's intention to perform the behaviour (in this case, to seek professional help), which in turn predicts the behaviour.

In line with the TPB, research studies have found a number of personal factors that influence attitudes, perceived norms and perceived control over help-seeking. Good quality social support from a robust social network (including friends, family and university) has been found to negate the need for professional help-seeking (Hirsch & Barton, 2011). Other reported barriers to help-seeking include students' lack of awareness of available services (King et al., 2008; Quinn et al., 2009), in addition to perceived stigma surrounding mental health and accessing services (Kearns et al., 2015; Vogel et al., 2009). In a large survey of UK students at 140 universities, 75.6% of students experiencing mental health problems hid their symptoms from their friends (Pereira et al., 2019). Stigma has been found to have a particularly detrimental effect on help-seeking for suicidal individuals (Rickwood et al., 2005; Batterham et al., 2013), although stigma perception may affect students

from different cultural backgrounds differently. Miranda et al. (2015) found that students from ethnic minority backgrounds were less likely to report previous mental health treatment, compared with white students. They also endorsed more treatment barriers including financial concerns, lack of time, and stigma-related concerns, compared to their white counterparts.

In addition to personal factors influencing intention to seek help, practical or institutional factors also appear to affect help-seeking. It has been frequently reported, for instance, by the Higher Education Policy Institute, that existing university mental health services are not able to meet the increasing demand due to lack of resources (Brown, 2016), which inevitably impacts on waiting lists, clinician availability and the duration and type of therapy offered. The number of therapy sessions necessary for clinically meaningful improvement, particularly among students with higher levels of distress, appears to be beyond the session limits of many university mental health services (Center for Collegiate Mental Health, 2017).

Macaskill (2012) noted that even when students do seek help, communication between student psychological services and mainstream health services is often poor, leading to disrupted continuity of care when students return home in the holidays. Furthermore, those who are able to overcome initial barriers to support may have negative experiences of services to the extent that this in itself reduce intention to seek ongoing or future support (Rickwood et al., 2005).

Despite the presence of several barriers to accessing services, demand for mental health services amongst university students continues to increase in line with increasing numbers of students identifying as experiencing emotional distress (Watkins et al., 2011). In the UK, it was recently reported that higher education institutions have experienced significant increases in demand for general student services, counselling services and disability services over the past five years (Universities UK, 2018). This suggests that students are becoming more able to

overcome initial barriers to accessing support, although this in turn is likely to have further stretched university and health service's already limited resources. Research exploring help-seeking in university students has provided valuable insight into factors which have facilitated students accessing support for their mental health. For example, personal contact with others with mental health problems has been found to mediate the effects of perceived mental health stigma, such that knowledge of others' using mental health services is positively associated with an individual's service use (Eisenberg et al., 2007a).

Taking into consideration the long-term and far-reaching clinical and socioeconomic risks of untreated depression, self-harm and suicidal ideation, universities have a unique opportunity to intervene at an early stage and support vulnerable students work towards academic success and wellbeing as they transition into adulthood. It is therefore critical that student mental health services consider evidence related to potential barriers and facilitators to accessing support when planning and delivering services, in order to maximise the likelihood of students accessing services and prevent deteriorating in students' mental health. While a number of studies (Czyz et al., 2013; Downs & Eisenberg, 2012) have examined the barriers and facilitators for help-seeking in suicidal university students in the USA, much less is known about suicidal university students in the UK (Akram et al., 2020). This aim of this study was to explore UK university students' experiences of accessing support for suicidal thoughts and behaviour. The specific research questions were as follows:

1. What are the barriers in accessing mental health support services for suicidal university students in the UK?
2. What are the predictors of UK students accessing support for suicidal thoughts?
3. How might support for suicidal students be improved?

Method

This study utilised a mixed method approach to data collection, involving a qualitative interview process with UCL students with a history of suicidal thoughts, and an anonymous online survey for university students across the UK, regardless of their own personal experiences of mental health problems.

This study was a joint project with another trainee (Barnett, in preparation). The focus of the other project was to understand the risk factors associated with suicide amongst university students. As such, the ethics application and the majority of the methodology were completed jointly. Only the interview and survey questions relevant to this part of the study are reported here, however, both interview and survey participants answered questions related to both parts of the project. Details of the individual contributions to this joint project are outlined in Appendix 10.

Ethics

Ethical approval for the study was granted by the University College London Research Ethics Committee (REC reference 15819/001; see Appendix 2).

Development of the online survey

Following a review of literature pertinent to suicidal students accessing mental health support, qualitative interviews were conducted to identify any additional issues relevant to UK students, leading to the development of the online survey.

Setting and Procedure

The initial phase of the research was conducted within UCL. Study advertisements were disseminated across the university in paper form, on digital screens, over university social media at student events, and via student newsletters. The advert called for UCL university students with a history of suicidal thoughts or

behaviours during their studies to attend a one-hour focus group about student life stressors, suicide and available support. The advert also detailed that participants would receive a £10 high street shopping voucher as compensation for their time. Interested parties were invited to email the researchers to express interest in taking part, or to ask any clarifying questions. All students who contacted the researchers were emailed the study information sheet (Appendix 3) and asked to read this thoroughly before proceeding. Due to conflicting work schedules, and one participant's preference for an individual interview rather than group setting, individual interviews with five students took place on UCL premises over a three-month period during the first semester of the academic year. When participants attended the interviews, they were welcomed and offered refreshments. They were offered another opportunity to read through the information sheet, before giving their informed consent through completion and signing of the consent form (Appendix 3).

Participants

The inclusion criteria for participants was intentionally flexible to allow for university students from different backgrounds to be eligible to participate. The inclusion criteria for the initial phase of research was as follows:

- (1) University student (undergraduate or postgraduate) studying at UCL
- (2) Previous experience of suicidal thoughts, plans or attempts at any point during university studies

Participants' demographic information was collected confidentially (see Appendix 3). Five students meeting the inclusion criteria were interviewed. The sample included four females and one male, two white British, two White other and one of Chinese ethnicity, with an average age of 21.2 years (SD = 1.79). Three students were UK students and two were students from the EU. One student was a postgraduate and four were undergraduates.

Interview

A semi-structured interview was developed, based on the research questions and a review of literature around relationship to help, beliefs and barriers to seeking professional support (see Appendix 5). There were two researchers and one participant present during each interview. Interviews were audio recorded and transcribed. Given the sensitive nature of the interview topic, a number of measures were put in place to help minimise participant distress and manage risk related to distress if it occurred, as outlined in the interview information sheet (Appendix 3). These measures included reminding students that they are able to leave the room at any time with the option of a researcher (a trainee clinical psychologist) assisting them in managing their distress using emotion regulation techniques. Students were free to re-enter the interview if they wished, or to withdraw participation without consequences. At the end of each interview there was an opportunity to debrief on the experience, and students were all offered printed self-help information and relevant contact details for supporting organisations, including university-led mental health support or telephone support such as the Samaritans. If the researcher identified any risk related to any participants' distress, the participant was encouraged to seek further support from UCL student health services, with the support of the researchers if necessary. None of the interview participants reported feeling distressed during the debrief; moreover, students gave positive feedback relating to the process of talking openly about their experiences, in addition to the act of contributing to research aiming to develop support for students with similar experiences.

Qualitative Analysis

The interview transcripts were analysed using both quantitative content analysis for questions such as 'What support are you aware of for suicidal university students?' and thematic analysis (Braun & Clarke, 2006) for questions such as

'When developing support services specifically for students, what would be important to consider?'. Thematic analysis is a set of approaches to analysing qualitative data that share a focus on identifying patterns of meaning, or themes, in qualitative data such as transcribed interviews. Both content and thematic analyses, along with a review of relevant literature, were used to help develop the survey questions.

Participant Involvement - Survey Development Consultation

Participants who had taken part in the initial phase of the research and agreed to be contacted about further opportunities, and students who had expressed an interest but were unable to attend due to scheduling conflicts, were invited to attend a survey development session by email. Those who expressed interest in developing the survey were emailed a copy of the survey development group information sheet (Appendix 3). As with the initial focus groups, it was difficult to hold a group due to the conflicting schedules of students. Two students trialled a draft version of the survey, gave feedback and answered questions related to the survey language, questions, flow and appearance. Two UCL students helped us develop the survey (one had been already been interviewed and the other also identified as having experienced suicidal thoughts at university, but was not able to attend the interviews). The students were provided with refreshments and given a £15 voucher as compensation for their time (around 90 minutes each).

Online Survey Methodology

Procedure

Participants were invited to participate in the online survey through a number of means. Social media platforms Twitter, Facebook and Instagram were used to promote the survey and direct interested parties to the study website, which included information about the context of the research, study aims, inclusion criteria,

and contact details of the researchers. The survey information sheet, consent form and debrief sheet were also available to view and download from the study website. Information regarding a £2 donation per completed survey to a youth suicide prevention charity in the study was included in all study promotion. Secondly, the communications teams from 59 universities across the UK were emailed by the researchers to ask if they would promote the study to their students through their student newsletters and social media platforms. Staff from 6 universities (including UCL) agreed to promote the research, 7 declined due to preference for promoting their own research, and most did not respond. In the final month of recruitment, many university sites were closed due to the Covid-19 pandemic, and therefore the recruitment strategy was limited to social media. The study was also advertised on the Student Mental Health Research Network (SMaRteN) website, led by Kings College London.

Before starting the survey, students were asked to read through the information sheet provided on the first page of the survey (Appendix 3) and to indicate that they understood the information and agreed to participate in the survey by selecting statements on the online consent form (Appendix 3) They were not permitted to proceed to the study unless all points on the consent form were ticked. The following page of the survey was a demographics form for participants to complete prior to the main survey questions. The survey took around 20 minutes to complete. On every page of the survey, there was a link for participants to click if they felt distressed at any point, which lead to a PDF document detailing some self-guided emotion regulation techniques and guidance and signposting about accessing further support if needed. Contact details for the researchers were also provided, and participants were informed that if they did contact the research team by phone or email, their anonymity could not be maintained. Once the study had closed, participants and other interested parties were informed that the results of the

study would be published via the study website and social media pages in September or October 2020.

Measures

Suicidality. Questions related to self-harm and suicidal ideation and behaviour were asked in regards to two time periods; since the start of university and over the last month. In this study, self-harm, suicidal ideation and suicidal behaviours were measured using the following questions:

1. *Since starting university, have you deliberately harmed yourself, but not with the intention of ending your life? (Yes or No)*
2. *Since starting university, have you had thoughts of ending your own life? (Yes or No)*
3. *Since starting university, have you made an actual attempt to end your own life? (Yes or No)*

Data sets from students with a history of suicidal ideation, as indicated by selecting 'Yes' for the second question, were solely used when investigating barriers to accessing services, in addition to predictors of service use.

Personal Contact. *Personal experience of others' suicide* was measured by asking: 'Has anyone [in your family/of your friends] ever made a suicide attempt or died by suicide?', with response categories 'Yes, within the last 12 months', 'Yes, more than 12 months ago' or 'No'. For the purposes of this study, responses were re-coded as 'Yes' or 'No'. *Personal contact with service users* was measured by asking: 'Has anyone [in your family/of your friends] accessed support for an emotional or personal issue?', with response categories 'Yes', 'No' or 'I'm not sure'. For the purposes of this study, responses were re-coded as 'Yes' or 'No/Unsure'.

Social Support. Since previous research has indicated that social support may reduce suicidal ideation and therefore reduce the need for professional help, it was

important to capture students' perceptions of their social support network. In order to assess subjective appraisals of social support, the Social Support Appraisals Scale (SS-A; Vaux et al., 1986) was included in the survey (see Appendix 6). This 23-item scale was designed to assess the degree to which the respondent believes that they are loved by, esteemed by, and involved with friends, family, and others. Response option ranges from 1 ('strongly agree') to 4 ('strongly disagree'), such that a higher score reflects more negative appraisals of social support. Data from five student and five community samples has demonstrated evidence of the scale's reliability (mean alpha = .90) and validity with respect to a broad range of measures (support appraisals, support networks, and psychological well-being and distress).

Help-seeking Intentions. The single response item "If you experienced suicidal thoughts, how likely is it that you would seek help from a professional help?" was used to assess professional help-seeking intentions, rated on a 9-point Likert scale, where 1 = "extremely unlikely" and 9 = "extremely likely" (Deane & Todd, 1996).

Utilisation of Support. A list of different sources of support for suicidal students was developed mainly from the content analysis of the interview transcripts, in addition to knowledge about support services available in the UK. The list was divided into the categories University-provided support, NHS-provided support, Privately-funded support, Charity-provided support, and Other support (including support provided by religious organisations and medication). Utilisation of support was measured by students selecting whether they a) were aware of sources of support and b) had utilised such support since starting university.

Perceived Barriers to Seeking Support. Students were asked what they perceived as barriers to seeking support. They could select any number of appropriate responses from a set of 24 perceived barriers (see results section for full list), including 'I have not had any need for mental health services', 'I don't have time' and 'I've had a bad past experience with treatment'. The list of perceived

barriers were developed from the set used in the study by Downs and Eisenberg (2012), in combination with the responses from the five initial development interviews.

