

**How can we enable education staff to recognise and seek help for children and young people with common mental health problems?**

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Submission Date: 24<sup>th</sup> May 2021

Thesis portfolio wordcount: 33298

Candidate registration number: 100299499

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### Thesis Portfolio Abstract

**Background:** Despite rates of mental health difficulties in young people increasing, they are unlikely to seek support themselves. Education staff are uniquely positioned to identify early signs of mental health difficulties in young people and support help-seeking behaviours, allowing them to access appropriate and timely support.

**Method:** A scoping review explored the existing literature regarding education staff's ability to recognise anxiety and depression in students (4–19-year-olds), without the use of screening tools. This included exploration of methods used and variables evaluated that may influence recognition. An empirical study explored the feasibility of a novel brief online training video. The training aimed to improve secondary school and college staff's ability to recognise students (11–19-year-olds) with anxiety symptoms, in English education settings, drawing upon the Gateway Provider Model (Stiffman et al. 2004).

**Results:** Twenty-one studies were included in the review. All studies used teacher nomination or a vignette-based approach to evaluate recognition ability in education staff. Staff's ability to identify anxiety or depression appears somewhat limited but firm conclusions cannot be drawn due to heterogeneity and scarcity of research. The feasibility study found that the brief online training video was feasible and acceptable to education staff who participated, however recruitment feasibility was poor. There were shifts in favour of the training, for recognition, level of severity, level of concern, confidence, and intention to refer, with small to large effect sizes.

**Conclusions:** There is a need to better understand education staff's ability to recognise and support help-seeking for students with mental health difficulties, such as anxiety and depression. Key gaps in the literature were identified including a lack of research using non-teaching staff and colleges, and the use of standardized measures. Brief online training appears to be a feasible and acceptable method of delivering training for those who participated, however barriers to recruitment need to be explored and overcome. Limitations, implications and future directions for research are discussed.

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**List of Contents**

Chapter 1. Introduction to the Thesis Portfolio .....	8
Chapter 2. Scoping Review .....	14
Abstract .....	15
Introduction .....	17
Methods .....	19
Results .....	22
Discussion .....	43
References .....	50
Chapter 3. Bridging Chapter .....	57
Chapter 4. Empirical Study .....	60
Abstract .....	61
Introduction .....	62
Methods .....	66
Results .....	71
Discussion .....	82
Conclusion .....	87
References .....	89
Chapter 5. Additional Methods .....	95
Chapter 6. Additional Results .....	104
Chapter 7. Critical Discussion .....	107
References .....	118
Appendices .....	130

## **List of Tables**

### **Introduction to the Thesis Portfolio**

None

### **Scoping Review**

Table 2.1 Summary of Study Characteristics

Table 2.2 Summary of Methods, Outcome Measures and Relevant Results

Table 2.3 Variables Investigated in Included Studies in Relation to Education Staff  
Recognition

### **Bridging Chapter**

None

### **Empirical Study**

Table 4.1 Participant Characteristics

Table 4.2 Means and Standard Deviations of the Training Video

Table 4.3 Categories, Codes and examples from Participants Qualitative Feedback

Table 4.4 Frequency Count of Codes from Participant Descriptions

Table 4.5 Within-group Difference from Vignette Questionnaires at Pre and Post-  
Training

Table 4.6 Within-group Differences of Confidence Items Pre and Post-Training

### **Additional Methods**

None

### **Additional Results**

Table 6.1 Frequency of selected options of support for each vignette.

### **Critical Discussion**

None

## **List of Figures**

### **Introduction to the Thesis Portfolio**

None

### **Scoping Review**

Figure 2.1 PRISMA flow diagram of article identification and selection

### **Bridging Chapter**

None

### **Empirical Study**

Figure 4.1 'The Gateway Provider Model' (Stiffman et al., 2004)

Figure 4.2 Consort Flowchart of Participants

### **Additional Methods**

None

### **Additional Results**

None

### **Critical Discussion**

None

### **Acknowledgements**

I would like to thank my research supervisors, Kiki Maystroyannopoulou, Dr Laura Pass and Dr Maria Loades. The support and encouragement that they gave me throughout the thesis process has been hugely appreciated. I would also like to thank my fellow trainee colleague, Ben Carroll. We have worked incredibly well as a team and I could not have completed this process without his wise words, support and great sense of humour. I would also like to thank the project refinement team and gatekeepers that supported the development and recruitment of the empirical project. I know how precious their time is, so I really appreciate the time that they gave to help support the research process.

Thank you to all my trainee psychology colleagues. I feel privileged to have experienced my clinical psychology journey with such a compassionate, funny and supportive cohort. I would particularly like to thank Stephanie Casey, Jasmine Taylor, Joanna Reed and Leona Wolters. They have been by my side every step of the way and I cannot thank them enough for getting me to the finish line.

Finally, I would like to thank my family. Thank you to my partner, James, for sitting alongside the doctoral stress and putting life on hold. Thank you to the incredible Wickson Family who have rallied around me to offer listening ears and proof-reading eyes. Their care and encouragement have got me to where I am today and I cannot thank them enough.

## **CHAPTER ONE**

### Introduction to the Thesis Portfolio



## Chapter 1. Introduction to the Thesis Portfolio

It is estimated that globally 10% of children and young people have a clinically significant mental health problem (World Health Organization [WHO], n.d.). Anxiety and depression are the most common mental health problems in children and young people (Sadler et al., 2018; WHO, 2017) and are among the leading causes of illness and disability in adolescents (WHO, 2021). In England, the rate of mental health difficulties in 6-16- year-olds has increased from 11.6% in 2017 to 17.4% in 2021 (Newlove-Delgado et al., 2021) and it is likely a greater number of children and young people experience sub-clinical levels or are considered 'at risk' of developing mental health problems (Public Health England [PHE] et al., 2021).

Mental health difficulties during childhood or adolescence can have a significant impact on a young person's cognitive and social development; physical health; and increase the risk of physical, social and mental health problems in adulthood (PHE et al, 2021). The long-term consequences of untreated mental health difficulties not only impact the individual but also wider society. Untreated and chronic mental health difficulties have an economic impact, due to reduced productivity and increased demands on public resources, which has encouraged changes in policy and provision by governments and budget-holders (Fineberg et al., 2013; Knapp & Wong, 2020).

Accessing interventions early could prevent the long-term consequences of mental health difficulties (Patel et al., 2007). However, current evidence suggests there is a significant gap between need and access to provision for children and young people (Crenna-Jennings & Hutchinson, 2020). Globally, most children and young people with diagnosable mental health problems do not access treatment (Crenna-Jennings & Hutchinson, 2020; Lawrence et al., 2015; Merikangas et al., 2011) and this does not include those with sub-clinical levels or those "at risk" of developing mental health problems.

There has been a growing agenda to prevent the development of mental health difficulties and promote positive emotional wellbeing in children and young people (Department

of Health [DoH] & NHS England, 2015; Department of Health and Social Care [DHSC] & Department for Education [DfE], 2017; NHS England et al., 2014; Public Health England [PHE] et al., 2021). In 2017, the UK government published a green paper outlining the transformation plans for children and young people's mental health services, building upon Future in Mind (DoH & NHS England, 2015) and Five Year Forward plan (NHS England et al., 2014). Schools and colleges were placed at the heart of the transformation plans to build on existing practices and evidence-base to best support children and young people in promoting positive mental health and providing early intervention and prevention (DHSC & DfE, 2017). Two key components of the transformation plans are: 1) the identification of a designated senior lead for mental health to oversee the whole school approach to mental health and wellbeing, and liaise with mental health services; 2) the introduction of Mental Health Support Teams, with the aim to increase the workforce and capacity for early intervention and ongoing support, working collaboratively with schools, colleges and the NHS. The government recommend a whole school approach to promoting positive wellbeing and preventing mental health problems, which includes early identification to prevent the escalation of emerging mental health problems in children and young people (DHSC & DfE, 2017; PHE et al., 2021).

However there appears to be a gap between expectations set and education staff's skills, knowledge, and confidence in identifying and supporting students with mental health problems. Teachers are educators, not mental health professionals, though they do recognise their role in supporting the social and emotional development of their students, including the identification of mental health difficulties and supporting them to seek appropriate support (Beames, 2022; Shelemy et al., 2019a, 2019b; Trudgen & Lawn, 2011a). However, without training, education staff rely on their own subjective understanding based on personal experience, attitudes and observed academic challenges (Trudgen & Lawn, 2011). Training is therefore integral to upskilling and developing all education staff's ability to accurately identify

emerging mental health difficulties and support help-seeking behaviours in students to access appropriate and timely support.

Research, exploring how we enable education staff to identify common mental health difficulties, is important and a key priority for many stakeholders, including young people. “What is the most effective way of training teachers and other staff in schools and colleges to detect early signs of mental health difficulties in children and young people?”(p.3) is one of the top ten research priorities for children and young people’s mental health services based on the priorities of young people and those who support them (McPin Foundation, 2018).

Mental Health Literacy (MHL) training programmes aim to support the role of education staff in recognising and supporting children and young people with mental health difficulties by improving MHL. Mental Healthy Literacy is defined as the “knowledge and beliefs about mental disorders which aid...recognition, management or prevention.” (Jorm et al., 1997) p. 182). It consists of six domains ‘1) the ability to recognise specific disorders or different types of psychological distress; 2) knowledge and beliefs about risk factors and causes; 3) knowledge and beliefs about self-help interventions; 4) knowledge and beliefs about professional help available; 5) attitudes which facilitate recognition and appropriate help-seeking; 6) knowledge of how to seek mental health information’ (Jorm et al, 1997). However, this definition has been re-defined over the years due to criticisms about its narrow focus. Chambers argued that mental health literacy suggests a dichotomy of illness and wellness (Chambers et al., 2015) leading to re-definition drawing upon the positive psychology movement (Bjørnsen et al., 2017; Kusan, 2013). The stretching of the definition and the variability in measures of MHL, has led to construct proliferation (Spiker & Hammer, 2019). Spiker and Hammer (2019) argued that MHL should be considered a multi-construct theory and not a multi-dimensional construct. This was further supported by Mansfield et al. (2020) when exploring the conceptualisation of MHL in adolescents. Therefore, research needs to be clear on the construct or domain within MHL that is being focused on.

Recognition is considered one of the domains of MHL and has been included in measuring improvements (Jorm et al., 1997). Recognition can be defined as: ‘the identification of something from previous knowledge or acknowledgement of the presence of something’ (Oxford English Dictionary, 2022). The identification of a mental health problem is a necessary first step towards help-seeking behaviours. If a problem is not recognised, children and young people and those working with them are not going to seek appropriate support, thus preventing access to services. Help-seeking behaviours for mental-health problems has been defined as “an adaptive coping process that is the attempt to obtain external assistance to deal with mental health concerns” (Rickwood & Thomas, 2012, p. 180). This can include help-seeking from formal sources (e.g. health services) or informal sources (e.g. friends or family) (Aquirre Velasco et al., 2020). It can refer to the individuals own help-seeking behaviours (e.g. talking to friends, family, teachers, doctors) and help-seeking behaviours of others for the individual. Education staff are one of many professionals, who act as gatekeepers to mental health services (Stiffman et al., 2004). Strong positive relationships with teachers have been found to be a key facilitator of help-seeking behaviours in young people (Aquirre Velasco et al., 2020).

Supporting education staff’s ability to recognise student mental health difficulties and support help-seeking behaviours, including decision to refer to support, is an important area of research. Understanding education staff’s ability to recognise student mental health problems and variables that influence this ability is important to target training appropriately. Furthermore, although current MHL training programmes target mental health knowledge to improve recognition and in turn help-seeking (Yamaguchi et al., 2020), training needs to consider targeting factors that influence gatekeeper decisions to refer beyond improving knowledge.

This thesis aimed to contribute to the question – ‘How can we enable education staff to recognise and seek help for children and young people with common mental health problems?’ - by understanding and addressing gaps in the literature. A scoping review of the existing literature regarding education staff’s ability to recognise anxiety and depression symptoms in

students is presented in chapter two. Chapter four presents a feasibility study of a novel brief online training video for education staff, aimed at improving recognition and help-seeking for students with anxiety symptoms. Chapter three provides contextual links between these two chapters. Additional methods and results from the empirical study can be found in chapter 5 and 6 respectively. The final chapter integrates the findings of the scoping review and empirical study, discussing the implications for future research. It also provides a critical account of the full thesis portfolio.

## **CHAPTER TWO**

### Scoping Review

Written for publication to Child and Adolescent Mental Health Journal

(Author guidelines for manuscript preparation – Appendix 2.A)

## Chapter 2. Scoping Review

### Education staff's ability to recognise anxiety and depression symptoms in students: A scoping review

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**Acknowledgements:** Thanks go to Oluwafunmilade Adenekan (Assistant Psychologist) and Shreya Marcus<sup>2</sup> for supporting the screening process.

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Word/Page Count:10572 (inclusive of tables, figures, and references)

### Abstract

**Background:** Early detection of common mental health problems in children and young people could improve access to services (Stiffman et al., 2004; Patel et al., 2007). This scoping review aimed to explore the existing literature regarding education staff's ability to recognise students with anxiety disorders or depression, methods used and associated variables. **Method:** Following PRISMA-ScR criteria, we searched 5 databases to identify peer reviewed articles (1997-2022) which met our inclusion criteria. **Results:** 21 studies were included which focused on teachers' ability to recognise mental health symptoms without the use of screening tools or assessment measures (11 depression; 8 anxiety; 2 both). Most anxiety studies were carried out in primary school settings and depression studies in secondary schools. Two main methods were used to measure teacher recognition: teacher nomination (real students) or vignettes (hypothetical students) with limited standardisation and validity of measures. Outcomes suggested limited ability to accurately recognise students with anxiety or depression. However, there was large variation in results due to the heterogeneity of methods and/or variables impacting recognition such as symptom characteristics. Associations between recognition and variables such as characteristics of education staff/students; education setting and symptoms were reported. **Conclusions:** Research examining education staff's ability to recognise student anxiety and depression is limited and heterogeneous, with notable gaps in the samples and education settings included. Efforts are needed to develop standardised measures to advance our understanding of education staff's role in early identification.

#### Key practitioner Message:

- Education staff are uniquely positioned to identify common mental health problems in students, without the use of screening tools, but no review has mapped the existing literature in this field.



- This scoping review found that research into education staff's ability to identify students with anxiety disorders or depression, without the use of screening tools, is limited and heterogenous in measures used.
- Future research should investigate recognition of common mental health problems by non-teaching staff, in Further Education settings, and develop standardised measures to advance our understanding of this field.

*Keywords:* Mental Health; Depression; Anxiety; School; Students

## Introduction

Globally, anxiety and depression are the most common mental health problems in young people (World Health Organization, 2021) . According to NHS digital statistics, rates of mental health problems are increasing (Bor et al., 2014; Newlove-Delgado et al., 2021; Sadler et al., 2018). Lifetime trajectories suggest that approximately half of all mental health problems are established by 14 years old (Kessler et al., 2005; Solmi et al., 2021). These common mental health difficulties can have a significant impact on a child or young person's (henceforth collectively referred to as young people) educational attainment, social functioning and health (Cresswell, Waite & Hudson, 2020; Wickersham et al., 2021) and increases risk of substance abuse, unemployment and adult mental health difficulties (Clayborne, Varin & Colman, 2019; Copeland et al., 2014; Johnson et al., 2018). There is a clear case for early detection, prevention initiatives, and access to support for students.

However, there is a large discrepancy between prevalence rates of mental health difficulties in young people and those accessing evidence-based treatment, across the UK, USA and Australia (Green et al., 2005; Lawrence et al., 2015; Merikangas et al., 2011). Globally, school-based approaches are being used to address the growing mental health needs of young people (McLaughlin, 2017) including interventions targeting anxiety and depression (Caldwell et al., 2019). However, reaching students with anxiety or depression remains challenging (Girio-Herrera et al., 2019).

Disclosures of problems with anxiety from young people to education staff has been found to be a significant predictor of service use (Colognori et al., 2012). Bronfenbrenner's ecological systems model (1977) and Kelly & Coughlan's (2019) model of youth mental health recovery highlight the importance of positive connection with microsystems (e.g. education setting) in a young person's development and mental health recovery. To understand the gap between need and access to mental health support, one should consider the influence of wider systems. Young people are unlikely to seek support themselves (O'Connell, Pote & Shafran,

2021; Radez et al., 2021), therefore, the responsibility falls to the systems around them. The Gateway Provider Model (Stiffman et al., 2004) and Children's Network Episode Model (Costello et al., 1998) highlight the critical role "gateway providers," such as teachers, play in accessing mental health services.

There is an expectation for education staff to recognise and support students with mental health difficulties (Department of Health and Social Care [DHSC] & Department for Education [DfE], 2017). For the purposes of this paper education staff refers to staff within an education setting who work directly with young people. This includes non-teaching staff (e.g. learning support staff, SENCos, and pastoral support teams) who also have the opportunity to recognise changes in behaviour that indicate a problem (Rothì, Leavey & Best, 2008).

Education staff report lacking confidence in their ability to recognise signs of mental health difficulties like anxiety and depression (Neil & Smith, 2017; Shelemy, Harvey & Waite, 2019b). For this review, recognition is defined as the acknowledgement or identification of something as true or worthy of consideration based on previous knowledge or experience. Knowledge and beliefs about mental health disorders – referred to as Mental Health Literacy (Jorm et al., 1997) - can aid recognition. The concept of Mental Health Literacy (MHL) has been adapted over time and, although it includes recognition, this is a distinct construct, within MHL. Although knowledge of common mental health difficulties may support someone's ability to recognise these (Jorm, 2000), improving mental health knowledge has not always been found to improve recognition (Moor et al., 2007).

As young people spend a significant proportion of their time in school, education staff are uniquely positioned to detect common mental health difficulties and refer students to access support (Johnson et al., 2011). Teachers are common informants in the clinical assessment process for young people (De Los Reyes et al., 2015). There is growing evidence that school-based mental health screening could be a means of identifying students at risk of mental health problems (Humphrey & Wigelsworth, 2016; Wood & McDaniel, 2020). However, the use of

mental health screening in schools is low (Bruhn, Wood-Groves & Huddle, Bruhn et al., 2014; Burns & Rapee, 2021; Wood & McDaniel, 2020). The key barrier to using universal screening in schools is lack of resources, including work force, time and financial cost (Burns & Rapee, 2021; Wood & McDaniel, 2020) .

Education staff identification is a more common, non-intrusive, cost-effective way of identifying students at risk or showing signs of common mental health conditions (Cunningham & Suldo, 2014). This is consistent with literature regarding access to mental health services (Merikangas et al., 2011) and multi-informant clinical assessments (De Los Reyes et al., 2015). To date only one systematic review has investigated teacher recognition of student anxiety and depression symptoms (Yamaguchi et al., 2018). The review focused on studies that used teacher nomination, without the use of screening tools or assessment measures, compared to self-report measures or clinical interviews. The review is only published in a Japanese-language journal so is not widely accessible. The review was limited to studies that rated agreement between teacher identification and student self-report measures or clinical interviews. It did not include other measures of identification (e.g. vignettes). It also limited the population in the studies reviewed to teachers and not education staff more broadly.

Due to the breadth and apparent heterogeneity of the literature, an important next step is to identify and map out the available literature. We aimed to conduct a scoping review to explore the existing literature on education staff's ability to recognise anxiety and depression symptoms in school aged students (4-19-year-olds), identify gaps in the literature and provide direction for future research including possible systematic reviews.

### **Methods**

A scoping review methodology was used, and the protocol was registered on Open Science Framework (<https://osf.io/63sbd>). This review draws upon the Arksey and O'Malley (2005) scoping review framework, advanced by Levac, Colquhoun & O'Brien (2010) and the Joanna Briggs Institute (Peters et al., 2015). The framework uses the following phases:

### **Development of research questions**

The broad review questions were: 1) What is the existing evidence available on education staff's ability to recognise anxiety and depression symptoms in school-aged students (4-19-year-olds), without the use of screening tools or assessment measures? 2) What methods have been used to investigate this? 3) What is known about the factors that are associated with education staff's ability to recognise anxiety and depression symptoms in students?

### **Identifying relevant studies**

The following databases were used: PsychINFO; MEDLINE Complete; CINAHL; British Education Index and ERIC all hosted by EBSCO. The search strategy can be found in Appendix 2.B. Only English language papers were included, but from any country. Yamaguchi et al. (2018) limited their search from 1997, which was replicated in this review. Papers were limited to peer reviewed journals.

### **Selection of relevant studies**

A database search was conducted using the specified search strategy followed by initial scoping and refinement of questions. Results were exported into reference management software (EndNote) and duplicates removed. Results were exported to Excel for initial screening (title and abstracts) by one reviewer (HW). A second reviewer (OA) independently screened 10% of the titles and abstracts. Agreement between reviewers was rated "moderate" ( $\kappa=0.41$ ); discrepancies were discussed, and consensus reached. For those deemed relevant, full texts were retrieved and assessed according to inclusion/exclusion criteria by HW and a second reviewer, SM. Data was extracted from the studies that met full inclusion criteria.