Stigma related to accessing services. Self-stigma was measured using the *Self-Stigma of Seeking Psychological Help Scale* (SSOSH; Vogel et al., 2006). The SSOSH is a ten-item questionnaire, with items rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The SSOSH has been found to have a unidimensional factor structure and good reliability (.91), as well as demonstrating good validity (construct, criterion, and predictive). The SSOSH was found to uniquely predict attitudes towards and intent to seek psychological help. Perceived stigma by others was measured by the *Perception of Stigmatization by Others for Seeking Help Scale* (PSOSH; Vogel et al., 2009). The PSOSH is a brief five-item scale, with 5-point Likert scale, ranging from 1 (not at all) to 5 (a great deal). This scale has also been found to have a unidimensional factor structure, as well as concurrent validity supported through moderate associations with three different stigma measures. The scale has been found to have good test–retest reliability (.82). The validity and reliability of the PSOSH was tested with a university student sample. Both SSOSH and PSOSH measures can be found in Appendix 6.

Expectations of seeking therapeutic support. The *Disclosure Expectations Scale* (DES; Vogel & Wester, 2003) is an 8-item measure of one's expected consequences of disclosing personally distressing information to therapists. Each item is rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (very). Higher scores indicate an expectation of more positive outcomes as a result of disclosing personal information to therapists. According to Vogel and Wester (2003), the coefficient alphas for the DES ranged from 0.74 to 0.83. The DES can be found in Appendix 6.

Participants

In line with the aims of this study, the inclusion criteria for completing the survey simply included being a university student studying in the UK, irrespective of course type, year or level of study (undergraduate or postgraduate), or any personal experience of mental health problems. Participants were asked to confirm their student status by indicating on the electronic consent form.

A total of 347 students completed the survey and another 89 surveys were partially completed. Of the partially completed data sets, only those where students had answered the central questions were included, such that data from 49 students completing 70% or less of the survey were excluded. Demographic information for survey participants can be seen in Table 1. The demographic data was compared to that of the general UK population obtained from the Higher Education Statistics Agency (2018-2019).

The survey respondents were broadly representative of the general student population in regards to ethnicity, disability status, student status (UK, EU or Overseas) and level of study. However, the sample consisted of a significantly higher proportion of female respondents compared to the wider population, $\chi^2 (1, N = 394) = 23.12, p < .001$. There was also a significant difference between the sample and UK student population in relation to sexuality, $\chi^2 (3, N = 394) = 25.23, p < .001$. Bisexual students were overly represented in the survey respondent sample, however in a large proportion of students in the national data did not give information related to their sexual orientation. There were also significant differences between the sample and wider population in relation to age, such that the students aged 20 and below were overrepresented in the present sample, $\chi^2 (3, N = 390) = 13.05, p = 0.005$.

Table 1. Demographic information of survey sample, compared with UK student population

	Demographic of present sample (n=394)	Demographic information of UK student population (HESA, 2018 - 19)
Age** (n= 390)	≤20 years 56% 21 – 24 years 29% 25 – 29 years 10% ≥ 30 years 4%	≤20 years 41% 21 – 24 years 28% 25 – 29 years 11% ≥ 30 years 20%
Gender*** (n= 394)	Female 83% Male 15% Other 2%	Female 57% Male 43% Other 0%
Ethnicity (n= 394)	White (British) 71% White (Other) 11% Mixed Ethnic Groups 4% Asian/Asian British 11% Black/African/Caribbean/British 2% Other 1% <i>1% preferred not to say</i>	White 76% Mixed Ethnic Groups 4% Asian/Asian British 11% Black/African/Caribbean/British 7% Other 2%
Sexual Orientation*** (n= 394)	Heterosexual 53% Homosexual 8% Bisexual 27% Other 4% Not sure 7% <i>2% preferred not to say</i>	Heterosexual 69% Homosexual 2% Bisexual 3% Other 1% <i>25% did not answer</i>
Disability Status (n= 394)	Considered to have disability 16% No disability 83%	Considered to have disability 14% No disability 86%
Student Status (n= 394)	UK student 84% EU Student 10% International Student 6%	UK student 80% EU Student 6% International Student 14%
Level of Study (n= 394)	Undergraduate 81% Postgraduate 19%	Undergraduate 75% Postgraduate 25%

** = Significant difference at $p < 0.01$, *** = Significant difference at $p < 0.001$

Data analysis

Students with and without history of suicidal thoughts were compared in relation to various experiences, attitudes and beliefs through chi-square calculations and t-tests using SPSS (version 26). To account for the increased likelihood of Type I error associated with multiple comparisons, there was a plan for post-hoc Bonferroni corrections to be applied, if necessary. For continuous data analyses, normality of data was tested using Kolmogorov-Smirnov test on SPSS. For any data where normality assumptions were violated, additional non-parametric tests were

conducted. Frequency data relating to the reported barriers to accessing support amongst students with a history of suicidal thoughts were calculated. A logistic regression analysis was conducted in order to ascertain any predictors of accessing mental health services amongst students with history of suicidal ideation. Statistical significance was set at $p < 0.05$ as is conventional in psychological research. Effect sizes for group comparison data and odds ratios for logistic regression data gave further clinical information about the extent of the differences between groups or relationships between variables. As per convention, effect sizes for chi-square tests were defined as small, medium and large where Cramer's $V \geq .1, .3$ and $.5$ respectively; whereas effect sizes for t-tests were defined as small, medium, and large where Cohen's $d \geq .2, .5,$ and $.8,$ respectively (Cohen, 1988).

The single open-ended question 'How might support services for suicidal students be improved?', included in both the interviews and the survey, was analysed using thematic analysis (Braun & Clarke, 2006). Thematic analysis is a commonly used method for identifying, analysing and reporting patterns of meaning (themes) within qualitative data. Thematic analysis is a foundational qualitative research method, and as such, was deemed to be a suitable method for answering a secondary research question, within the scope of this mixed-methods doctoral research study. The thematic analysis process was as follows:

1. *Immersion in data*

The author read through the qualitative responses several times in order to familiarise herself with the data.

2. *Coding*

The author worked through the responses systematically and gave equal attention to each data item. The author coded items of particular relevance to the third research question.

3. *Development of themes*

During the coding process, the author identified overarching themes that the various codes appeared to fit under.

4. *Refining of themes*

Following the initial development of themes, the author reviewed the codes and whether they 'fit' under the themes. If it was deemed necessary, a theme was adjusted or two or more themes collapsed into one.

Results

History of Suicidal Ideation

Of the 394 students that reached the critical part of the survey relating to services accessed, 233 (59%) students reported that they had experienced suicidal thoughts during their university studies, compared to 161 (41%) that reported they had not.

Experiences, attitudes and beliefs of students with and without a history of suicidal thoughts

A number of comparisons were made between students with and without a history of suicidal ideation in relation to their experiences, attitudes and beliefs. The findings are presented in Table 2.

History of Personal Contact with Suicidal Individuals and Service Users

Students with and without a history of suicidal ideation were compared in relation to their history of personal contact with suicidal individuals and with others who have accessed services. The two groups differed significantly in relation to their personal contact with a suicidal friend or family member, such that more students with a history of suicidal ideation reported knowing a friend or family member that had been suicidal., $\chi^2 = 6.38$, $p = .012$. Similarly, the groups differed significantly in

Table 2. Experiences, attitudes and beliefs among students with and without history of suicidal thoughts at university

	History suicidal thoughts n = 233		No history suicidal thoughts n = 161		Test		Effect Size
	%		%		χ^2	p	V
Contact with suicide attempt	60		47		6.38	.01	0.13
Contact with service users	93		84		7.66	.006	0.14
Perceived need for help	67		5.6		172.04	<.001	0.66
	n	M (SD)	n	M (SD)	t	p	d
Perception university values	233	2.64 (.90)	159	2.97 (.86)	-3.70	<.001	0.37
Intention to seek help	233	4.63 (.23)	161	6.11 (2.33)	-6.23	<.001	0.89
SS-A	222	55.19 (10.74)	151	41.07 (10.74)	11.94	<.001	1.31
PSOSH	221	13.49 (5.26)	151	7.85 (3.18)	12.86	<.001	1.30
SSOSH	214	29.91 (7.47)	150	26.49 (7.37)	4.31	<.001	0.46
DES Risks	205	15.71 (3.76)	142	11.81 (4.36)	8.65	<.001	0.95
DES Benefits	205	13.28 (3.64)	142	13.89 (3.71)	-1.51	.13	0.16

PSOSH = Perceived Stigma of Seeking Help, SSOSH = Self-Stigma of Seeking Help, DES = Disclosure Expectations Scale, SS-A = Social Support Appraisals

relation to their contact with friends or family who had accessed services for an emotional issue, such that more students with history of suicide reported knowing a friend or family member who had accessed services, $\chi^2 = 7.66$, $p = .006$.

Students' Attitudes and Beliefs

The attitudes and beliefs of students with and without history of suicidal thoughts during their studies were compared in relation to perceived need for help, help-seeking intentions, perception of university values, perceived social support appraisals, perceived stigma and self-stigma, expectations about accessing therapeutic support. Due to non-normality of data from a number of the continuous scales, additional non-parametric tests were conducted (see Appendix 7) as a precautionary measure. The results of all of these additional non-parametric tests were in line with the t-test results.

As might have been expected, there was a significant difference in *perceived need for help* between students with a history of suicidal ideation and those without ($\chi^2 = 172.04$, $p < .001$). The effect size for this finding (Cramer's V) was very large ($V = 0.66$). However, a significant minority (33%) of students with a history of suicidal

ideation reported that they did not need support for suicidal thoughts, or that they weren't sure. This may have been a reflection of the question wording, which related to perceived need for help in *the last 12 months*.

Students with a history of suicidal thoughts reported that their *university valued students' wellbeing* significantly less than students with no history of suicidal thoughts, $t(349.53) = -3.70$, $p < .001$; $d = .37$.

On the self-reported *likelihood of professional help-seeking* should they experience suicidal thoughts, students with no history of suicidal thoughts at university were significantly more likely to seek professional help compared to those who had experienced suicidal thoughts, $t(392) = -6.23$, $p < .001$; $d = .89$.

In relation to *social support appraisals*, students with a history of suicidal thoughts at university reported significantly more negative appraisals of social support compared to students with no history of suicidal thoughts, $t(371) = 11.94$, $p < .001$; $d = 1.31$.

Students with a history of suicidal ideation reported significantly higher levels of *perceived stigma from others*, $t(365.09) = 12.86$, $p < .001$; $d = 1.30$, and higher levels of *perceived self-stigma*, $t(362) = 4.31$, $p < .001$; $d = .46$, compared to those with no history.

Students with a history of suicidal ideation reported significantly *greater perceived risks in relation to help-seeking*, $t(273.55) = 8.65$, $p < .001$; $d = .95$. However, there was no difference between students with and without history of suicidal ideation in relation to *perceived benefits of help-seeking*.

Due to the effect sizes and degree of statistical significance for all but one of these group comparisons, such that the alpha levels were below $p = .05$ divided by the number of comparisons, Bonferroni corrections were not applied.

Support Services Accessed by Students with a History of Suicidal Thoughts

Of the 233 students reporting experiencing suicidal thoughts at some point during their studies, 165 (71%) reported that they had accessed one or more university-provided services, compared to 140 (60%) accessing NHS-provided services, 35 (15%) accessing support through private organisations, 63 (27%) through charitable organisations and 131 (56%) through other support such as medication or a religious contact. Over half of students with a history of suicidal thoughts had never accessed any form of psychological therapy (52%) nor medication (53%) since they had been enrolled at university. Furthermore 43 students (19%) with a history of suicidal thoughts reported never having accessed any support of any kind since enrolling at university.

Barriers to Accessing Services

The barriers to service access as reported by students with history of suicidal thoughts are presented below in Table 3. In line with Downs and Eisenberg's (2012) finding that the most commonly reported barriers amongst suicidal students in the USA were related to personal attitudes about help-seeking, the students in the present sample also endorsed barriers related to help-seeking attitudes with one exception. Over half of students with history of suicidal thoughts reported that waiting times for appointments were too long. Despite mental health support provided by the university, NHS or charities being free in the UK, 30% of students reported that financial reasons were a barrier to accessing support for suicidal thoughts. Only three students reported that none of the barriers had affected their ability to access services, and only 16 students reported that they had no need for services, which is line with responses to perceived need for help.