The inclusion criteria determined for the full text screening were: 1) a sample of education staff directly working with school aged students (4–19-year-olds); 2) reported quantitative data on education staff's recognition, without the use of screening or assessment measures, compared to a validated self-report measure, clinical assessment, or diagnostic criteria (DSM/ICD); 3) focused on the identification of anxiety and depression symptoms, with

data reported separately. Anxiety disorders included: Generalised Anxiety Disorder, Separation Anxiety Disorder, Social Anxiety/Phobia and panic disorder, as these are the most common in this age group in community and clinical settings (Albano, Chorpita & Barlow, 2003; Sadler et al., 2018). Articles were excluded if participants were counselling, educational, clinical or school psychologists as these roles suggest a referral has been made for support. Articles were excluded if the focus was on students with additional needs such as autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), learning disabilities, cognitive or developmental delays due to differences in prevalence, symptoms and comorbidities that may impact recognition (Green, Berkovits & Baker, 2015).

### **Charting the data**

Data from relevant studies were extracted into table format including: author, title, date, country of origin, publication journal, study design/method, education staff sample, sample size, education setting, type of mental health difficulty, outcome measures, factors influencing recognition, and key findings.

### **Collating, summarising and reporting the findings**

The PRISMA-Sc checklist was used and PRISMA flow diagram presented to illustrate the scoping review process. Tables summarising the study characteristics and key findings were presented. Based on the Synthesis without meta-analysis (SWiM) guidelines (Campbell et al., 2020), a narrative approach and basic numerical analysis were used to describe the study design and methods used, type of difficulty investigated, country of origin, different populations, measures used and factors investigated, alongside the table summary. Due to high levels of variability in the methods and data collected, a descriptive narrative method was used and reported. A range of percentages across the studies were reported where possible.

A formal critical appraisal and quality assessment of the relevant studies was outside of the scope of this review, and a descriptive approach was used in line with the recommendations by Arksey and O'Malley (2005). This review aimed to map out the existing literature, without

rating the evidence, using the Arksey and O'Malley scoping review framework as outlined above.

## **Results**

The search was conducted in January 2022, yielding a total of 6860 unique studies. The PRISMA flow diagram summarises the screening process (see Figure 2.1). Details of the 21 unique studies relevant to the review can be found in Table 2.1 (Summary of study characteristics) and 2.2 (Summary of outcome measures and relevant results).

### **Study characteristics**

#### ***Population characteristics***

Most studies focused primarily on teaching staff (19/21 studies). There was limited reporting on teacher role. One study included learning support staff (Moor et al., 2007) and two studies included guidance teachers (Moor et al., 2000 & 2007) but data was not separated from teaching staff. Sweeney et al. (2015) included school/guidance counsellors alongside teachers. Two studies used a sample of school nurses (Haddad et al., 2018 & Haddad & Tylee, 2013).

Participants were recruited from a variety of education settings. Ten studies recruited from only primary school age settings (aged 4-11), eleven recruited from secondary school age settings (11+) and one across multiple settings (Green et al 2018). Two studies did not describe the education setting (Haddad et al, 2018 & Haddad & Tylee, 2013), but both used a sample of school nurses who covered several settings. No study recruited from further education settings.

Most studies were carried out in the USA (7/21), followed by the United Kingdom (6) and Australia (4). The other studies were from Brazil (1), Greece (1), Japan (1), Nigeria (1).

#### ***Type of mental health disorder***

Eight studies focused exclusively on anxiety disorders, eleven on depression, and two included both (reporting separate data). Of those that included anxiety disorders, two specified separation anxiety (Loades & Mastroyannopoulou, 2010; Splett et al., 2019); one social anxiety (Sweeney et al., 2015) and one panic disorder (Yamaguchi et al 2021). Most anxiety studies

were completed in primary school settings (7/10) and depression studies in secondary school settings (9/13).

### ***Study design/methodology***

Most studies used a cross-sectional design (15/21). Two methods were used: education staff nomination, referred to as teacher nomination (real students), or vignette-based approach (hypothetical students; see Table 2.2). Vieira et al. (2014) used both methods, while nine studies used just teacher nomination (4 depression; 4 anxiety; 1 both reported separately) and 11 used a vignette-based approach (6 depression; 4 anxiety; 1 both reported separately).

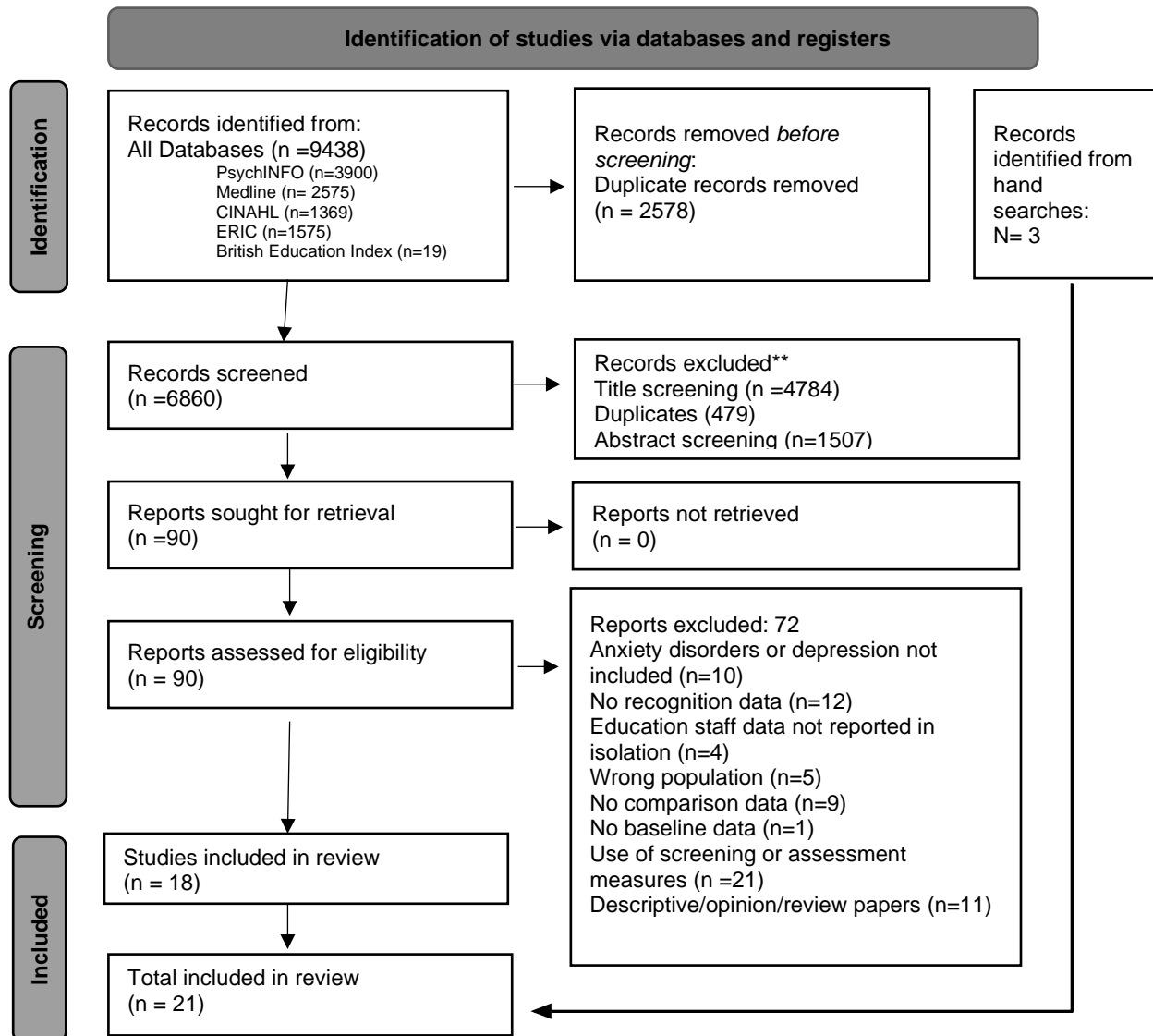
Studies developed or adapted questionnaires for their study purposes. There was minimal reporting on how measure validity had been assessed, with only three studies reporting details. Green et al. (2018) and Green, Oblath & Holt (2022) reported details of construct validity, using experts in child or adolescent mental health to rate the realism of vignettes and to rate the severity of impairment using the Children's Global Assessment Scale (Shaffer et al., 1983). Green et al. (2022) assessed the validity further by asking school psychologists to do the same. One study (Haddad & Tylee, 2013) developed a standardised measure for the purpose of measuring recognition of and knowledge of depression, which was used in one other study (Haddad et al., 2018). Other studies referred to the use of experts to check face and content validity of vignettes (Loades & Mastroyannopoulou, 2010) or adapted vignettes/questionnaires from previous research, but the validity of was not always reported (Headley & Campbell, 2011; Missenden & Campbell, 2019; Splett et al., 2019).

Vignette studies varied in what data was collected to demonstrate recognition of anxiety or depression. Some collected categorical data on whether staff could correctly identify the vignettes (Loades & Mastroyannopoulou, 2010; Splett et al., 2019; Yamaguchi et al., 2021); some used multiple-choice options (Yamaguchi et al., 2021), some had to state the disorder (Aluh, Dim, & Anene-Okeke, 2018; Jorm et al., 2010), while others had to recognise there was a problem (Loades & Mastroyannopoulou, 2010; Splett et al., 2019; M. A. Vieira et al., 2014).



Other vignette studies asked staff to rate on a scale (Haddad et al., 2018; Haddad & Tylee, 2013) whether there was a problem or rank vignettes based on level of concern, severity or need for referral (Green et al., 2018; Green et al., 2022; Headley & Campbell, 2011; Loades & Mastroiannopoulou, 2010; Missenden & Campbell, 2019).

Teacher nomination studies also varied in how they measured staff's ability to recognise anxiety or depression. Measures included percentages of staff who identified cases (Auger, 2004), percentages of cases that were nominated by staff (Cunningham & Sudlo, 2014; Dadds et al., 1997; Kleftras & Didaskalou, 2006; Moor et al., 2000 & 2007; Sweeney et al., 2015; Vieira et al., 2014), and differences in scores of students nominated and not nominated (Layne, Benrstein & March, 2006; Neil & Smith, 2007). Comparative measures also varied with self-reported measures or clinical interviews used.