Table 3. Reported barriers to service access amongst students with suicidal ideation history

Rank	Reported Barrier	% (n=)
1	I question how serious my needs are	76 (176)
2	Waiting time until I can get an appointment is too long	53 (123)
3	Prefer to deal with issues on my own	45 (104)
4	The problem will get better by itself	42 (97)
5	I worry that someone will notify my parents	41 (95)
6	I worry what others will think of me	40 (93)
7	I've had a bad past experience with treatment	40 (92)
8	I fear being hospitalised	38 (88)
9	Stress at university is normal	36 (84)
10	I question whether medication or therapy is helpful	35 (82)
11	I worry my actions will be documented on my academic record	31 (73)
12=	I worry my actions will be documented in my medical records	30 (70)
12=	There are financial reasons	30 (70)
14	I don't think anyone can understand my problems	28 (64)
15	I don't have time	27 (63)
16	I question the quality of my options	26 (61)
17	I am concerned about privacy/confidentiality	26 (60)
18	I get a lot of support from others, such as family & friends	21 (49)
19	The location is inconvenient	14 (32)
20	The hours are inconvenient	13 (31)
21=	I haven't had the chance to go but I plan to	8 (18)
21=	Service providers aren't sensitive enough to cultural issues	8 (18)
23	I have not had any need for mental health services	7 (16)
24	None of these	1 (3)

Predictors of Service Access

As is conventional in logistic regression (Ranganathan et al., 2017) an initial univariate analysis of each of the following predictor variables was conducted: gender, ethnicity, sexuality, contact with suicidal friends or family, contact with service users (friend or family), perceived need for support for suicidal thoughts, social support appraisals, intention to seek professional help, perceived stigma, self-stigma, and anticipated risks and benefits of seeking support. Predictor variables with a univariate analysis result falling below or near to significance ($p = 0.05$) were included in the multivariate analysis. The results of the logistic regression of service access amongst students with a history of suicidal ideation are presented in Table 4.

Table 4. Predictors of service access amongst students with a history of suicidal ideation

Variable (n)	B	SE	Wald	df	Exp(B)	p	95% CI
Sexuality	.524	.445	1.392	1	1.689	.238	.707, 4.038
Contact with suicidal people	.306	.444	.474	1	1.358	.491	.568, 3.243
Contact with service users	1.722	.662	6.766	1	5.593	.009	1.529, 20.467
Perceived need for help	-1.076	.452	5.676	1	.341	.017	.141, .826
Intention to seek professional help	.343	.110	9.779	1	1.409	.002	1.137, 1.747
Perceived stigma	.102	.050	4.151	1	1.107	.042	1.004, 1.221
Self-stigma	-.081	.033	6.035	1	.922	.014	.865, .984

Model summary: $\chi^2 = 44.32$, $df = 7$, $p < .001$; Cox and Snell $R^2 = .192$; Nagelkerke $R^2 = .319$. Classification: 98% of those who have accessed services, 25% of those not who have not accessed services (85% total). $N = 208$.

In relation to sexuality, being heterosexual was not significantly associated with accessing professional help amongst our sample. Whilst personal experience of suicidal friends or family members was not found to be associated with accessing services, awareness of friends or family accessing services was associated with service access, such that those who knew friends or family members that had accessed services for an emotional issue were over five times as likely to access services themselves.

Perceived need for help was found to be significantly associated with accessing services. Intention to seek help for suicidal thoughts was also found to be associated with actual service access, such that as intention to seek help increased, as did likelihood of accessing services. In line with previous research findings (Downs & Eisenberg, 2012), a split was observed in relation to stigma as a predictor of service use, such that self-stigma was associated with a significantly lower likelihood of treatment use, whereas perceived stigma was associated with an increased likelihood of treatment use.

Qualitative Analysis

Of the 233 students with a history of suicidal ideation during their studies, 140 (60%) answered the optional final survey question “How might support services for suicidal students be improved?”. The responses varied from specific two-word

answers to several sentences of thoughtful suggested improvements, and therefore analysis included a combination of counting frequently occurring items and a more in-depth thematic analysis of responses. It was not possible to incorporate vague answers such as 'clearer communication' or 'more awareness' into the analysis as the meaning behind such statements was not clear. A number of students also used their own (often negative) experiences to illustrate the reasoning behind their answer. The analysis process led to the generation of three main clusters of twelve themes. Commonly occurring codes such as 'Reduced Waiting Times' and 'Easier Access' became themes in themselves. The clusters, themes, and sub-themes are summarised in Table 5, and a thematic cluster map is presented in Appendix 8.

Cluster 1: Improved accessibility

The majority of students referred in some way to improving accessibility; fifteen (11%) students simply suggested easier or better accessibility, whereas other students took a more specific approach. The most frequently occurring theme within this cluster was 'Reduced Waiting Times'. This is in line with the 53% of students that endorsed long waiting times as a barrier to accessing support. Students also made several suggestions related to 'Increased Resources', including increased funding for student support services, more staff, an increased number of sessions, and staff training.

P124 6 sessions is not nearly enough to feel healed

P113 Treatment until better rather than just a number of sessions

P131 Only 6 free counselling sessions which means in some of my darkest times I don't go in case I need them later and things get even darker

Table 5. Clusters and themes relating to how services for suicidal students could be improved

Cluster	Theme	Sub-Theme
Improved Accessibility	1. Increased resources	1a. More funding 1b. More staff 1c. More sessions/longer term support 1d. Staff training
	2. Reduced waiting times	
	3. Improved physical accessibility	
	4. Improved awareness of options & process	
Increased Variety of Options	5. Proactive approach	5a. Checking in on students 5b. Better connections between services
	6. Tailored, individualised care	
	7. Preventative support prior to crisis	
Safe Environments	8. Reduced stigma	
	9. Confidentiality, privacy & anonymity	
	10. Compassion & understanding towards students	
	11. Institutional flexibility & support rather than punitive approach	

Some students related increased resources with reduced waiting times.

P49 Increased funding for counselling services would reduce wait time for all.

In relation to 'Improved Physical Accessibility', students made reference to physical location and opening times of services, and several suggested specifically the addition of same-day or drop-in appointments or 24-hour services. Some students made the link between improving accessibility and an increased variety of options (Cluster 2).

P13 Better accessibility for students who have hearing impairments or difficulty speaking/expressing how they feel (e.g. more texting services).

Students also suggested increased clarity about what support options were available and what would be involved when seeking help would increase students' awareness and decision making.

*P20 Clear routes - too many services makes it overwhelming to choose.
Make it clear what the outcome of approaching services are (will I get to see someone again, is this a one-time interaction?)*

Cluster 2: Increased variety of options

Students with a history of suicidal ideation made a wide range of suggestions ways in which services could improve, which in itself indicated a demand for flexible and varied options to suit different individuals. However, a number of common themes relating to increased variety in support options were also identified.

A common theme that was identified related to universities taking a more proactive approach (Theme 5), including regular 'checking in' with the student.

P46 I think currently the pressure is on students to reach out to access services, and that can be really difficult, for different reasons. I think there needs to be a responsibility on the university to actively reach out to students instead, and check up on their welfare, without waiting for the student to ask for help.

Another suggested way in which university services could take a proactive approach was improved communication between university departments and between university and NHS services in order to holistically support students with suicidal ideation.

P127 ... mental health services should work closely with academic departments.

P73 More continuity between home and university services.

Students also suggested support for suicidal individuals being more preventative in nature.

P87 More practical support in early days before the student hits crisis levels.

Several respondents suggested more individualised support options, for example to suit different type and severity of need, and to flexibly accommodate preferences.

P95 More variation - there are far too many support groups... which are just not accessible for a lot of us... We all deal with mental health struggles differently, and the support needs to be just as varied.

P126 Stop the 'one size fits all' approach. it trivialises students experiences of accessing services. There needs to be care for those deemed 'too ill' for university services but not 'ill enough' for NHS services.

Cluster 3: Safe Environments

Four themes were clustered together under the heading Safe Environments. Seven students made direct reference to anonymity, confidentiality and/or privacy and a number of other students made reference to specific services that are able to maintain anonymity, for example online chat services. Six students referred directly to stigma or shame when making suggestions about improving services, however, ideas about specific methods to reduce stigma in the university environment were not suggested. Thirteen students referred to suggestions for universities to adopt a more flexible and supportive, rather than punitive, approach. A number of these students referred specifically to fitness to study policies or threats or advising students take time away from university.

P100 Not suspending them because "the risk to the university's reputation should she kill herself would be too high" when all they need is to be allowed to continue with some support...

Linked with this, ten students referred more generally to services responding to students with compassion and understanding. This included a number of students wishing for their needs and experiences to be acknowledged and taken seriously.

P 13 Staff in psychological services need to be aware that students can feel emotions beyond "stress" about exams and other aspects of university life. Recognise student problems as real and valid, not just phases or natural responses to environmental pressures.

P29 Recognise that asking for help when suicidal is very difficult and don't judge... Acknowledge the stress of university and how that might affect students.

Discussion

Whilst there have been a number of American research studies investigating students' utilisation of mental health services (Eisenberg et al., 2012; Mitchell et al., 2007), including for suicidal ideation (Downs & Eisenberg, 2012), there is a paucity of research conducted with UK students. This study sought to discover the barriers for suicidal university students accessing mental health support services in the UK, in addition to exploring whether certain experiences, attitudes and beliefs predicted students accessing support for suicidal thoughts. Furthermore, this study builds on existing research (Downs & Eisenberg, 2012) about help-seeking barriers for suicidal students through a qualitative exploration of student's views relating to how support services could be improved for this population. The clinical implications of the present findings are far-reaching and provide student mental health services and

universities with information regarding factors preventing and facilitating suicidal students accessing services, in addition to concrete suggestions for improvements.

The present study found a similar proportion of suicidal students accessing psychological therapy or medication to studies in the USA (Drum et al., 2009; Downs & Eisenberg, 2012). However, based on the initial interviews, 'professional support' was widened to include services provided by the NHS, private healthcare providers and charities. When these services were taken into account, a much smaller, but nonetheless significant, proportion of students with a history of suicidal thoughts reported never having accessed any type of support of any kind. Whilst this suggests that non-university provided support could help ease the load of university mental health services, 20% of students in the present sample did not seek professional help despite experiencing suicidal thoughts. This in turn reinforces the suggestion that barriers to help-seeking are still significant enough to prevent access to vital support services. Research has shown that psychosocial therapy for individuals with self-harm and suicidal thoughts has a protective effect for suicide after long-term follow-up (Erlangsen et al., 2015), and therefore it is imperative that barriers preventing individuals from accessing this support are identified in order that universities can appropriately intervene.

The findings of this study support the Theory of Planned Behaviour (TBP; Ajzen, 1991) and previous empirical research suggesting that intention to seek help predicts help-seeking behaviour (Armitage & Connor, 2001). The TBP posits that an individual's attitudes towards help-seeking, perceived social norms and perceived control around help-seeking all influence an individual's intention to seek help. Whilst expectations around help-seeking, measured using the Disclosure Expectation scale (DES; Vogel & Wester, 2003) did not significantly predict service access in this study, both personal contact with service users and lower levels of self-stigma were significantly associated with service access. Unexpectedly, those

with higher perceived stigma from others were more likely to access services. This finding is in line with that of Downs and Eisenberg (2012), who speculated that this positive association could be due to others' stigmatising attitudes becoming more salient after accessing treatment. In the context of the TBP, self-stigma and perceived stigma from others would influence both attitudes and perceived social norms relating to seeking professional help. Furthermore, close personal contact with a service user significantly predicted service access, such that those with contact with service users were over five times more likely to access support. Contact with service users is likely to improve an individual's attitudes, perceived social norms and perceived control related to help-seeking (knowledge that services are available), which according to the TBP, all increase an individual's intention to seek help.

With this in mind, universities could facilitate contact with individuals who are happy to discuss their experiences, such as a mental health champion, in order to promote and normalise the process of seeking help. This role could involve provision of information and clarification of processes of seeking appropriate help, as suggested by our students in our sample. Previous studies have demonstrated that social contact with mental health service users can reduce self-stigma in young people (Martinez-Hidalgo et al., 2018) and university students (Yamaguchi et al., 2013). Future research in this area could investigate whether the facilitating effect of social contact with service users is mediated by personal stigma.

One study found that stigma toward people who die by suicide and poor suicide literacy were significantly associated with reduced intentions of seeking help and poorer attitudes toward help-seeking (Calear et al., 2014). Sharp and colleagues (2006) evaluated an educational lecture giving detailed information about available mental health services, and their findings suggested an effective reduction in mental health stigma related to service use amongst students. If a similar suicide

education intervention is made compulsory for all university staff and students, it is likely to improve suicide literacy and normalise help-seeking for suicidal ideation, with the aim of reducing both personal stigma (attitudes) and stigma from others (perceived social norms), and ultimately maximise likelihood of suicidal students accessing services.

Whilst intention to seek help is associated with help-seeking behaviour, it does not automatically lead to accessing professional support. Some of the present findings can help shed light on the 'intention-behaviour gap' highlighted in previous literature (Tomczyk et al., 2020). For instance, over half of respondents endorsed long waiting times as an institutional barrier preventing students from accessing professional help. Such practical barriers may lead to development of more negative attitudes and reduced perceived control related to help-seeking, and in turn, reduced intention to seek help in future according to the TPB. Indeed, in this study, 40% of students with a history of suicidal ideation identified that a bad previous experience had prevented them accessing services again. Other consequences of long waiting times include deterioration in students' mental health, increased distress, and reduced academic and social functioning. This in turn may lead to increased feelings of isolation and hopelessness, both of which are known risk factors for suicidal behaviour (Daniel & Goldston, 2012). If waiting times are minimised, or supplemented with an interim solution, students may feel less distressed, and be more likely to persevere with seeking professional help. Further research is needed to explore the 'gap' between help-seeking intention and actual service utilisation amongst suicidal students, in order that universities are able to develop services to maximise their accessibility.