**Figure 2.1.***PRISMA flow diagram of article identification and selection***Relevant results*****Anxiety disorders***

The percentages of education staff correctly identifying anxiety disorder vignettes ranged from 73%-98% (Loades & Mastroyannopoulou, 2010; Splett et al., 2019; Yamaguchi et al., 2021). Missenden and Campbell (2019) and Headley and Campbell (2011) found accuracy was

dependent on level of severity. Missenden and Campbell (2019) found secondary school teachers were more accurate in recognising 'very severe' or 'non-anxious' vignettes but ranked 'mild' as more in need than 'moderate' or 'severe' vignettes. The authors reported that the mild vignettes had a more externalising presentation making them more likely to be considered a problem. This was also reported by Headley and Campbell (2019) with primary school staff.

Teacher nomination was less accurate for anxiety recognition. Cunningham and Sudlo (2014) reported 41% sensitivity, suggesting poor accuracy in identifying students with at risk levels of anxiety based on student self-report; missing 59% of students who met the threshold for elevated anxiety. Dadds et al.(1997) reported 56.2% of teacher nominated students met the DSM-IV criteria for any anxiety disorder; and Sweeney et al (2015) reported only 12.3% of nominated students met criteria for social anxiety disorder. There was variation reported in results comparing self-report scores and teacher nominated and non-nominated, with one reporting no difference and therefore poor accuracy (Neil & Smith, 2017) and another finding significant difference (Layne et al., 2006). Only three studies investigated recognition of anxiety in secondary school settings, all using different methods and measures with varying degrees of reported accuracy (Missenden & Campbell, 2019; Sweeney, Masia Warner, et al., 2015; Sweeney, Warner, et al., 2015; Yamaguchi et al., 2021).

### ***Depression***

The percentage of education staff in secondary school settings correctly identifying depression vignettes ranged from 16.3%-81% (Aluh et al., 2018; Green et al., 2022; Haddad et al., 2018; Haddad & Tylee, 2013; Jorm et al., 2010; M. A. Vieira et al., 2014). One study (Aluh et al., 2018) found particularly low accuracy (16.3%), whereas other studies ranged from 57%-81%. In secondary school settings, sensitivity of teacher nomination ranged from 27%-58% (Auger, 2004; Moor et al., 2000 & 2007). In primary school settings, Kleftras and Didaskalou (2006) reported 14% of students with mild or severe symptoms were accurately recognised by staff, whereas Cunningham and Sudlo (2014) reported 50% sensitivity meaning that teachers

were able to accurately identify approximately half of students that reported at risk levels of depression.

**Table 2.1***Summary of Study Characteristics, Grouped by Disorder*

Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
<i>Anxiety studies</i>							
Dadds et al. (1997)	Australia	Evaluate the effectiveness of early intervention for anxiety disorders in children.	Randomised control trial	Teachers	Not reported	Anxiety	Primary School
Headley & Campbell (2011)	Australia	Investigate the ability of primary school teachers to recognise and refer children with anxiety symptoms.	Cross sectional	Teachers	n=358 (299 completed)	Anxiety	Primary School
Layne et al. (2006)	USA	Investigate which anxiety symptoms teachers are aware of and whether this differs according to student characteristics	Cross-sectional	Teachers	Not reported	Anxiety	Elementary School
Loades & Mastroyannopoulou (2010)	United Kingdom	Investigate a) whether teachers can distinguish between children presenting symptoms at different levels of severity; b) teachers are more concerned about students presenting with	Cross-sectional	Teachers	n=113	Anxiety-Separation Anxiety	Primary, Junior and Middle School

Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
		emotional disorders or behavioural disorders; c) what factors predict accuracy of teacher recognition.					
Missenden & Campbell (2019)	Australia	Investigate secondary school teachers' ability to appropriately refer adolescents with anxiety symptoms for school counselling or other support, depending on level of severity.	Cross-sectional	Teachers	n=120 (113 completed)	Anxiety	Secondary School
Neil & Smith (2017)	United Kingdom	Investigate teachers' ability to recognise children's anxiety and somatic symptoms, and how they do this.	Cross-sectional	Teachers	n=52 (51 completed)	Anxiety	Primary School
Splett et al. (2019)	USA	Investigate factors (worry, seriousness and need for intervention) of the Gateway Provider Model, on identification and need for intervention.	Cross-sectional	Teachers	n=153	Anxiety - Separation anxiety disorder	Elementary school
Sweeney et al. (2015)	USA	Evaluate the use of a two-step, school-based screening	Cross-sectional	Teachers and School/Guidance counsellors	Not reported	Anxiety – Social anxiety	High school

Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
		procedure to identify social anxiety disorder in students.					
<i>Depression studies</i>							
Aluh et al. (2018)	Nigeria	Assess mental health literacy among teachers with a focus on depression.	Cross sectional descriptive	Teachers	n=120 (104 completed)	Depression	Secondary School
Auger (2004)	USA	Determine whether teachers were able to identify students who self-report depressive symptoms, without the use of screening tools, and to investigate the effect of teacher and student characteristics on teacher identification.	Cross sectional	Teachers (regular education teachers, special education teachers, English-as-a-second language teachers)	n=52	Depression	Middle School
Green et al. (2018)	USA	Investigate teacher identification and support of students with emotional and behavioural problems and whether this varied based on type and severity of the problem.	Cross-sectional	Teachers	n=172	Depression	Middle and High School

Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
Green et al. (2022)	USA	Investigate what student, teacher and school characteristics were associated with teacher identification, concern and referrals of students with depression or oppositional defiant disorder.	Cross-sectional	Teachers	n=1386 (501 completed)	Depression	Middle and High School
Haddad et al. (2018)	UK	Investigate the effectiveness of QUEST training, a specially developed education programme for school nurses to support recognition of depressive symptoms.	Cluster randomised control trial	School nurses	n=146	Depression	Not reported
Haddad & Tylee (2013)	UK	Develop and test the use of the QUEST measure to evaluate school nurses' recognition of depression.	Development of an outcome measure	School nurses	n=146	Depression	Not reported
Jorm et al. (2010)	Australian	Evaluate Mental Health First Aid training for high school teachers.	Cluster randomised control trial	Teachers	n=560 (327 completed)	Depression	High School
Kleftaras & Didaskalou (2006)	Greece	Investigate a) the proportion of	Cross-sectional	Teachers	n=35	Depression	Primary School



Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
		students with depressive symptoms; b) teacher readiness and ability to identify those students; c) teacher perceptions of causation d) compare teacher characteristics with teachers' causal attributions.					
Moor et al. (2007)	Scotland	Evaluate an education package aimed at training teachers to recognise depression. Pre-training data reported.	Randomised control trial	Teachers (guidance teachers, subject teachers, class registration and learning support teachers)	n=151	Depression	Secondary School
Moor et al. (2000)	Scotland	Pilot the evaluation of depression recognition training for teachers.	Pilot study pre-post	Teachers (guidance and subject teachers)	n=16	Depression	Secondary School
Vieira et al. (2014)	Brazil	Evaluate teachers' ability to recognise and appropriately refer students with possible mental health problems and the effectiveness of training for teachers.	Exploratory descriptive: 1) Pre-post 2) case-control	Teachers	n=45 (32 completed)	1) Depression 2) Internalising problems (anxiety and depression)	Middle and High School

Author (Year)	Country	Aim/purpose	Study design	Sample	Sample size	Disorder	Education setting
<i>Both Anxiety and Depression</i>							
Cunningham & Suldo (2014)	USA	Examine the accuracy of teacher identification of elementary school children with self-reported depression and/or anxiety.	Cross sectional	Teachers	n=26	Depression and Anxiety	Elementary School
Yamaguchi et al. (2021)	Japan	Investigate mental health literacy in East Asian high school teachers including knowledge recognition and stigma.	Cross-sectional	Teachers	n=665	Depression & Panic disorder	High School

**Table 2.2***Summary of Methods, Outcome Measures and Relevant Results Grouped by Disorder*

Citation	Method	Outcome measures	Relevant results
<i>Anxiety studies</i>			
Dadds et al. (1997)	Teacher nomination	Teacher questionnaire: asked to nominate 3 students displaying the most anxiety and 3 displaying the most disruptive behaviour. Validity of measure not reported.  Compared to self-report measure, Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond, 1979), and clinicians rating using DSM-IV diagnostic criteria from parent clinical interview.	Low convergence between teacher nomination and self-report (2% were identified by both). 56% of teacher nominations met criteria for anxiety. 39% of students, who met the criteria for anxiety, were not identified by teachers. Self-report only were more likely to have GAD and simple phobias. Teacher nomination only, were more likely to have social or simple phobia. Significance not reported.
Headley & Campbell (2011)	Vignette-based approach	Teachers Anxiety Identification and Referral Questionnaire (TAIRQ, designed for the study): including 5 vignettes of differing severity, adapted from Green et al. (1996); Percy et al. (1993); and Spence Children's Anxiety Scale (SCAS; Spence, 1998). Asked to rate intent to refer and rank vignettes in order of need for referral. Validity of vignettes not measured.	Teachers correctly ranked need of referral (recognition) according to severity, however 'moderate' was, on average, ranked higher than 'severe' anxiety. Significant main effect of severity on ranked need for referral but not child or teacher gender. Significant main effect of severity and teacher gender on intention to refer but not child gender.
Layne et al. (2006)	Teacher nomination	Teacher questionnaire: Asked to nominate the 3 most anxious from list of participating students. Validity of measure not reported.  Compared to MASC (March, 1997)	Students nominated by teachers had significantly higher MASC total scores than those not nominated. Nominated students also had significantly higher separation anxiety, social anxiety and physical symptoms but not harm avoidance. No significant gender differences in those nominated and not nominated. Significant interaction between teacher nomination and year group.
Loades and Mastroyannopoulou (2010)	Vignette-based approach	Vignette questionnaire (adapted from Day (2002) and Stein et al (2001)): Vignettes of an emotional disorder (separation anxiety disorder) or a	93.8% correctly identified clinical levels of SAD, 79.6% of teachers described sub-clinical levels as a problem, and 25.7% for the

Citation	Method	Outcome measures	Relevant results
		behavioural disorder (ODD) at three levels of severity for each. Categorical data of perceived problem reported. Face and content validity discussed.	problem-free vignettes. Significant difference between recognition and student gender, more accurate for male behavioural problem and female emotional problem. Significant difference in level of concern between behavioural and emotional disorders; more concerned with behavioural disorders.
Missenden and Campbell (2019)	Vignette-based approach	Vignette questionnaire (TAIRQ; Headley and Campbell, 2011).	'Very severe' and 'Minimal anxiety' were correctly identified through teacher ranking of need to refer; 'mild', 'moderate' and 'severe' were not. Significant negative correlation between teacher rated severity and decision to refer. No significant difference of identification and referrals between male and female teachers.
Neil and Smith (2017)	Teacher nomination	Teacher questionnaire: asked to rate students in class on 5-point scale for anxiety and somatic symptoms separately, then 3 students nominated as having debilitating levels of these symptoms. Validity of measure not reported.  Compared to SCAS; Child and Parent Report (Spence, 1998; Nauta et al. 2004) and the Children's Somatization Inventory (CSI: Walker & Green, 1989)	No significant difference in SCAS scores for teacher nominated and non-nominated for anxiety symptoms but significant for somatic symptoms. Small, significant, positive correlation between teacher ratings and child reports of anxiety and somatic symptoms; most strongly associated with child self-report of social phobia/panic agoraphobia and least with physical injury fears but these were not significant.
Splett et al. (2019)	Vignette-based approach	Vignette questionnaire: 6 vignettes, 3 internalising (separation anxiety) and 3 externalising (ODD) at different levels of severity (severe, moderate and no-problem). Asked to rate level of concern and severity on a 10-point scale to determine identification. Based on Teachers' Mental Health Literacy Questionnaire with adequate validity and reliability (Jacobs & Loades, 2016; Loades and Mastroiannopoulos, 2010)	No significant difference in accuracy of severe externalising (100%) and internalising (98%). Significant difference between moderate externalising (91%) and internalising (73%).