One reason that suicidal students may not access support is because they are not aware of what support is available. According to the TPB, lack of knowledge of available support would reduce an individual's perceived control around help-

seeking, and therefore their intention to seek help. In the present study, students with a history of suicidal ideation made suggestions for more widely distributed information about available services, and clarification about what different treatment pathways involve. This is in line with a recent recommendation by Gorczynski and colleagues (2020) suggested that universities should provide students with detailed information about accessing face-to-face support systems. If students are made aware of available support options, including through promotion of specific provision for individuals with suicidal thoughts, intention to attend services, and therefore actual service utilisation may increase. Furthermore, in line with American students in Downs & Eisenberg's (2012) study, three-quarters of students in this study reported uncertainty around the seriousness of one's needs, with nearly half reported preferring to dealing with issues on their own and 36% expressing their belief that stress at university is normal. This echoes findings of a review of literature exploring service utilisation amongst suicidal individuals, which suggests that lack of perceived need and preference for self-management were major barriers to accessing services (Hom et al., 2015). The authors suggested that these barriers may stem from individuals feeling that their symptoms are not severe enough to warrant professional help or that they have adequate social support to help them cope. Hom et al., (2015) also linked lack of perceived need and preference for self-management reflecting stigmatising attitudes related to help-seeking. As discussed above, both increased suicide education and contact with university service user champions would help mitigate these concerns in order to encourage help-seeking amongst suicidal students.

One idea for overcoming both practical concerns such as waiting times, and attitudinal factors such as perceived stigma or confidentiality concerns, is through implementation of online interventions, as was suggested by some survey respondents. Today's generation of students have grown up with digital technologies and are often therefore referred to as 'digital natives', such that it is

likely that the vast majority of university students are accustomed to communicating through online forums (Gallardo-Echenique et al., 2016). Online interventions are therefore likely to be accessible to the vast majority of students. Indeed, Ryan et al., (2010) found that in contrast to established findings linking the highest levels of distress and lowest levels of treatment-seeking, intention to use an online intervention increased at higher levels of distress. This suggests that online interventions may be a useful and relatively inexpensive way to provide support to students in need who otherwise may not seek formal help. Kauer and colleagues (2016) developed a web-based intervention, based on the Theory of Planned Behaviour, to increase help-seeking amongst young people by directing them to appropriate resources based on symptoms, self-rated severity, and preferred service modality. In a randomised control trial of this intervention, Sanci, Kauer & Buhagier (2017) reported that more young people using the intervention programme accessed help compared to those in the control group. Many of our survey respondents suggested that a variety of treatment options to suit different preferences and clinical needs would be beneficial for suicidal students. By offering an online intervention such as that of Kauer et al. (2016), alongside face-to-face support, university health services increase the likelihood of help-seeking amongst students who prefer not to speak on the phone or who do not wish to identify themselves due to stigma or confidentiality concerns.

The World Health Organisation (2014) reported that many suicides are preventable through interventions that target high-risk groups. In line with this, students in the present sample identified a need for a more proactive, targeted approach from universities and training amongst university staff. In order to deliver tailored interventions for suicidal students, university staff must first be able to identify suicide risk and subsequently have knowledge of appropriate monitoring and referral processes. This could include a formal screening and monitoring process for

all students, such as screening for identified risk factors on enrolment (e.g. Mortier et al., 2017), regular pastoral check-ins, and suicide awareness training for all staff in order that risk can be identified, and support placed around the student can be increased where necessary. Some studies have explored gatekeeper training programmes designed to train university staff to recognise and respond to warning signs of emotional crises or suicide risk in students. However, a Cochrane review of such interventions found a lack of empirical evidence regarding gatekeeper training in reducing suicidal behaviour (Harrod et al., 2014). The review recommended more rigorously designed studies testing the effects of preventive interventions on suicidal ideation and behaviour, in university settings across different countries. Another potentially positive outcome of suicide awareness training is increased understanding and compassion amongst academic staff. Students in the present study advocated for a more compassionate response from the university, such that supporting suicidal students' wellbeing is prioritised over academic achievement and the institution's reputation.

Another notable finding in this study is that students with a history of suicidal ideation differ from those with no experience of suicidal ideation, in relation to a number of personal experiences and attitudes, such as greater perceived stigma, less positive social support appraisals, and greater perceived risk of seeking professional help. This echoes previous research findings relating to the help-negation effect in suicidal individuals (e.g. Han et al., 2018). When this is considered alongside suggestions made by survey respondents for more individualised support that reflects both student preferences and spectrums of distress and risk severity, universities have a responsibility to deliver a specific treatment pathway for this population, once suicide risk is identified. Many survey respondents suggested that the six-session model typically offered by UK university psychological services is not nearly enough for managing severe emotional distress associated with self-harm and suicidal thoughts. Drum and Denmark (2012) outlined a comprehensive

treatment pathway including a full continuum of preventative interventions ranging from university-wide interventions to individual therapy. In a review of evidence, Hawton et al. (2016) reported that psychological therapies such as dialectical behaviour therapy (DBT) and cognitive behavioural therapy (CBT) can effectively prevent the repetition of self-harm. As such, students at risk of suicide should be able to access such therapies, provided either by the university or an NHS service. There is a paucity of studies evaluating the effectiveness of treatment pathways and longer-term interventions provided to suicidal students at UK universities, and the development of the evidence-base could lead to the commissioning of more intensive treatments at UK universities.

Limitations of this study

Whilst this study has provided insight into the factors that predict suicidal students accessing professional help, as well as the personal and institutional barriers that suicidal students face when considering seeking professional help, these findings should be considered alongside the following limitations.

Males were significantly underrepresented in the study sample, compared to the UK student population. Given that males are at increased risk of suicide in the student and general population, the present results may overly reflect female perspectives. Previous research has indicated that females are more likely to seek professional help for mental health problems compared to males (Mackenzie et al., 2006), and this relationship can be explained by increased perceived stigma and reduced mental health knowledge amongst males from adolescence onwards (Chandra & Minkovitz, 2006). Gender was not found to predict service use in this study, however future research with a more balanced gender ratio and a larger sample size may produce more concrete conclusions.

The initial phase of recruitment to focus groups was not as successful as hoped. This was two-fold; firstly, fewer students expressed interest than expected,

and secondly conflicting schedules of students resulted in focus groups being abandoned in favour of individual interviews. Whilst the interviews undoubtedly provided a more in-depth, richer discussion of individual students' experiences and opinions, the opportunity for a collaborative discussion of ideas and shared experiences was missed. The research team also encountered some recruitment challenges during the survey phase of the study. In order to work towards a sample representative of the UK student population, we contacted a variety of universities across the UK to request they promote this study amongst their students. Only a minority of universities responded to these requests, and even fewer agreed to promote the study, citing reasons such as the prioritisation of their own research.

The present findings should also be considered alongside limitations relating to conducting online research. Firstly, it cannot be assumed that students across the UK would be able to access to the internet in order to view the study advertisements or website, or indeed to access the survey itself. Whilst the researchers did not collect information relating to where students heard about the survey, surges in survey responses appeared to coincide with targeted social media advertisements for the study, including Facebook, Instagram and in particular, Twitter. Whilst it has been found a large proportion of university students in Western cultures use social media as a means to communicate (Perrin, 2015), this cannot be assumed for all UK students. Furthermore, students who accessed the survey through social media may be more connected than other students that don't use social media. As such, sampling biases, including self-selection bias, associated with online recruitment and data collection (Wright, 2005) cannot be discounted. Furthermore, whilst students completed a consent form indicating they met the inclusion criteria for participation, the online and anonymous nature of the survey means that relatively little is known about the characteristics of survey respondents. Therefore, survey

responses may not be as representative of the wider UK student population as the team aimed for.

Perhaps due to the nature of the research and the incentive to donate to a relevant suicide prevention charity, the proportion of students reporting a history of suicidal thoughts at university was much higher than that of the general student population. This was helpful in relation to achieving an adequate sample size for analyses, however, the opportunity sampling method may have led to a disproportionately dissatisfied subgroup of students with a history of suicidal ideation. Furthermore, students' varied and sometimes contradictory suggestions for service improvement in itself suggests that students with a history of suicidal ideation are, in the present study at least, by no means a homogeneous population in relation to their experiences, attitudes and preferences. This further indicates a demand for flexible and varied treatment options to suit different individuals, as indicated in the findings of this study.

The results of this study may only be generalised to students at UK universities. As Downs and Eisenberg (2012) refer to in their study with a USA student sample, students at UK universities face a unique set of stressors and opportunities, such that findings from this study may not be applicable to young non-student adults in the UK, or indeed to university students across the world. Furthermore, as with all cross-sectional designs, data from the logistic regression reflects associations between the predictor variables and service access. Conclusions regarding the direction of this association, that is, which variables occurred first, cannot be drawn in such designs. Furthermore, data was only collected from a cross-section of students at one timepoint (between January and March 2020) and this may have affected students' experiences, attitudes and recall of suicidal experiences, for example waiting times or perceived need for professional help, compared collecting data at another time of year. Therefore, the findings of this study represent only a

snapshot of students' experiences, attitudes and beliefs at one point in time. Future research could investigate how students' experiences and attitudes change at different timepoints across the academic year and throughout students' academic lives.

Conclusion

This study has highlighted a number of personal experiences and attitudes which predict service use, in addition to personal and institutional barriers preventing service use amongst UK university students with a history of suicidal thoughts. The study also sheds light on students' suggestions on how services can make improvements in order to maximise suicidal students' likelihood of accessing support for suicidal thoughts. Some of these findings are similar to those of research conducted with university students in the USA, suggesting some shared experiences of students, but other findings offer unique insight into the experiences of UK students.

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Part 3: Critical Appraisal

Overview

This critical appraisal considers the issues arising during the process of conducting this research. Firstly I will discuss the factors which led me to choose a research project in this field, before I give reflections on various aspects of the project such as service user involvement, conducting mixed-methods research, as well as a reflection of the challenges and dilemmas faced while conducting research with the student population. Finally, I will reflect on the impact of the study, including my hopes for dissemination of the research findings.

Choice of Research Project

Having previously worked with adults with acute mental health problems, I have witnessed first-hand the difficulties some people experienced in relation to accessing professional help leading up to and during an acute crisis. This led to a developing interest in conducting research with populations who are often deemed too 'risky' to include in research studies.

Students in the UK face a unique set of challenges and stressors, including academic, financial and social pressure, in addition to commonly living away from home and established support networks. In recent years I have become aware of several news stories relating to student suicides, particularly at Russell Group universities, and became interested in the responses from universities and other student organisations. I understood that student psychological services typically offered a brief six-session model of therapy, which simply is not adequate to meet the needs of students in severe and enduring levels of distress. Initially this project was planned to be an evaluation of a more comprehensive therapy programme for suicidal students comprising both Dialectical Behaviour Therapy and Cognitive Behaviour Therapy. It transpired that this project was not able to proceed during the time frame of this doctoral thesis, however I remained enthusiastic about

investigating the experiences and attitudes of suicidal students in the UK, with the aim of gaining knowledge that may help develop and improve the support available to this population.

Service User Involvement

As the study progressed, there were two opportunities to involve service-users, both in their capacity as 'consumers' of student support services, and secondly to involve them directly in the research through consultation related to development of our online survey. Firstly, the single qualitative survey question asking students to identify how support services for suicidal students could be improved felt extremely important in order to give service users a 'voice'. During the thematic analysis, I aimed to stay as impartial as possible in order that the impact of the students' voices could be maximised. Tait and Lester (2005) endorsed service user involvement in the planning and delivery of mental health services for numerous reasons, including considering different but equally important perspectives of 'experts by experience', increasing the existing limited understanding around emotional distress, and opportunities for innovation and greater social inclusion. Moreover, involving service users in mental health service planning and evaluation has been found to improve a number of clinical outcomes (Thornicroft & Tansella, 2005). When the findings of this research are disseminated amongst universities and other organisations, I hope that the students' direct suggestions are prioritised when considering service planning and delivery.

Mclaughlin (2006) set out the ways in which young service users can be directly involved in research (consultation, collaboration and user-controlled research), in addition to the describing the benefits and costs of involving young service users in the research process. The proposed benefits include those related to the research development process and benefits for the service users themselves. I believe that both of these benefits were identified during the process of this study.

When developing the online survey, we were aware that students may or may not be discussing sensitive issues, and as such wanted to ensure that the language in the survey was appropriate and accessible. We invited students who had expressed an interest in the initial interview stage of the study, and therefore had self-identified as having a history of suicidal thoughts during their studies, to attend a survey consultation meeting. Not only were these meetings an opportunity for the consultees to review and feedback regarding the appropriateness of the language used, but also to identify any errors or survey glitches, and to feedback on the general flow and length of the survey. While we did not recruit as many students as hoped, the two students who attended the consultation meeting gave the researchers valuable feedback, the majority of which the research team were able to act upon. Despite the extra time and resources involved, I believe that the consultee's input led to a direct improvement in the survey. Tait and Lester (2005) reported that service user involvement may in itself be a therapeutic process. Indeed, both students stated that the consultation process enabled them to actively participate in the research process, which contributed to a feeling of 'doing something to help' a cause they felt personally connected to.