Citation	Method	Outcome measures	Relevant results
Sweeney et al. (2015)	Teacher nomination	Teacher nomination: submitted names of students perceived as experiencing significant social anxiety.  Compared to MASC (March et al 1997); Social Phobia and Anxiety Inventory for Children (SPAI-C, Biedel et al 1995) and Anxiety disorders interview schedule for DSM-IV: Parent and Child Versions (ADIS-P/C, Silverman & Albano, 1996)	In step 1 of screening 123/4742 (2.6%) nominated by school personnel, of which 45 (36.6%) were also identified by self-report measures and 78 (63.4%) were only identified by nomination. Of the 1271 screened positively in step 1, 90.3% were self-report only, 6.1% were school personnel only and 3.5% both. Of the 204 diagnosed in step 2 only 12.3% had been nominated by school personnel, only 7 (3.4%) were exclusively identified by school personnel.
<i>Depression studies</i>			
Aluh et al. (2018)	Vignette-based approach	Vignette questionnaire (adapted from Burns & Rapee, 2006): two vignettes, one depression and one not, based on DSM-IV criteria. Categorical data through coding responses to "What do you think is the matter?" Validity of measure not reported.	16.3% teachers correctly identified depression (16.1% male. 16.9% female). 6.7% misidentified depression in the non-depressed vignette. No significant difference between gender or years' experience regarding identification. Age of staff significance not reported but there was a difference. 96.2% participants suggested the depressed vignette needed help; 85% for the non-depressed vignette.
Auger (2004)	Teacher nomination	Teacher questionnaire: teachers asked to make a depression rating (not depressed-extremely depressed) and judgement (need for intervention) for a list of participating students. Validity of measure not reported.  Compared to self-report Reynolds Adolescent Depression Scale (RADs, Reynolds, 1987), and clinical interview with students using Diagnostic Interview Scale for Children edition IV (DISC-IV; Saffer et al., 2000)	27% of teachers identified students with DISC-identified depression, 73% judged them as non-depressed. 91% judged the non-depressed students as such and 9% as depressed.  Regular education teachers were significantly more congruent with students self-report than special education teachers. 6 <sup>th</sup> grade teachers were more successful than 7 <sup>th</sup> and 8 <sup>th</sup> grade teachers. Familiarity and hours spent with student also significant.
Green et al. (2018)	Vignette-based approach	Vignette questionnaire: internalising problem was depression (female); externalising problem was ADHD for elementary school and ODD for middle	Significant difference in concern between problem type, severity, and school level. Vignettes designed to be severe and those

Citation	Method	Outcome measures	Relevant results
		and high school (male). Recognition was measured based on level of concern and seriousness. Construct and criterion validity of vignettes discussed.	describing depression were rated significantly more concerning and serious, and less common than vignettes designed to be moderate and describing externalising problems. Middle school teachers found problems significantly more concerning and serious but less common than elementary school teachers. Significant interactions between school level and problem type (e.g. Middle school teachers rated externalising problems more concerning and serious than elementary school teachers, but not internalising problems).
Green et al. (2022)	Vignette-based approach	Vignette questionnaire: vignettes adapted from Centre for Multicultural Mental Health Research (Chavez et al,2010) either an internalising (depression) or externalising disorder (ODD) based on DSM criteria, male or female, moderate or severe. Asked to rate seriousness, concern, typicality, and likelihood of referral. Construct and criterion validity of vignettes discussed	56.7% correctly identified depressed vignette. Identification was significantly associated with vignette severity (more likely to identify severe vignette). Female teachers were significantly more likely to identify depression and rate as more serious, concerning and common. High school teachers more likely to identify depression than middle school teachers (non-significant) but significantly less likely to refer. Significant differences found between region on likelihood to refer. Racial composition of school impacted ratings of seriousness and likelihood of referrals. Teacher gender significantly interacted with vignette gender and severity.
Haddad et al. (2018)	Vignette-based approach	QUEST measure (Haddad & Tylee, 2013)	Baseline data suggested 66.3% sensitivity and 48.3% specificity.
Haddad and Tylee (2013)	Vignette-based approach	QUEST measure: 12 vignettes measuring detection of depression. Participants asked to rate whether the vignette had depression, answers categorised as non-depressed and depressed. Content validity of measure discussed.	65% sensitivity (for both specialist and non-specialist nurses) and 47% specificity (51% specialist vs 45% non-specialist, not statistically significant). Weak correlation between knowledge scores and detection ability but no significant difference between the

Citation	Method	Outcome measures	Relevant results
			27% highest and lowest knowledge scores and sensitivity of depression recognition.
Jorm et al. (2010)	Vignette-based approach	Vignette questionnaire: one depression vignette (female); asked open-ended question about what the problem was. Validity of measure not reported.	81% of intervention group recognised depression pre-training and 80.6% of control group
Kleftaras and Didaskalou (2006)	Teacher nomination	Teacher questionnaire: teachers identified students who displayed problematic behaviours, including emotional problems (depression) and behavioural problems. Validity of measure not reported.  Compared to Greek translation (not validated) of Children's Depression Inventory (CDI, Kovacs 1985,1992)	14.1% of students with CDI scores indicating mild or severe depression were identified by teachers, 11 had mild symptoms and 3 had severe symptoms. 85.8% of students displaying either mild or severe depressive symptoms were not identified by teachers. Behavioural problems were reported more frequently than emotional ones (non-significant).
Moor et al. (2007)	Teacher nomination	Teacher questionnaire: asked to indicate students from class lists they thought to be "possibly/probably depressed". Validity of measure not reported.  Compared to self-report Mood and Feelings Questionnaire (MFQ) and interviews using Schedule for Affective Disorders and Schizophrenia for school age children (K-SADS, Kaufman et al 1997)	Experimental group recognised 52% of cases prior to training and the control group 41%. Significant difference between schools, specific characteristics not reported.
Moor et al. (2000)	Teacher nomination	Teacher questionnaire: asked to identify which pupils were currently depressed or had been in the past year from class lists. Validity of measure not reported.  Compared to self-report MFQ and K-SADS (Kaufman et al 1997)	58% sensitivity and 62% specificity.
Vieira et al. (2014)	Vignette-based approach Teacher nomination:	1) Vignette questionnaire: 6 vignettes indicating high risk of psychosis, depression, conduct disorder, hyperactivity, mania, and normal behaviour. Asked if vignette had any mental health	1) 80% (24/30) of teachers correctly identified depression vignette and 66.7% correctly recognised normal 2) Of the 26 students identified by teachers as having a problem, 15.4% had internalising

Citation	Method	Outcome measures	Relevant results
		problem and need for referral. Validity of measure not reported. 2) Teacher nomination: teachers asked to list students they perceived as needing a mental health assessment.	problems, 3.8% had externalising, 34.6% had both, and 46.2% had none. The control (not identified by teachers): 46.2% had internalising problems; 11.5% had externalising problems; 0 had both; and 42.3% had no problems.
<i>Both Anxiety and Depression</i>			
Cunningham and Suldo (2014)	Teacher nomination	Teacher questionnaire: teachers asked to nominate 3 students presenting with anxiety and/or depression, from a list of participating students. Up to six students could be nominated. Validity of measure not reported. Compared to student self-report measures: Multidimensional Anxiety Scale for Children (MASC; March 1997) and Children's Depression Inventory (CDI, Kovacs, 2003)	Teachers accurately identified 50% and 41% (sensitivity) of students with elevated depressive and anxiety symptoms respectively. Teachers misidentified 16% (depression) and 17.5% (anxiety) of those without elevated symptoms. Student characteristics: no significant differences across identified groups for either depression or anxiety. Symptom characteristics: mean scores did not significantly differ for those nominated or not nominated by teachers for depression or anxiety.
Yamaguchi et al. (2021)	Vignette-based approach	Vignette questionnaire: 3 vignettes (depression, schizophrenia and panic disorder based on DSM-V criteria). Asked to select the name of the illness from a list of 6 choices: "no illness", "depression", "schizophrenia", "panic disorder", "social phobia", and "I don't know". Vignettes not validated.	54.1% recognised depression, 78% recognised panic disorder. No significant difference across age groups, academic degree, MH training, experience. However, female teachers correctly recognised depression and panic significantly more than male teachers.

Notes. Attention deficit hyperactivity disorder (ADHD); Diagnostic Statistical Manual of Mental Disorders (DSM); Generalised anxiety disorder (GAD); Opposition defiant disorder (ODD)



### **Variables associated with education staff's ability to recognise anxiety and depression symptoms in students**

Variables were grouped into four categories: characteristics of education staff; students; education setting; and mental health (see Table 2.3 which summarises the variables included in each study and whether they were associated with recognition). Six studies did not analyse data on variables associated with staff recognition.

Teacher gender was the most common staff characteristic explored, with female teachers being more likely to identify anxiety or depression than male teachers (Green et al., 2022; Headley & Campbell, 2011; Yamaguchi et al., 2021). This trend was also seen in other studies but non-significant (Aluh et al., 2018; Auger, 2004; Missenden & Campbell, 2019). There was a significant interaction between teacher gender, student gender and vignette severity with female teachers more concerned about female students and less concerned about male students than male teachers (Green et al., 2022).

Student characteristics of gender (Loades & Mastroyannopoulou, 2010) and year group (Auger, 2004; Layne et al., 2006) were found to significantly impact education staff's ability to recognise anxiety and depression. The significance of student gender interacted with problem type. There was better recognition of female students with internalising problems and males with externalising problems (Loades & Mastroyannopoulou, 2010). However, student gender was not found to be significant in four other studies (Auger, 2004; Cunningham & Suldo, 2014; Headley & Campbell, 2011; Layne et al., 2006). Although non-significant, Cunningham & Suldo (2014) reported a higher proportion of boys were identified in the true positive than false negative group and higher miss rate (false negatives) in girls than true positives. The non-significant findings may be due to sample size and reduced power, increasing the chances of type II error.