Impact of a Global Pandemic

During this research process, the Covid-19 pandemic began to take hold of the UK. The face-to-face phase of this research had already been conducted, nevertheless, the sweeping impact of the pandemic did reach the present research study. During the period when the survey was live, universities across the UK closed to students and many were advised to return home where possible. This would have undoubtedly caused considerable disruption and uncertainty in the lives of students, as for the general population, but in addition to potential worries about academic progression, qualification and finances. Therefore, it is possible that some of the

students may have been more or less likely to complete the survey or have responded differently to how they would under normal circumstances, for example, because they have more free time or because they are not checking their university emails as often. Indeed, no students completed the survey between the 16th and 21st March after a generally steady stream of surveys being completed; these dates coincide with the suspension of face-to-face teaching and the closure of university sites across the UK. When the universities closed, it became unfeasible to continue contacting universities regarding promotion of our study. Firstly, university communications teams may not be in a position to respond and action our requests, but more importantly, the research team acknowledged that our project should not be considered a priority given the circumstances, and recognised that this was a time for universities providing students with key information regarding the pandemic.

Reflections on Conducting Research with University Students

Researching Students as a Student

As a doctoral student researcher, it was an interesting experience to work with university students. Particularly during the individual interviews, I felt an affinity towards students with whom I was part of the same university community. At times, I could understand and relate to students' frustrations about the limitations of support services. However, I also recognised the heterogeneity of responses reflecting the student population, which led me to consider the different ideas for improving services and therefore the limitations of a 'one size fits all' care pathway for suicidal students.

Challenges in Recruitment

During the initial phase of the research, we had planned for several focus groups, however, due to low recruitment levels and conflicting academic schedules,

we opted for individual interviews with participants. Our recruitment strategy was fairly extensive; including through paper flyers across campus, digital screens with QR codes, student emails and university-led social media pages, however, we did not recruit as many students as hoped. One explanation for this may be related to perceived stigma of identifying as an individual with a history of suicidality, particularly given the face-to-face nature of the first phase of research. Furthermore, the adverts and information referred to the planned focus groups, which may have felt even more exposing for students with worries about mental health stigma than if we had originally advertised individual interviews. Previous research has found that both perceived mental health stigma and severity of illness are barriers to participation in research (Woodall et al., 2010), both of which may have been relevant to recruitment challenges in the present study, given the severity of distress and high rates of mental health stigma (Oexle et al., 2017) amongst suicidal individuals.

In the survey phase of research, we hoped to reach a broad range of students, through contacting both university teams directly and through the study's social media channels. Of the university teams that declined to promote the survey, most explained that they had a policy to prioritise the promotion of their own research. This left me feeling frustrated, particularly given that the aim of the study was to increase knowledge around effectively supporting suicidal students across the UK.

Successes in Recruitment

Despite the challenges in accessing students through universities, we also used social media platforms Facebook, Instagram and Twitter. Evidence suggests that 83% of young people aged 18–29 years use social networking sites (Duggan & Brenner, 2013). Furthermore, previous studies have indicated that social media may be the most effective means to recruit participants, particularly those who are

difficult to access through traditional means for a variety of reasons such as geographical distance (Fazzino et al., 2015; King et al., 2014) and the findings from the present study appeared to be consistent with this. King et al. (2014) gave a number of recommendations for maximising recruitment of participants through social media, including the inclusion of a study website, a multipronged recruitment strategy, online data collection and incentivising participation, all of which were followed as part of this research. Advertising through social media platforms allowed us to promote the online survey in a targeted manner, for instance, on pages with a high visibility amongst students or through tagging relevant organisations. This appeared to significantly boost survey responses, such that we noticed surges in responses immediately following Twitter posts being retweeted by organisations and institutions with large and relevant followings. By the time the survey closed, total responses exceeded the number needed for the maximum charity donation granted by the university. Despite some initial apprehension about advertising research in this way, both due to my lack of knowledge of digital platforms and the risk of a biased sample, using social media appeared to be an effective strategy for recruiting students.

Reflections on Following a Mixed-Methods Approach

During the initial planning phases of the study, I favoured a mixed-methods approach in order to numerically summarise and compare quantitative findings with previous research with students in other countries, whilst also taking an explorative approach in relation to students' suggested ways in which services could be improved. Furthermore, the qualitative nature of the first phase of research facilitated the design and development of a mostly quantitative online survey in the second phase. Purist quantitative and qualitative researchers have historically argued that these research methods cannot, and should not, be combined due to

the vast differences in their underlying philosophies, or as Howe (1988) refers to, the 'Incompatibility Thesis'. Nevertheless, other researchers argue that mixed-methodology studies frequently result in superior research, compared to solely quantitative or qualitative methodology (Johnson & Onwuegbuzie, 2004). The authors advocate the advantages of mixed-methods research, including added insight and understanding that single-method research might miss, and more complete knowledge necessary to inform theory and practice. In the case of the present study, I believed that it was important to highlight the barriers and predictors of service use and compare this to similar studies with American students, however, I also felt it was important to ask students how they suggested services could be improved. As such, universities and other services and organisations supporting students would receive direct, relevant and largely applicable feedback from those they are supporting, rather than making varying interpretations of the quantitative results leading to differing responses from such organisations. Furthermore, students often elaborated on suggested improvements for examples using examples from their own experiences. These quotes gave rich detail which lent itself to explaining how and why the phenomena described by the quantitative results might have occurred.

Although at the time a mixed-methods approach appeared to be the 'best of both worlds' for the reasons highlighted above, at several times during the process, I felt as if I was conducting a 'double project', particularly considering the two-phase nature of this study. Given the limited time and resources within the boundaries of this DClinPsy thesis project, I noticed a tension between fully immersing myself in the qualitative data analyses and conducting and interpreting a quantitative analysis. While mixed-methods research can often answer a broader and more complete range of research questions, in hindsight, mixed methodologies might be better

suited to larger scale studies with a team of researchers, in order that multiple perspectives can inform the research in addition to the research tasks being shared.

Tension between clinical and research roles

At different times during the research process, I felt a tension between being an efficient and systematic researcher, and a compassionate and validating clinical psychologist. At times, for example, when completing the ethics application form or engaging in statistical analyses, I felt much less connected with the aims of this study and the pressing clinical needs of suicidal students. Furthermore, during the individual interviews, I found it extremely challenging to maintain my focus exclusively on research tasks such as asking interview questions and recording answers, rather than my attention solely being focused on listening to and validating the distressing experiences of the participants, as would be the case during clinical work. My research partner and I agreed to leave time after each interview during which the audio recorder was switched off and participants were invited to reflect on the interview. Listening to the participants feedback positively about the research process was a particularly humbling experience, and helped me to reconnect with the aims of this research, having previously been preoccupied with the research protocol and tasks to be completed.

The tension between clinical and research aspects of a trainee clinical psychologist's role re-emerged during the development of the online survey. Having previously worked with suicidal individuals, I was conscious from the beginning of the project that it was important for the research team to adequately manage risk. The research team was prepared for the possibility that some students may feel distressed when talking about experiences such as feeling suicidal. When completing our ethics application, we regularly discussed striking a balance between

anonymity whilst also finding a way to monitor distressed individuals or for them to be able to contact us. Through reflections and regular discussions as a research team, this dilemma was resolved through development of a button on each page of the survey which students could click on if they were feeling distressed. The button led to a document containing a number of emotion-regulation strategies in addition to a variety of contact details for support organisations.

There were moments during the process where I was struck by students' responses, such that my thinking was much more affected by my own emotions. I noticed feeling distressed by some experiences I heard about. Whilst our information sheets warned potential participants of the possibility of feeling distress when discussing mental health and suicide, I had not anticipated the emotional impact this would have on me. Research into vicarious distress amongst clinicians has identified a number of risk factors in developing work-related distress and compassion fatigue, including lack of supportive working environment and lack of personal social support, and ability to recognise and meet one's own needs (Killian, 2008). From my training and clinical work, I knew the importance of self-reflection and taking care of my own wellbeing and therefore I sought supervision, peer reflective practices and also utilised other modes of self-care. This enabled me to recognise and regulate emotions that inevitably arose while working alongside individuals with histories of suicidal thoughts or trauma.

Over time, I recognised that having a solely task-focused approach to conducting clinical research may lead to becoming desensitised to the emotional impact of talking about suicide, and perhaps consequently to lack of compassion and humility. Although it was difficult to always strike a perfect balance between managing the emotional and task-focused aspects of undertaking this research, I believe that on the whole, I was able to manage both. This is something I will continue to work on throughout my career as a scientist-practitioner.

Impact of the Study

Charity Donation

In all survey promotion, we incentivised participation through a £2 donation per completed survey (up to a maximum of £670) to Papyrus, a youth suicide prevention charity. Donating to a charity that we hoped held relevance to the research area in addition to being meaningful to our target population felt important from the outset. Donating to charity as part of the research process had additional advantages. Papyrus sent a personal email expressing their support of our research and their gratitude for the donation, and this demonstrated the networks that can be built between research and clinical or charity sectors. Furthermore, Papyrus supported recruitment via their social media channels. Papyrus have a large online following (approximately 25,000 followers on Twitter) and their promotion of the study enabled the research to reach not only our target population of university students, but also clinicians and researchers with a professional interest in student mental health.

Dissemination

While a number of universities declined to promote the study amongst their students, many acknowledged the importance of research into student mental health, including suicidal ideation. Some even stated that they would be interested in our findings. Interview participants we met in person also echoed these sentiments. Through the study website and social media pages, the research team released blog posts detailing updates throughout the research process for interested parties, and at the end of the recruitment period, we explained that the findings would be disseminated via the study website in Autumn 2020. This was also detailed in each of the three study information sheets.

Having planned and conducted the study, and later analysed and interpreted the results, it felt like our duty as researchers to adequately disseminate the findings in a manner that is accessible to students, universities, student support services, and researchers alike. Furthermore, having felt humbled by the generosity of participants in sharing their personal experiences, I realised the importance of giving back to this population through feeding back to academic, healthcare and charitable institutions that support them. Our overarching aim is that the findings of this research are considered in the planning and delivery of services that support students experiencing suicidal thoughts.

Conclusion

The process of conducting mixed-methods research with university students has raised a number of challenges and dilemmas, including those related directly to working with a student sample, in addition to methodological aspects. Despite these challenges, I have felt profound value in promoting the voices of individuals who have experienced severe emotional distress associated with suicidal thoughts, and this has greatly reinforced the reasons I embarked on this project. It was a privilege to be in a position to witness the students' sharing their distressing experiences in order to help others. The experience of undertaking this research has led to the development of my clinical and research interest in working with students with severe and enduring mental health problems, particularly given that this research has highlighted a gap in adequate clinical provision and limited accessibility for the most distressed members of this unique clinical population.

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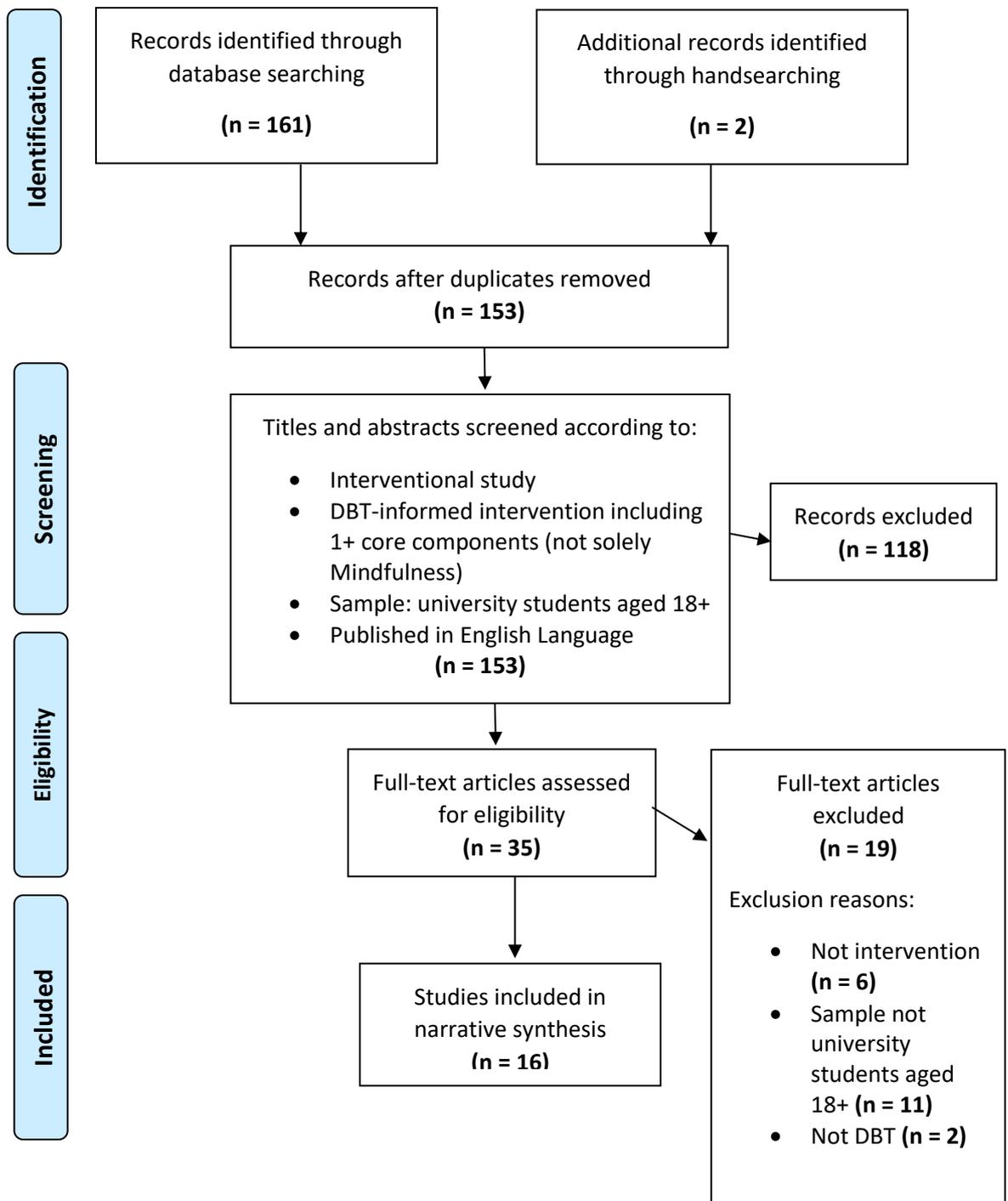
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Appendix 1.

PRISMA Flow Diagram of Study Selection



Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine*, 6, e1000097.

Appendix 2.

QualSyst Quality Appraisal Criteria and Scoring

Full definitions of scoring criteria can be found in:
 Kmet, L. M., Lee, R. C., & Cook, L. S. (2004). Standard Quality Assessment Criteria for Evaluating Primary Research Papers from a Variety of Fields. Alberta Heritage Foundation for Medical Research.

Quantitative Checklist

1. Question / objective sufficiently described?
2. Study design evident and appropriate?
3. Method of subject/comparison group selection or source of information/input variables described and appropriate?
4. Subject (and comparison group, if applicable) characteristics sufficiently described?
5. If interventional and random allocation was possible, was it described?
6. If interventional and blinding of investigators was possible, was it reported?
7. If interventional and blinding of subjects was possible, was it reported?
8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?
9. Sample size appropriate?
10. Analytic methods described/justified and appropriate?
11. Some estimate of variance is reported for the main results?
12. Controlled for confounding?
13. Results reported in sufficient detail?
14. Conclusions supported by the results?

Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	SCORE
Ustundag-Budak et al. (2019)	Y	Y	P	Y	n/a	n/a	n/a	Y	Y	Y	Y	P	Y	Y	0.91
Lin et al. (2018)	Y	Y	Y	Y	Y	Y	n/a	Y	Y	Y	N	Y	Y	Y	0.92
Muhomba et al. (2017)	Y	Y	P	Y	n/a	n/a	n/a	Y	Y	Y	N	P	Y	Y	0.82
Cheng & Merrick (2017)	Y	n/a	n/a	Y	n/a	n/a	n/a	Y	n/a	n/a	n/a	n/a	Y	Y	1.00
Uliaszek et al. (2016)	Y	Y	Y	Y	Y	N	n/a	Y	P	Y	P	Y	Y	Y	0.85
Panepinto et al. (2015)	Y	Y	P	Y	n/a	n/a	n/a	Y	Y	Y	N	P	Y	Y	0.82
Fleming et al. (2015)	Y	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	Y	Y	Y	1.00
Rizvi & Steffel et al. (2014)	Y	Y	P	Y	P	N	n/a	Y	Y	Y	N	P	Y	Y	0.73
Chugani et al. (2013)	Y	Y	P	Y	N	N	n/a	Y	P	Y	P	N	Y	Y	0.65
Meaney-Tavares et al. (2012)	Y	Y	Y	Y	n/a	n/a	n/a	Y	P	Y	Y	P	Y	Y	0.91
Engle et al. (2019)	Y	Y	N	N	N	N	n/a	Y	P	N	N	N	N	Y	0.35
Pistorello et al. (2012)	Y	Y	Y	Y	Y	Y	n/a	Y	Y	Y	N	Y	Y	Y	0.92
Pistorello et al. (2017)	Y	Y	Y	Y	Y	Y	n/a	Y	Y	P	P	Y	Y	Y	0.92
Beanlands (2019)	Y	Y	Y	Y	n/a	n/a	n/a	Y	Y	Y	Y	P	Y	Y	0.95
Lee & Mason (2019)	Y	Y	P	Y	n/a	n/a	n/a	Y	P	Y	N	N	Y	Y	0.73

Qualitative Checklist

1. Question / objective sufficiently described?
2. Study design evident and appropriate?
3. Context for the study clear?
4. Connection to a theoretical framework / wider body of knowledge?
5. Sampling strategy described, relevant and justified?
6. Data collection methods clearly described and systematic?
7. Data analysis clearly described and systematic?
8. Use of verification procedure(s) to establish credibility?
9. Conclusions supported by the results?
10. Reflexivity of the account?

Study	1	2	3	4	5	6	7	8	9	10	SCORE
Beanlands et al. (2020)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	1.00

Appendix 3.

Ethics Approval Letter



25th June 2019

Professor Janet Feigenbaum
Research Department of Clinical, Educational and Health Psychology
UCL

Cc: Larissa Barnett & Helen Adams

Dear Professor Feigenbaum

Notification of Ethics Approval with Provisos

Project ID/Title: 15819/001: What are the factors contributing to suicide risk amongst UK university students and what might help?

I am pleased to confirm in my capacity as Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the UCL REC until 1st July 2020. However, please provide your Data Protection registration number for our records and provide confirmation that a risk assessment has been completed.

Ethical approval is subject to the following conditions:

Notification of Amendments to the Research

You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form'
<http://ethics.grad.ucl.ac.uk/responsibilities.php>

Adverse Event Reporting – Serious and Non-Serious

It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Final Report

At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research

Office of the Vice Provost Research, 2 Taviton Street
University College London
Tel: +44 (0)20 7679 8717
Email: ethics@ucl.ac.uk
<http://ethics.grad.ucl.ac.uk/>

i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: <https://www.ucl.ac.uk/srs/file/579>
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application. This will be expected even after completion of the study.

With best wishes for the research.

Yours sincerely



Professor Lynn Ang
Joint Chair, UCL Research Ethics Committee

Appendix 4.

Study Documentation



Help us to understand the stressors associated with student suicide, and the help that is available, so that more effective support can be developed

What: Discussion group about student life stressors, suicide and available support

Who: UCL university students who have experienced suicidal thoughts at some point during their studies

Compensation: £10 Highstreet Voucher

Principal Investigator: Dr Janet Feigenbaum
Researchers: Larissa Barnett and Helen Adams

To find out more, rip a slip and contact the researcher on the details below:



What are the factors contributing to suicide risk amongst university students and what might help?

Principal Investigator: Janet Feigenbaum
Researchers: Larissa Barnett and Helen Adams

Focus Group Study Information Sheet

You have been sent this study information sheet as you have expressed an interest in taking part in our research project. The project aims to understand the factors that increase the risk of suicide amongst university students in the UK, what services are currently available, and how more effective support can be developed. Participation in this study is entirely optional and there will be no consequences if you chose not to take part. Before making a decision about whether or not you would like to take part, **it is important that you read this information sheet carefully**. After reading this information sheet, please contact us by emailing l.barnett.17@ucl.ac.uk or h.adams.17@ucl.ac.uk to let us know whether or not you are still interested in taking part and to ask any questions you might have. If you find the content of this information sheet at all distressing and you feel at risk, we would encourage you to make contact with UCL student mental health services by calling 020 7679 1487 or to contact the principle investigator, Dr. Janet Feigenbaum, (j.feigenbaum@ucl.ac.uk). If you need help urgently, you should call 999.

What is this study about?

In recent years, concerns have been noted about the number of student suicides in the UK. This study is concerned with understanding more about what makes some students feel suicidal and what support is available for students. In particular, we would like to hear the voices of people who have considered or attempted suicide during their university studies. In doing so, we hope to identify ways to better support students and reduce thoughts of suicide.

Who can take part?

You are able to take part in this study if you;

- Are an undergraduate or postgraduate UCL student
- Have had thoughts of suicide or have made a suicide attempt or plan at any point during your university studies

Why should I take part?

Participation in this study will help us to understand the reasons that some students might feel suicidal and what help is currently available to them, in order to develop ways to support such students more effectively.

If you decide to take part in the focus group, you will receive an incentive of a £10 High Street or Amazon voucher as compensation for your time.

What will the study involve?

If you are happy to take part in this study, you will be invited to attend a focus group that will last approximately 60 minutes and will be facilitated by two Doctorate in Clinical Psychology researchers who are also Trainee Clinical Psychologists. The focus group will be made up of between 4 – 6 undergraduate and/or postgraduate UCL students, including yourself.

If you do decide to take part in this study, discussions that are had within the focus group will be recorded so that they can be typed up and analysed. Your name will not be detailed anywhere in the recording and once the discussions have been typed-up, recordings will be deleted. Your name will not be recorded anywhere in the written data. Written data and scanned copies of consent forms will be stored in a secure data system for 20 years. After this period, all records will be destroyed.

Please note, we cannot guarantee that a student you know will not also volunteer to take part in the focus group and recognise you. However, before the focus group begins, you will be asked to respect the confidentiality of other participants by not continuing discussions outside of the focus group with group members or people who did not attend.

During the focus group, you will be asked some questions about the difficulties that students face. The group will consider why some students may feel suicidal, what support services there are that you are aware of and what, if any, barriers exist to accessing support. You will not be required to speak in any detail about personal experiences that have led to suicidal thoughts; the group will talk broadly about reasons that students may feel suicidal. You are not required to answer any questions that you do not wish to.

How might taking part affect me?

During the focus group, you will be asked to discuss some sensitive topics, such as thoughts about why some students generally may feel suicidal and what previous experiences of support students have received. It is possible that you might find such conversations distressing. If you do feel distressed and feel that you need to stop taking part at any point during the group, one of the focus group leaders will be able to leave the room with you and assist with reducing or managing your distress. There will be no consequences for withdrawing participation and you would not be required to return to the group if you choose not to.

At the end of the focus group, we will have a debrief with the group and you will be given the opportunity to discuss anything that you found distressing. The details of several crisis services and some step-by-step self-help guidelines that can be used to manage distress are included in the debrief. You will also be given printed copies of this information to take away.

If any risks are identified at any point in this study, you will be encouraged to seek further support from the UCL student health services, if you are already open to this service. If you feel highly distressed, we will make contact on your behalf, with your knowledge. If risk is identified and you are not open to the UCL student health service, a potential referral will be discussed with you. Support will be given to manage risk and obtain ongoing support.

Giving informed consent

If you do decide to take part in this study, on the day of the focus group, you will be asked to sign a consent form; this is to make sure that you understand your rights. Even after you sign the consent form, you can withdraw your participation in the focus group at any time. However, please note, once you have taken part in the focus group, it will not be possible to withdraw

your contributions to the discussions from the study as these will be inseparably intertwined with data of other participants on the recording. If you withdraw your participation during a focus group, again, it will not be possible to withdraw any contributions you have made to the study.

Local Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer oversees UCL activities that involve the processing of personal data; they can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. If you would like further information on how UCL uses participant information, have a look at our 'general' privacy notice by clicking the link below:

For our 'general' privacy notice, click [here](#)

The information that must be given to participants, according to data protection legislation (GDPR and DPA 2018), is provided across both this 'local' and the 'general' privacy notices.

In this study, the following information will be collected:

- Your name, phone number and email address (so that study information can be sent to you). This will be deleted once your participation in our study ends.
- Demographic information such as your age, gender and ethnicity. This information will be used in study write-up, to detail the group demographics of participants. Demographic information will be pseudonymised. It will be stored in a UCL data safehaven for 20 years, as is standard, and then deleted.
- You will be asked to sign a consent form on which you will detail your name and signature. This will be kept in a UCL data safehaven for 20 years, in a separate location to other anonymous focus group data, and will be deleted after this period.

The lawful basis that will be used to process your *personal data* are: 'Public task' for personal data and 'Research purposes' for special category data. If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Where can I find out about the results of the study?

A summary of the results of this study will be posted on our online website in autumn 2020. Any publications that come from this study will also be posted at this site.

Researcher contact details:

Larissa Barnett l.barnett.17@ucl.ac.uk
h.adams.17@ucl.ac.uk

Helen Adams

Principal investigator: Dr. Janet Feigenbaum, Associate Professor Clinical Psychology, UCL
j.feigenbaum@ucl.ac.uk; 0300 5551213

Factors contributing to suicide risk amongst UK university students and what might help?

Study Consent Form

Please read each statement carefully and put your initials to indicate that you understand and agree. You will not be able to proceed to the study until you have initialled each statement.