There were differences found by setting and age where studies recruited across multiple education settings and age groups. Green et al. (2021) found that high school teachers were

significantly more likely to identify depression than middle school teachers but less likely to refer. Green et al. (2018) found a significant interaction between school level, problem type and rating of concern, severity, and commonality. However, the externalising problem presented in the vignette for the elementary school teachers differed to middle and high school which may explain this finding.

Symptom characteristics were the most common variable investigated. The category of 'problem type' included studies that looked at different types of symptoms (e.g. anxiety symptoms or externalising vs internalising symptoms). Three studies looked at types of anxiety symptoms suggesting that less observable symptoms (e.g. generalised anxiety) were less likely to be identified in a classroom setting. However, this was not significant or significance was not reported (Dadds et al., 1997; Layne et al., 2006; Neil & Smith, 2017). Studies that compared externalising and internalising problems were often found to significantly impact staff's ability to recognise anxiety or depression (Green et al., 2018; Layne et al., 2006; Loades & Mastroiannopoulou, 2010; Splett et al., 2019; Vieira et al., 2014). There was one exception to the direction of effect: Green et al (2018) found greater levels of concern for depression than externalising problems.

**Table 2.3***Variables investigated in included studies in relation to education staff recognition*

Author (Year)	Education staff								Student			Education setting				Symptom		
	Gender	Age	Race/ethnicity	Years experience	Role	Training	Knowledge/Experience of MHD	Familiarity/relationship	Gender	Year group	SES	Race/ethnicity	School level	Type of school	Region/Urbanicity	Racial/ethnic composition	Severity	Problem type
Aluh et al. (2018)	X																	
Auger (2004)	X			X	X*	X	X*	X	X*									
Cunningham & Suldo (2014)								X	X	X	X						X	
Dadds et al. (1997)																		X
<sup>a</sup> Green et al. (2018)												X*					X*	X*
Green et al. (2022)	X*		X	X								X	X	X	X	X	X	
Haddad & Tylee (2013)						X	X											
<sup>a</sup> Headley & Campbell (2011)	X*								X								X*	
<sup>a</sup> Layne et al. (2006)									X	X*								X*
Loades & Mastroyannopoulou, (2014)									X*								X	X*
<sup>a</sup> Missenden & Campbell (2019)	X																X*	
<sup>a</sup> Neil & Smith (2017)																		X*
Splett et al. (2019)																	X*	X*
Vieira et al. (2014)																		X*
Yamaguchi et al. (2021)	X*	X				X	X											

Notes: X means study included factor in analysis, \*means significant result found for recognition measure. <sup>a</sup> means study reported recognition based on ratings or ranking of severity, concern and/or need to refer.

### Discussion

This scoping review found 21 unique studies regarding education staff's ability to recognise anxiety and depression in students (4-19 years old), without the use of screening tools or assessment measures. Most studies used a sample of teachers, with little detail about teachers' roles (e.g. pastoral responsibilities) or how this was associated with recognition. Anxiety studies were typically set in primary school settings and depression studies in secondary school settings. Two measurement approaches were used to assess recognition: teacher nomination (real students) and vignette-based approaches (hypothetical students). Overall, vignette studies appeared to find better accuracy of recognition than teacher nomination. Most studies concluded that teacher recognition of student mental health problems was limited. There was some evidence that recognition was more accurate for more severe and observable presentations.

The purpose of a scoping review is to descriptively map out the existing literature and not to evaluate the quality of the studies or synthesise data further than this, as often identified studies are often heterogenous in nature due to the breadth of the search (Arksey & O'Malley, 2005). In the anxiety studies, the vignette studies reported better accuracy than the teacher nomination. However, variables such as type of anxiety, level of severity and measures used, appear to impact the results. For example, of the three studies that investigated recognition of anxiety in secondary school students, Yamaguchi et al. found 78% of teachers could accurately recognise panic disorder from the vignette from multiple choice options, whereas Sweeney et al (2015) found only 12.3% of students nominated by staff met the criteria for social anxiety disorder. Missenden and Campbell (2019), however, reported that teachers could accurately rank very severe and non-anxious vignettes but not mild, moderate or severe symptoms. The heterogeneity across the studies makes it impossible to draw conclusions and this is not the purpose of a scoping review. However, it appears teaching staff are more limited in their ability to recognise internalising symptoms or less severe presentations.

The depression studies found staff to have limited ability to recognise depression symptoms in primary or secondary schools, though again this varied greatly. Two studies using vignettes found approximately 80% of teachers to correctly identify depression from a vignette (Jorm et al., 2010; Vieira et al., 2014). However, accuracy was much lower, though still varied, in other studies both vignette and teacher nomination (Aluh et al., 2018; Auger, 2004; Cunningham & Sudlo, 2014; Green et al., 2022; Haddad et al., 2018; Haddad & Tylee, 2013; Kleftara & Didaskalou, 2006; Moor et al., 200 & 2007). As discussed with the anxiety studies, the variation in results is likely to be due to the heterogeneity of methodology and confounding variables that may have influenced staff's ability to recognise depression symptoms, as mapped out in Table 2.3.

Low rates of identification are consistent with the broader literature of gateway providers' ability to recognise mental health problems within primary care settings (Stiffman et al., 2004). Those that reported higher accuracy (Jorm et al., 2010; Loades & Mastroyannopoulou, 2010; Splett et al., 2019; Yamaguchi et al., 2020) found variability based on characteristics like student gender and problem severity. However, it is difficult to draw any firm conclusions, given the varied methodology and measures used, which could also account for the findings. Standardised measures were not used and the quality of the measures was not always clearly reported, a problem shared with the wider MHL research (Mansfield, Patalay & Humphrey, 2020; Yamaguchi et al., 2020).

Of the two main methodological approaches to assessing accuracy of teacher recognition, vignette-based approaches typically reported greater accuracy than teacher nomination. Significant differences have been found between teachers' responses to student's behaviours in vignettes and the same behaviour in real life (Lucas, Collins & Langdon, 2009). Educational settings are dynamic and complex and participants may not respond to vignettes in the same way as they would in reality (Norcini, 2004). Vignettes are designed to give concise information about one child in isolation, rather than in a busy classroom context and evolving

over time. Therefore, the ecological validity of vignette studies is limited and may not reflect actual recognition.

Variation in teacher recognition rates in anxiety studies may be explained by different types of disorders or symptom presentation. Symptoms more observable in an education setting (e.g. panic, somatic symptoms or separation anxiety) appeared to be more likely to be recognised than less observable symptoms (e.g. generalised anxiety, rule following and threat monitoring) Layne et al., 2006; Neil & Smith, 2017). Symptom characteristics were the variable most consistently associated with problem recognition. Arguably more severe problems present with more observable behaviours and so are more easily recognised. This was not the case in Headley and Campbell's (2011) and Missenden and Campbell's (2019) studies, but this was explained by the more observable symptoms being included in the 'mild' vignette used. Externalising/behavioural problems were also found to be more identifiable than internalising/emotional problems (Green et al., 2018; Layne et al., 2006; Loades & Mastroiannopoulou, 2010; Splett et al., 2019; Vieira et al., 2014).

Anxiety and depression are classified as internalising disorders and teachers appear less accurate in recognising these than externalising problems, which are also more observable and arguably, more problematic in the classroom context. This supports the findings in multi-informant mental health assessments for young people, where symptom characteristics (e.g. externalising vs. internalising) acted as a moderator for convergence between informants (e.g. young person, parents and teachers), with higher convergence between informants when problems were more observable (De Los Reyes et al., 2015). Therefore, internalising disorders such as anxiety and depression could be an important area to target when supporting education staff in their role in detection.

The majority of the studies (n=19) used a sample of teaching staff. This raises concerns about the generalisability of the findings as participants were not representative of the workforce in education settings. Approximately 50% of the school workforce in England are non-teaching

staff, of which approximately 30% are teaching assistants (DfE, 2021). Campbell (2004) found that support staff increased the number of students accurately identified with a mental health problem in an urban school setting. Non-teaching staff could play an important role in early identification and supporting students' wellbeing and therefore should be included in research in this area. Furthermore, few studies (n=9) provided descriptions of teachers' roles (e.g. class teacher; guidance teachers), with limited detail about pastoral responsibilities. Only one evaluated this variable, finding education staff's role did influence ability to recognise depression (Auger, 2004). Research should consider the impact of staff roles and relationship with student and consider how this can be controlled for or targeted when offering training to staff.

No studies were identified that explored the ability of college staff to recognise anxiety or depression symptoms in young people. NHS digital statistics found that there has been an increase in mental health problems in 17-19 year-olds from 10.1% to 17.4% (2017-2021). This presents a clear gap in the literature and should be explored in future research.

Our review found two methods used to measure education staff's ability to recognise anxiety or depression symptoms in adolescents: vignettes or teacher nomination. Of the studies that used vignette-based questionnaires, the majority were developed for the purposes of the study (n=7) and few reported on the psychometric properties of the measure (n=4). Given the lack of reporting on the quality (psychometric properties) of the measures used and the content of the measures, it is difficult to determine the value of the results. This is a limitation identified in MHL more broadly (Wei et al., 2015; Yamaguchi et al., 2020), possibly due to the recent criticism that MHL should not be considered a stand-alone construct but a multi-construct theory (Spike & Hammer, 2019). Researchers need to be clear on the construct being measured and develop standardised measures including evaluation and reporting of the psychometric properties of measures to improve the quality of studies.

### **Strengths and Limitations**

To our knowledge this is the first review exploring the existing literature of education staff's ability to recognise anxiety and depression symptoms without the use of screening tools or assessment measures. This is important universal screening is not commonly used in education settings (Burns & Rapee, 2021; Wood & McDaniel, 2020) and young people are unlikely to seek help themselves (Radez et al., 2021), so education staff play a key role in identification of mental health problems and supporting help-seeking in students. A systematic and rigorous methodology was used to transparently and comprehensively identify relevant studies, summarising the findings using a narrative synthesis approach (Arksey & O'Malley, 2005; Tricco et al., 2018).

However, the search did not include non-English-language papers, grey literature (e.g. doctoral theses) or non-peer reviewed studies, which may have provided additional sources of information for the review. A quality assessment was not carried out; while not a requirement of scoping reviews (Arksey & O'Malley, 2005) it could help to understand the quality of the literature to develop this field further. However, as this was the first scoping review to summarise the existing evidence, methods and associated factors, the primary aim was to scope out the existing literature not assess quality.