	Please Initial
I confirm that I have read and understood the study information sheet	
I understand that my participation in this study is voluntary and that I am not obliged to give consent	
I understand that if I do not give consent to take part, there will be no consequences	
I understand that I can withdraw my consent to take part in a focus group at any time without having to give a reason	
I understand that once I have contributed information in a focus group, that contribution cannot be withdraw from the study as it is recorded with all other participants contributions	
I understand that the contributions I make to this study will be included in the researcher's thesis and may be published in a scientific journal	
I understand that any data I give will be anonymised and that my confidentiality will be protected in any reports or publications that come from data collected in this study	
I understand that if I become unduly distressed during the study, the researchers may contact the UCL student health service on my behalf	
I agree to take part in this study	

Signature:

Date:

Research Staff contact details

Larissa Barnett: l.barnett.17@ucl.ac.uk
h.adams.17@ucl.ac.uk

Helen Adams:
 Principal Investigator: Dr Janet Feigenbaum: j.feigenbaum@ucl.ac.uk

Demographics Form

Age: _____

Gender:

Male Female Prefer not to say

Other: (please state) _____

Ethnicity:

Prefer not to say

White

English/Welsh/Scottish/Northern Irish/British Irish Gypsy or Irish traveler

Other (please state): _____

Mixed/Multiple Ethnic Groups

White and black Caribbean White and black African

Other (please state): _____

Asian/ Asian British

Indian Pakistani Bangladeshi Chinese

Other (please state): _____

Black/ African/ Caribbean/ Black British

African Caribbean

Other (Please state): _____

Sexual orientation

Heterosexual Homosexual Bisexual Prefer not to say

Other (please state) _____

Would you describe yourself as having a disability?

Yes No Prefer not to say

Student status

UK student EU student Overseas student

Degree level

Undergraduate student Postgraduate student



What are the factors contributing to suicide risk amongst university students and what might help?

Principal Investigator: Janet Feigenbaum
Adams

Researchers: Larissa Barnett and Helen

Survey Development Consultation Information Sheet

You have been sent this information sheet as you have expressed an interest in taking part in our research project. The project aims to understand the factors that increase the risk of suicide amongst university students in the UK, what services are currently available, and how more effective support can be developed. Participation in this study is entirely optional and there will be no consequences if you chose not to take part. Before making a decision about whether or not you would like to take part, it is important that you read this information sheet carefully. After reading this information sheet, please contact us by emailing l.barnett.17@ucl.ac.uk or h.adams.17@ucl.ac.uk to let us know whether or not you are still interested in taking part and to ask any questions you might have. If you feel distressed after reading this information sheet, we have attached a handout containing some suggestions which may help and contact details of support services available. We encourage you to make contact with student mental health services, or the principal investigator, Dr. Janet Feigenbaum (j.feigenbaum@ucl.ac.uk) if you feel at risk.

What is this study about?

In recent years, concerns have been noted about the number of student suicides in the UK. This study is concerned with understanding more about what makes some students feel suicidal and what support is available for students. This part of the study will focus on consulting with UK students to help us develop a national survey that is accessible and appropriate for other students. The survey will explore risk factors for suicide amongst UK university students. In doing so, we hope to identify ways to better support students and reduce thoughts of suicide.

Who can take part?

You are able to take part in this study if you;

- Are an undergraduate or postgraduate UCL student
- Have had thoughts of suicide or have made a suicide attempt or plan at any point during your university studies

Why should I take part?

Participation in this consultation group will help us to develop a national survey asking UK students about the reasons that some students might feel suicidal and what help is currently available to them, in order to develop ways to support such students more effectively.

If you do decide to take part in the consultation group, you will receive an incentive of a £15 High Street or Amazon voucher as compensation for their time.

What will the study involve?

If you are happy to take part, you will be invited to attend a consultation group that will last approximately 90 minutes and will be facilitated by two Doctorate in Clinical Psychology researchers who are also trainee clinical psychologists. The consultation group will be made up of around eight undergraduate and/or postgraduate UCL students, including yourself.

During the group, you will be asked to join us in discussions about how to make our survey accessible and appropriate for other students. You might be asked about whether language is sensitive and appropriate, about survey format and design or about how clear or helpful certain questions are, for instance. Throughout the group, we will be taking notes of your thoughts and ideas, but no confidential information, such as your name, will be recorded.

Please note, we cannot guarantee that a student you know will not also volunteer to take part in the consultation group and recognise you. However, before the consultation group begins, you will be asked to respect the confidentiality of other participants by not continuing discussions outside of the consultation group with group members or people who did not attend.

How might taking part affect me?

Although the aim of the consultation group is to discuss the development of appropriate survey questions, it is important to note the sensitive content of the survey questions being developed. It is possible that you may find such conversations distressing. If you do feel distressed and feel that you need to stop taking part at any point during the group, one of the group leaders will be able to leave the room with you and assist with reducing or managing your distress. There will be no consequences for withdrawing participation and you would not be required to return to the group if they choose not to.

At the end of the consultation group, we will have a debrief with the group and you will be given the opportunity to discuss anything that you found distressing. The details of several crisis services and some step-by-step self-help guidelines that can be used to manage distress are included with this information. Printed copies of this information will also be routinely given to you to take away.

If any risks are identified at any point in this study, and you are already open to the UCL student health services, you will be encouraged to seek further support from this service. If you are highly distressed, we will make contact on your behalf, with your knowledge. If risk is identified and you are not open to the UCL student health service, we will discuss a referral with you.

Giving informed consent

If you do decide to take part in this study, on the day of the consultation group, you will be asked to sign a consent form; this is to make sure that you understand your rights. Even after you sign the consent form, you can withdraw your participation from the group at any time. However, please note, once you have taken part, it will not be possible to withdraw their contributions to the discussions from the study as these will be inseparably intertwined with data of other participants on the recording. If you withdraw your participation during the

consultation group, again, it will not be possible to withdraw any contributions that you have made to the study.

Local Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer oversees UCL activities that involve the processing of personal data; they can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. If you would like further information on how UCL uses participant information, have a look at our 'general' privacy notice by clicking the link below:

For our 'general' privacy notice, click [here](#)

The information that must be given to you, according to data protection legislation (GDPR and DPA 2018), is provided across both this 'local' and the 'general' privacy notices.

In this study, the following information will be collected:

- Your name, phone number and email address (so that study information can be sent to you). This will be deleted once your participation in our study ends.
- Demographic information such as your age, gender and ethnicity. This information will be used in study write-up, to detail the group demographics of participants. Demographic information will be pseudonymised. It will be stored in a UCL data safehaven for 20 years, as is standard, and then deleted.
- You will be asked to sign a consent form on which you will detail your name and signature. This will be kept in a UCL data safehaven for 20 years, in a separate location to other anonymous focus group data, and will be deleted after this period.

The lawful basis that will be used to process your *personal data* are: 'Public task' for personal data and 'Research purposes' for special category data. If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Where can I find out about the results of the study?

A summary of the results of this study will be posted on our online website in autumn 2020. Any publications that come from this study will also be posted at this site.

Researchers: Larissa Barnett l.barnett.17@ucl.ac.uk and Helen Adams h.adams.17@ucl.ac.uk

Principal investigator: Dr. Janet Feigenbaum, Associate Professor Clinical Psychology, UCL

j.feigenbaum@ucl.ac.uk; 0300 5551213

**What are the factors contributing to suicide risk amongst UK university students
and what might help?**

Survey Development Consultation Consent Form

Please read each statement carefully and put your initials to indicate that you understand and agree. You will not be able to proceed to the study until you have initialled each statement.

	Please Initial
I confirm that I have read and understood the survey development consultation group information sheet	
I understand that my participation in this consultation group is voluntary and that I am not obliged to give consent	
I understand that if I do not give consent to take part, there will be no consequences	
I understand that I can withdraw my consent to take part in the consultation group at any time without having to give a reason	
I understand that once I have contributed information in the consultation group, that contribution cannot be withdrawn as it is recorded with all other participants' contributions	
I understand that the contributions I make to the consultation group will be used to help develop an online survey asking UK students about stressors, suicidality and available support	
I understand that if I become unduly distressed during the study, the researchers may contact the UCL student health service on my behalf	
I agree to take part in this study	

Signature:

Date:

Research Staff contact details

Larissa Barnett: l.barnett.17@ucl.ac.uk

Helen Adams: h.adams.17@ucl.ac.uk

Principal Investigator: Dr Janet Feigenbaum: j.feigenbaum@ucl.ac.uk



What are the factors contributing to suicide risk amongst UK university students and what services might be appropriate?

Principal Investigator, Dr Janet Feigenbaum

Researchers: Larissa Barnett, Helen Adams

Online Survey Study Information Sheet

Thank you for taking an interest in this study. Participation in this study is entirely optional and there will be no consequences if you chose not to take part. Before making a decision about whether or not you would like to take part, **it is important that you read this information sheet carefully**. If you are still happy to take part after reading this document, you can go back to the study website when you are ready ([link](#)) and participate in the study.

What is this study about?

In recent years, concerns have been noted about the number of student suicides in the UK. This study is concerned with understanding more about what makes some students feel suicidal. Please note, we would like to hear from a variety of students; **you do not need to have experienced suicidal thoughts to take part in this study**. Our aim is to better understand the factors leading to the increase in suicide rates, the stressors leading to suicidal thinking, and what suggestions students have for improving support systems.

Who can take part?

You are able to take part in this study if you;

- Are an undergraduate or postgraduate university student
- Are studying in the UK (including international students)

Why should I take part?

Participation in this study will help us to understand the reasons that some students might feel suicidal. With this information, we will be able to make recommendations for universities about how they can support their students more effectively. The information would also give insight into how psychological or health care services may tailor their interventions to be more effective in helping reduce suicidal thinking amongst students.

For every survey completed, £1 will be donated to the Samaritans Charity, up to the amount of £X

What will the study involve?

If you decide to take part in our online survey, you will be asked a number of questions about yourself, some of your life experiences and how you spend your time. Some of these questions will be sensitive and may cause discomfort (please see the section below on “How might taking part affect me”). The survey is anonymous so you will not be asked to provide any information that would reveal your identity. However, you will be asked some demographic information such as your age, ethnicity or gender. The survey will take approximately 30 minutes to complete.

Please note, if you wish to contact us to raise a query or complaint about the survey, we may gain information that makes you identifiable (such as email addresses). Therefore, if you wish to contact us anonymously, please create an alternative email address to contact us.

How might taking part affect me?

The survey will ask some questions which you may find distressing, such as questions about suicidal thinking and mental health issues. You should not begin the survey at a time when you are feeling highly distressed. If during the survey, you do become distressed, there will be a “Click here if distressed” button in the right-hand corner of the screen. By clicking this button, you will be redirected to a new page which will give you a list of support services which can be accessed, should they be needed, as well as some self-help information such as information about mindfulness and self-soothe strategies. This information will also be given to you at the end of the survey. These pages are downloadable at any time. If the pages on managing distress are not helpful you may wish to contact the principle investigator for further advice and support in accessing support in your local area.

If you do click the “click here if distressed” button, it is up to you to decide whether you would like to return to the survey to complete it or not. There will be no consequences if you chose not to complete the survey. However, you should note that once you have clicked the “next” button on any given page of the survey, responses already submitted cannot be withdrawn from the study because all responses are anonymous and therefore it will not be possible to identify which answer you gave.

Giving informed consent

If you do decide to take part in the survey, on the first page of the survey you will see a consent form. In order to continue to the survey, you will need to show that you agree with the information detailed in this document by ticking boxes on the consent form before you will be able to proceed with the study.

The data that you provide in this study will be stored in a secure online password protected database for 20 years and after this period, all records will be destroyed.

Local Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer oversees UCL activities that involve the processing of personal data; they can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. If you would like further information on how UCL uses participant information, have a look at our 'general' privacy notice by clicking the link below:

For our 'general' privacy notice, click [here](#)

The information that must be given to participants, according to data protection legislation (GDPR and DPA 2018), is provided across both this 'local' and the 'general' privacy notices.

In this study, the following information will be collected:

- Demographic information such as your age, gender, ethnicity and student status. This information will be used in the study write-up, to detail the group demographics of participants. All demographic information will be anonymous. It will be stored in a UCL data safehaven for 20 years, as is standard, and then deleted.

The lawful basis that will be used to process your *personal data* are: 'Public task' for personal data and 'Research purposes' for special category data.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Where can I find out about the results of the study?

A summary of the results of this study will be posted on our online website (see the link below) in autumn 2020. Any publications that come from this study will also be posted on this site.

Researcher contact details: Larissa Barnett: l.barnett.17@ucl.ac.uk

Helen Adams: h.adams.17@ucl.ac.uk

Principal investigator: Dr. Janet Feigenbaum Associate Professor Clinical Psychology, UCL
j.feigenbaum@ucl.ac.uk; 0300 5551213

**What are the factors contributing to suicide risk amongst UK university students
and what might help?**

Study Consent Form

Please read each statement carefully and tick if you understand and agree. You will not be able to proceed to the study until all boxes are ticked.

	Please Tick
I confirm that I have read and understood the study information sheet	
I understand that my participation in this study is voluntary and that I am not obliged to give consent	
I understand that if I do not give consent to take part, there will be no consequences	
I understand that I can withdraw my participation in this survey at any time without consequences	
I understand that once I have contributed information to the survey and clicked "next", that information cannot be withdrawn from this study	
I understand that all contributions I make to this study will be anonymous	
I understand that the contributions I make to this study will be included in the researcher's thesis and may be published in a scientific journal	
I agree to take part in this study	

NEXT

Appendix 5.

Study Debrief Self-Help Information & Support Contact Details

Self-Help Information and Further Support Contact Details

Please find below resources to help support yourself if you are feeling distressed. Contact details for support services are on the last page.

Visualisation

This is a quick way of getting away from a situation without physically leaving.

- Imagine yourself walking to a door.
- Open the door and walk down the 3 steps, taking a deep breath for each of the steps.
- You walk into an environment where you feel relaxed and calm. This could be a familiar place, a happy memory, or somewhere in your dream.
 - * **What can you see?**
 - * **What can you hear?**
 - * **What can you smell?**
 - * **What can you touch?**

Spend a few minutes in this place, enjoying the feeling of relaxation.

When you feel ready, start to make your way back up the three steps, take a breath for each of the three steps. Make your way back through the door and back into the present.

Mindfulness - "Leaves on a Stream" Exercise

1. Sit in a comfortable position and either close your eyes or rest them gently on a fixed spot in the room.
2. Visualise yourself sitting beside a gently flowing stream with leaves floating along the surface of the water.
3. For the next few minutes, take each thought that enters your mind and place it on a leaf... let it float by. Do this with each thought – pleasurable, painful, or neutral. Even if you have joyous or enthusiastic thoughts, place them on a leaf and let them float by.
4. If your thoughts momentarily stop, continue to watch the stream. Sooner or later, your thoughts will start up again.
5. Allow the stream to flow at its own pace. Don't try to speed it up and rush your thoughts along. You're not trying to rush the leaves along or "get rid" of your thoughts. You are allowing them to come and go at their own pace.
6. If your mind says "This is dumb," "I'm bored," or "I'm not doing this right" place those thoughts on leaves, too, and let them pass.
7. If a leaf gets stuck, allow it to hang around until it's ready to float by. If the thought comes up again, watch it float by another time.
8. If a difficult or painful feeling arises, simply acknowledge it. Say to yourself, "I notice myself having a feeling of boredom/impatience/frustration." Place those thoughts on leaves and allow them float along.
9. From time to time, your thoughts may hook you and distract you from being fully present in this exercise. This is normal. As soon as you realize that you have become side-tracked, gently bring your attention back to the visualisation

Distraction Techniques

These are some ideas for helping people delay or avoid self-harm that you might wish to consider- they've been suggested by people who self-harm. Some ideas might seem ridiculous, but others might work. Different people find that different things help, and it isn't failure if you try something and it doesn't help. You will be able to add things which you have discovered.

Expressing feelings PHYSICALLY

- * Scream as loud as you can
- * Hit a cushion/punch bag/throw a cushion against a wall
- * **Smash** a water melon
- * Kick a football against a wall
- * **Squeeze** a stress ball
- * **Tear up** a newspaper/phone directory
- * Play loud music and dance energetically- be as wild as you like
- * Draw on the place you want to cut with red marker pen, fake blood or watered-down food colouring
- * *Write words* on yourself with red marker pen
- * Spend some **energy**- go for a walk/swim/go to gym/ride a bike/go running.

Trying to work out how you are feeling....

- * Ask yourself 'Do I feel ANGRY'? 'Do I feel anxious'? 'What about?'
- * Ask yourself 'What would the razor blade say if it could talk to me?'
- * **Write a letter** to someone you're angry with (hurt by etc.) saying how you feel (no need to send it).
- * Write a list of your **achievements**
- * Write a letter to yourself saying 'I love you because.....'
- * **Make a list** of things you're thankful for
- * Make a wish list

Talking about it...

- * Talk to a **friend**
- * Call the Samaritans or other helpline
- * Allow yourself to **cry** (if you can)

Using your Creativity

- Draw / paint / collage/ paper mâché / finger paint / sculpt in clay- to express what you want to do or what you are feeling
- Write a poem / **story** / song / joke / autobiography / parody / musical
- Write a **diary** / journal / read old diaries (unless there might be triggers)
- Write an **online journal**
- **Scribble** a word again and again to say how you're feeling e.g. 'lonely', 'angry'
- Deface a magazine (preferably your own)
- Paint with **red paint** using your fingers
- Write a **message** on an online support group
- Take some **photos**
- Play an **instrument** / Sing to music as LOUD as you can
- Put on **music** which expresses how you are feeling
- Write out the **soundtrack** to your life if it were a film
- **Imagine a colour** which expresses your feelings then change it in your mind to another colour
- Make a **memory box** / scrapbook
- Write an **alternative ending** to a story
- Watch a foreign language channel and make up your own interpretations
- **Create** your own cartoon characters / legends
- Create a SECRET CODE

Self-Soothe with the Five Senses

Things You See

Make a part of your room look just the way you want it to. Look at nature around you. Watch stars, the moon, sunrise or sunset. Look at pictures or a poster that you like. Take a walk in a park or in your neighbourhood. Really look at and notice what is nice.

What You Hear

Listen to relaxing, soothing, or energetic music. Pay attention to the sounds of nature (waves, birds, rain, and leaves rustling). Sing your favourite songs. Hum a soothing tune. Learn to play an instrument. Call a friend. Listen to your cat purr.

Odours You Smell

Use your favourite aftershave, cologne, or perfume. Put potpourri in a bowl in your room. Boil cinnamon sticks. Bake cookies, cake or bread. Smell roses. Be mindful of the smells of nature; try smelling a pinecone.

Foods You Taste

Have a good meal. Have a favourite soothing drink such as herbal tea or hot chocolate. Treat yourself to dessert. Sample ice cream flavours. Chew your favourite gum or candy. Really taste the food you eat. Eat one thing mindfully.

Things You Touch

Pet your dog or cat. Take a bubble bath. Put clean sheets on the bed. Soak your feet. Put lotion on. Put a cold compress on your forehead. Sink into a really comfortable chair in your home. Brush your hair for a long time. Hug someone. Hold a pinecone. Hold a basketball, football, or baseball.

Contacts for further support

If you feel you might need some further support, you might find it helpful to contact your **university wellbeing team**. Similarly, if you are currently under the care of a **disability service** or a **local mental health team**, you might find it helpful to contact your therapist/worker. Alternatively, you may wish to contact **your GP** if your distress is ongoing after participating in the study.

If you would like to speak to someone anonymously about the way you feel, you can call the **Samaritans** on **08457 90 90 90** or visit their website at <http://www.samaritans.org>. They provide a confidential listening service. You may also be able to access a confidential listening service provided by your university.

If you are aged under 35 and having thoughts of suicide, or are concerned for a young person who might be, you can contact **HOPELINE UK** for confidential support and practical advice. Call 0800 068 4141, text 07860039967, or email pat@papyrus-uk.org. HOPELINE's opening hours are 9am – 10pm weekdays, 2pm – 10pm weekends and bank holidays.

If you need help immediately and are in an emergency, you can always call the emergency services on **999** or go to **A&E**.

Appendix 7.

Focus Group/Interview Schedule

Project Part A Questions

- What kind of circumstances or experiences might put university students at an increased risk of suicide?
- Are there any risk factors which are specific to students?
- We've talked about some factors that might cause suicidal feelings when they are present. Are there any factors that might cause suicidal feelings because they are absent?
- Are there any factors or resources that might protect students against suicidal feelings?
- Why might these factors/ resources be successful in protecting students against suicide?

Project Part B Questions

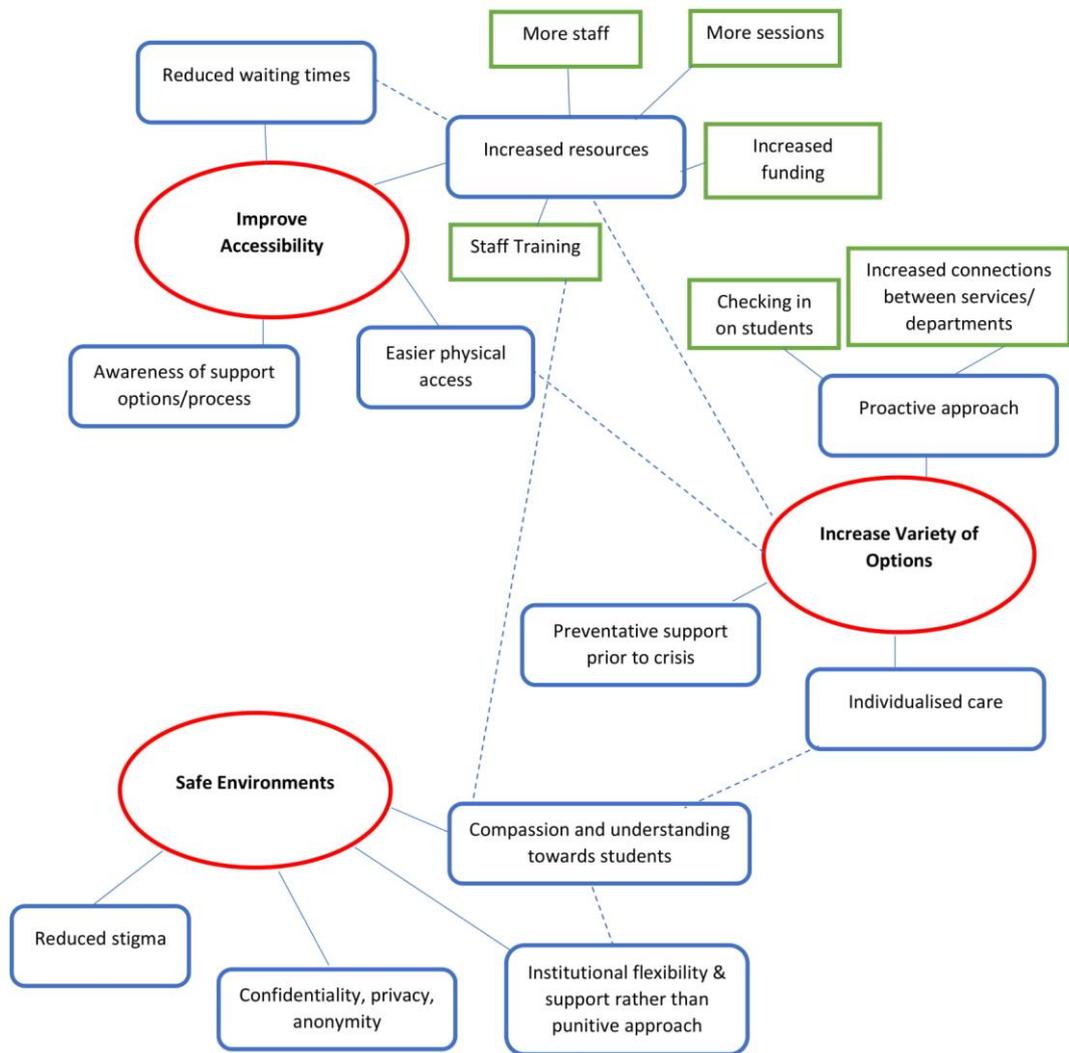
- Are you aware of any support available to students who are suicidal?
- Is this support provided by the university, NHS service or another service?
- What might get in the way of students accessing support?
- What kind of support would be helpful for students with suicidal thoughts?
- When developing support services specifically for students, what would be important to consider?

Appendix 7.

Precautionary Non-Parametric (Mann-Whitney U) Test Results

Measure	<i>History suicidal thoughts</i>	<i>No history suicidal thoughts</i>	Test	Significance
	n	n	U	p
Intention to seek professional help	233	161	12266.5	<.001
Perception of university values	233	159	14846.5	<.001
SS-A	222	151	6176.5	<.001
PSOSH	221	151	6107	<.001
DES Risks	205	142	7255	<.001
DES Benefits	205	142	13175.5	.13

Appendix 8.
Thematic Cluster Map



Appendix 9.

Trainee Contribution to Joint Project

This project was conducted jointly with another Trainee Clinical Psychologist at University College London (UCL). It quickly became apparent that my initial project would not be feasible, and therefore early discussions with my research supervisor (Dr Janet Feigenbaum) and her other supervisee led me to amend my project idea and combine projects with the other supervisee, who became my research partner. At this stage, my partner had formed a research plan and had begun to draft some study information sheets and recruitment advertisement documents. From this point onwards, we collaboratively created, amended and submitted all documentation required for the joint ethics application and any research expenses. We later jointly planned and advertised for focus groups with students with history of suicidal ideation.

During the planning and recruitment phases of research, we met jointly with our supervisor. Due to family circumstances, my research partner conducted the first two interviews and the remaining three interviews were conducted jointly. My partner transcribed the first three interviews and I transcribed the final two. The analyses of interview transcripts were conducted separately, before the research team met in order to jointly create, develop and advertise the online survey via the study website and social media pages, including to jointly consult with interview participants about survey development. Analyses of survey data was conducted separately and therefore communication with our supervisor from this point onwards was also separate.