### **Future research**

Based on this review, there is limited quantitative data on education staff's recognition of anxiety and depression in students and further quality research is needed.

Existing research is limited in the sample used, with only two depression studies using non-teaching staff (Haddad et al., 2018; Haddad & Tylee, 2013). Campbell (2004) found that support staff increased the number of students accurately identified with a mental health problem in an urban school setting. Support staff may be uniquely positioned to recognise changes in behaviour in both primary and secondary school settings (Rothì et al., 2008) but little is known about their ability to recognise and support help-seeking. With the recommendation of



using a whole school/college approach to target students mental health and wellbeing and with approximately half of the workforce in education settings being non-teaching staff (Department for Education, 2021), this is an important population to develop our understanding of to and advance research further.

No studies were found that investigated recognition of anxiety or depression in Further Education settings. This age group (17-19 years old) has the highest prevalence of anxiety and depression (Sadler et al., 2018) so should be a focus for future research. There were also fewer studies investigating anxiety in secondary schools. Although anxiety disorders have an earlier onset (Kessler et al., 2005), rates of anxiety and depression increase from childhood to adolescence (Sadler et al., 2018). Therefore, further exploration is needed to understand education staff's ability to recognise anxiety in adolescence.

Further methodological development and standardisation is clearly required. Most studies developed measures for the purposes of the study and validity was not assessed or reported. In the studies reviewed, no standardised measure was consistently used, limiting the research and conclusions drawn. Refining the construct of recognition and developing standardised and valid measures will facilitate comparison between studies so clearer more robust conclusions can be drawn.

The review found this field of research to be heterogeneous in its methodology and limited across different settings, mental health conditions and populations. This leads to difficulties synthesising findings beyond a narrative or drawing firm conclusions. However, it does provide clear gaps in the literature and areas of improvement for future research.

Furthermore, future research should consider the use of teacher nomination or a vignette-based approach. There are strengths and limitations of both. The vignette-based approach provides a standardised method, that is more time efficient within a research context, however, is arguably less ecologically valid (Lucas et al., 2009). The teacher nomination methods may provide a greater insight to the reality of teacher recognition but involves a lengthy

and complex research process regarding completion of student assessment measures or clinical interviews, with a risk of bias within the student sample based on parental and student consent. Careful consideration is needed based on the reliability and validity of methods and the primary purpose and feasibility of different methods in future studies.

### **Conclusion**

In conclusion, although education staff's ability to recognise anxiety and depression in students (4-19 years old) without the use of screening tools or assessment measures appears limited, firm conclusions cannot be drawn due to the limited number and heterogeneous methodology of the studies. There is some evidence that teacher recognition is more accurate for externalising or more observable symptoms. There are clear gaps in the literature including sample, settings, and the development of standardised measures, providing a clear direction for future research to better understand education staff's ability to recognise anxiety and depression in students.

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**CHAPTER THREE**

Bridging Chapter

### Chapter 3. Bridging Chapter

The scoping review in chapter two explored the existing literature on education staff's ability to recognise anxiety and depression symptoms in students (4-19 years old). The review focused on studies that did not use screening tools or assessment measures to determine recognition. Screening tools are not often used in schools (Bruhn et al., 2014; Burns & Rapee, 2021; Wood & McDaniel, 2020), due to lack of resources both in terms of work force, time and financial cost (Burns & Rapee, 2021; Wood & McDaniel, 2020). The review highlighted the heterogeneity of the research in this area, gaps in the literature and variation in the results. Some studies found education staff to be able to recognise anxiety and depression symptoms. These typically used a vignette-based approach. Teacher nomination studies suggested poor to moderate ability to recognise symptoms. Across both disorders and methods there was large variation in results.

Only three studies were found that investigated anxiety disorders in a secondary school setting. Yamaguchi et al (2021) found 78% of teachers accurately recognised a vignette presenting panic disorder. Missenden and Campbell (2019) reported that teachers were able to identify 'very severe' and 'non-anxious' vignettes, but did not correctly rank/rate mild, moderate or severe vignettes. Finally, Sweeney et al (2015) found only 12.3% of the students nominated by teachers met the criteria for an anxiety disorder. Panic disorder symptoms are more observable and therefore are likely to be easier to identify. In Yamaguchi's study participants were given multiple choice answers, which may also have impacted on the ability to recognise a specific disorder. The most studied factors associated with recognition ability were severity and problem type. Within the anxiety disorder studies, less observable anxiety symptoms such as generalised anxiety, rule following and threat monitoring were less likely to be identified by education staff and less severe symptoms were less accurately recognised (Layne et al., 2006; Loades & Mastroyannopoulou, 2010; Neil & Smith, 2017; Splett et al., 2019; Vieira et al., 2014).

Early recognition and access to support services can help to minimise the immediate impact and long-term consequences of common mental health problems such as anxiety (Creswell et al., 2020; Wickersham et al., 2021). Schools and further education settings are being asked to take on responsibility for early identification of children and young people with mental health difficulties to improve access to support (Department of Health & Social Care & Department for Education, 2017). Although conclusions could not be drawn from the review due to the heterogeneity of the research it appears that a number of students with symptoms of anxiety, particularly internalised presentations, are missed. Training could offer a means to support education staff's role in recognition and help-seeking behaviours. Mental health literacy training for education staff aims to improve staff's knowledge and beliefs to aid recognition. Limited studies on Mental Health Literacy (MHL) training explore recognition of mental health problems, often focusing on knowledge outcomes instead. Those that did report recognition data, focused on depression not anxiety (Yamaguchi et al., 2020). Very few explored help-seeking behaviours; intention to or actual help-seeking behaviours (Yamaguchi et al., 2020).

There are clear gaps in the literature of education staff's recognition of anxiety and depression symptoms in schools and colleges and of the outcomes of existing mental health literacy training. The following chapter presents the empirical research paper aimed to assess the feasibility and acceptability of a brief novel training video, aimed at improving education staff's ability to recognise anxiety symptoms in adolescents and decision to refer to appropriate support, using the Gateway Provider Model which focuses on key influences that impact gateway providers' decision to refer to young people's services (Stiffman et al., 2004). A sister-project by Ben Carroll (Trainee Clinical Psychologist) was completed focusing on improving recognition of depression symptoms.

## **CHAPTER FOUR**

### Empirical Study

Written for publication to British Journal of Educational Psychology

(Author guidelines for manuscript preparation – Appendix 4.A)

## Chapter 4. Empirical Study

### **A brief online training intervention for improving recognition and referral of adolescents with anxiety symptoms by education staff: A feasibility study.**

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**Acknowledgement:** Thank you to Tamara Sancho, Rebecca Scales, Charlotte Ring, Ciaran Stewart and James Carnell for their participation in the project refinement team supporting the development of the brief training video.

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Word/Page Count: 5608 (excluding abstract, tables, figures, references and appendices)

### Abstract

**Background:** Early identification of anxiety symptoms allows adolescents to access support early and prevent long-term consequences (Patel et al., 2007). Education staff play an important role in identifying and referring students with mental health difficulties (e.g. anxiety). However, teachers' ability to accurately identify and refer students appears limited, particularly for internalising symptoms or less severe presentations. **Aims:** This study aimed to evaluate the feasibility and acceptability of delivering brief online training to English education staff, for improving identification and referrals of mild-moderate anxiety in adolescent students, including limited efficacy analysis. **Sample(s):** Education staff working with adolescents in secondary school and further education settings in the England. **Methods:** This was a feasibility study using a within groups pre-post design. Participants were asked to complete vignette-based and feedback questionnaires. **Results:** 57 participants were recruited to the study with 32 (56%) completing participations, below the recruitment feasibility marker of 54 based on power analysis. The majority of participants were female (72%), with ages ranging from 20-59 years. The majority of participants came from secondary schools (72%) and Ofsted ratings of 'Good' (72%). Approximately half were non-teaching staff (52%) and had pastoral responsibilities (48%). Participants found the brief online training video engaging, clear, helpful and would recommend it to colleagues. The research process also appeared acceptable for participants. Areas of development were noted regarding the vignette questionnaire and recruitment process for future trials. Preliminary analyses suggest promise with shifts in favour of the training. **Conclusions:** The novel brief online training appears to be a feasible and acceptable method of delivery for those that participated. However, recruitment feasibility was limited with only 56%, who expressed an interest, completing the study. Limitations of the study are discussed. Firm conclusions cannot be drawn. However, preliminary results show promise and warrant further testing.

**Keywords:** Mental Health, School, Anxiety, Youth

## Introduction

Anxiety disorders are the most common mental health problem in adolescents in England (Sadler et al., 2018; Vizard et al., 2018). Anxiety disorders significantly impact adolescents' education, social functioning and health (Creswell et al., 2020; Woodward & Fergusson, 2001) and increase the risk of adult mental health difficulties (Copeland et al., 2014; Woodward & Fergusson, 2001).

Early identification and access to support can improve recovery and prevent long term difficulties (Patel et al., 2007). There is convincing evidence that cognitive behavioural therapy (CBT), one of the main evidence-based treatments (NICE, 2013), is effective in treating anxiety in adolescents (Baker et al., 2021; James et al., 2020). However, the majority of adolescents with mental health difficulties do not receive treatment (Green et al., 2005) and, in England, only 2% of those with anxiety disorders received CBT (Reardon et al., 2020). Accessing treatment requires problem recognition and help-seeking behaviours. Adolescents are unlikely to seek mental health support themselves (Radez et al., 2021). Therefore, adults working with adolescents need to recognise emerging difficulties and support help-seeking behaviours.

### Role of Education Staff

The UK Government's transformation plans for children and young people's mental health service provision places greater responsibility on schools and colleges (Department of Health & Social Care [DHSC] & Department for Education [DfE], 2017). Education staff are often the first professional that adolescents seek support from (O'Reilly et al., 2018) and are uniquely positioned to observe early signs of anxiety and refer to appropriate support (DHSC & DfE, 2017; Johnson et al., 2011).

However, education staff lack confidence in their ability to recognise and support mental health difficulties (Rothì et al., 2008; Shelemy et al., 2019a); particularly internalising disorders such as anxiety (Papandrea & Winefield, 2011). Teachers are less accurate, less concerned, and less likely to refer internalising problems over externalising problems (Loades &

Mastroyannopoulou, 2010; Splett et al., 2019). Both vignette (Headley & Campbell, 2011; Missenden & Campbell, 2019) and teacher nomination (Cunningham & Suldo, 2014; Dadds et al., 1997) studies have found limited accuracy in teachers' ability to identify anxiety disorders, unless severe or with externalising presentations (Wickson et al., in preparation). Furthermore, Trudgen and Lawn (2011) found that the threshold of concern about students' anxiety from teachers was subjective and not based on formal knowledge or training.

### **Mental health training for education staff**

With increased focus on student mental health by Government and new Ofsted frameworks (DHSC & DfE, 2017; Ofsted, 2022); mental health training for education staff has been introduced (Anderson et al., 2019; Yamaguchi et al., 2020). Mental Health Literacy (MHL) programmes are designed to improve recognition and help-seeking behaviours. MHL is defined as the "knowledge and beliefs about mental disorders which aid...recognition, management or prevention." (Jorm et al., 1997) p. 182). MHL training has shown improvements in education staff's knowledge and attitudes. However, limited research has explored the impact on staff's helping behaviours or student outcomes, such as accuracy of identification, referrals, or receipt of interventions following identification (O'Connell et al., 2021; Yamaguchi et al., 2020). Those that do report on helping behaviours have found limited effect (Splett et al., 2019; Yamaguchi et al., 2020).

Despite increasing rates of anxiety disorders in adolescence (Newlove-Delgado et al., 2021), there is limited research exploring training for education staff or setting-based interventions for these common mental health difficulties in Further Education settings (Gee et al., 2020; Gee et al., 2021; Yamaguchi et al., 2020). Systematic reviews of MHL training have highlighted gaps in the evidence and argue that there needs to be a greater number of randomised studies or higher quality non-randomised studies; reporting on staff's helping behaviours or student outcomes, and on the implementation, methodology and research



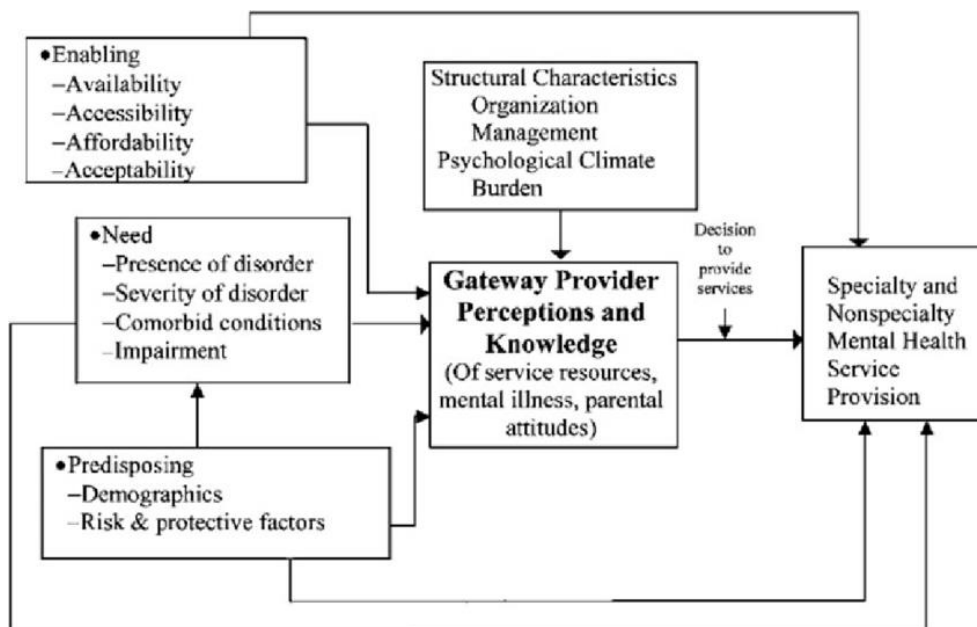
process to improve the quality of the evidence base (Carroll et al., in preparation; Yamaguchi et al., 2020).

### **Gateway Provider Model**

Few MHL training programmes have been designed with a theoretical basis (Kelly et al., 2007), although the Theory of Planned Behaviours (TPB; Ajzen, 1991) as a conceptual framework has been used in some (Kelly et al., 2007). While TPB provides a general model for behaviour change, specific models have emerged regarding education staff's ability to recognise and refer those identified as presenting with mental health difficulties. The Gateway Provider Model (GPM; Figure 1. Stiffman et al., 2004), provides a framework of the key factors that influence 'gateway providers' - who can facilitate access to mental health services (e.g. non-mental health professionals such as education staff) - decision to refer. It suggests that gatekeepers' perception and knowledge of a young person's needs (e.g. presence, severity, impairment, comorbidity); predisposing factors (e.g. risk and protective factors); enabling factors (e.g. resource/service availability, accessibility, affordability and acceptability), and structural characteristics (e.g. organisation, management and psychological climate) influence their decision regarding service provision (Stiffman et al., 2004). These factors are more predictive of mental health service use than young people's self-reported need (Stiffman et al., 2000; Stiffman et al., 2001). Therefore, training that addresses gateway providers' perception of need, and knowledge of resource may help improve onward referrals (Splett et al., 2019; Stiffman et al., 2004).

**Figure 4.1**

The Gateway Provider Model (Stiffman et al. 2004)



A diagram of the Gateway Provider Model. Reprinted from 'Building a Model to Understand Youth Service Access: 'The Gateway Provider Model' (Stiffman et al., 2004)

### Online training

There has been a rapid growth in online training for professional development (Sinclair et al., 2016), providing greater flexibility, time efficiency and accessibility (O'Connell et al., 2021). However, there is limited research exploring online MHL training for education staff (Yamaguchi et al., 2020). Existing online MHL training, although indicating improvements, also focuses on knowledge and stigma outcomes rather than staff helping behaviours (Pereira et al., 2015). Furthermore, Pereira et al.'s MHL training (2015) had high attrition rates, arguably due to the length of time it took and availability of education staff, highlighting a need for brief flexible online training.

Education staff have reported a need for training in identifying mental health problems, particularly the more subtle signs of mental health difficulties (Shelemy et al., 2019b). Education staff highlighted a need for training to be engaging, applicable to an educational context, expert-led, and using a variety of approaches (e.g. videos, case examples; Rothì et al., 2008; Shelemy et al., 2019b). Furthermore, time pressures and psychological language have been found to be a barrier to training (Rothì et al., 2008). Offering brief online mental health training for education staff could overcome some of the barriers and meet education staff's needs.

### **Present study**

Using the GPM (Stiffman et al., 2004), a brief online training video was developed to support education staff's ability to recognise mild-moderate anxiety symptoms in students (aged 11-19) and refer to appropriate services. This study aimed to explore the feasibility of this brief online training for education staff, specifically by addressing the following questions: 1) Is the online training package feasible and acceptable to education staff in England? 2) Does the online training package show promise for improving education staff's recognition of mild-moderate anxiety symptoms and intention to refer?

## **Methods**

### **Design**

This is a mixed-methods feasibility and acceptability study (Bowen et al., 2009; Orsmond & Cohn, 2015).

### **Participants**

Participants included education staff working with adolescents (11-19-year-olds), in Secondary Schools and Further Education settings in England. The age limits were based on English secondary school entry age (11), and age range of sixth forms and colleges. Education staff included both teaching and non-teaching staff whose primary role was working with

students (e.g. learning support assistants or pastoral teams). Participation was voluntary and no remuneration was received.

Exclusion criteria were: working in non-mainstream settings, such as special educational needs provision, as targeted training in recognising anxiety symptoms within this population would be needed (Green et al., 2015); and receipt of mental health training within the last four weeks, as recent training may influence responses.

Priori power analysis, using G\*Power 3.1, estimated the required sample size of 54 participants when using the following parameters: effect size of 0.5 (medium, Cohen's d), an alpha significance of 0.05; and power of 0.95 for a two-tailed, paired samples t-test. However, it should be noted that null hypothesis testing is not the primary aim of a feasibility study which is more interested in the implementation of the novel intervention than trialing a smaller version of a planned larger study (Arain et al., 2010). However, the study used 54 as a feasibility marker for recruitment and retention.

### **Training Video**

A 15-minute online training video was developed by HW and BC with the project refinement team (clinical psychologists, education mental health practitioners and secondary school teachers) using the animation software VideoScribe (Appendix 4.B). The training aimed to support education staff in recognising mild-moderate anxiety symptoms and their intention to refer. It included: psychoeducation about anxiety symptoms using cognitive behavioural theory and the hot-cross-bun model to diagrammatically conceptualise the interactions between thoughts, emotions, physical feelings and behaviours (Padesky & Mooney, 1990); risk factors (Michael et al., 2007); the importance of early intervention (Patel et al, 2007); and information about referring. Content was guided by the GPM (Stiffman et al., 2004) drawing upon key components of the model, including: predisposing factors of anxiety disorder (e.g. adverse childhood experiences, risk factors and protective factors); needs of a young person with anxiety (e.g. how it might present in schools, impact/impairment, severity including

differentiating between “normal” anxiety and when it becomes a problem); enabling factors (e.g. what services are available and how to access them); structural factors (e.g. what organisational structure is in place in school to support staff identifying and referring for support). A downloadable resource based on the video content was also created and disseminated after data collection.

### **Procedure**

This project was carried out alongside a sister project, training education staff about adolescent depression, with joint recruitment and data collection (May-December 2021). A study advert was shared with potential participants through social media or gatekeepers (senior leadership staff in secondary schools, clinical and regional leads of Children and Young people’s Mental Health Services, and the Department for Education’s Children and Young People’s Mental Health Programme and Mental Health Delivery Division). HW/BC manually assessed eligibility (inclusion/exclusion criteria) following expressions of interest before randomly allocating participants to receive the anxiety or depression training using an online block randomisation generator ([www.sealedenvelope.com](http://www.sealedenvelope.com)). Participants were blind to their allocation prior to participation.

Participants were emailed a unique participant ID and a link to the survey with embedded training video on the JISC survey platform (<https://www.jisc.ac.uk/online-surveys>), with reminders after two weeks. They were asked to complete the survey in one sitting, approximately 30-40 minutes. The link led participants to the following pages: 1) project information sheet, 2) informed consent page, 3) demographic questionnaire and confidence ratings, 4) pre-training vignette questionnaire, 5) 15-minute training video, 6) post-training vignette questionnaire, 7) feedback questionnaire and confidence ratings, 8) debrief information, 9) thank you and exit page. After the data collection phase, the participants were offered the sister project’s training video and corresponding downloadable resource.

## **Ethics**

University of East Anglia Faculty of Medicine and Health Science Research Ethics Committee granted ethical approval (ref:202021-031). All participants provided informed consent via the online survey.

## **Data collection**

### ***Demographic questionnaire (Appendix 4.C)***

A demographic questionnaire obtained information on gender, age, job title and pastoral responsibilities, age range of students, years of experience, and Ofsted rating. Participants were also asked whether they had received mental health training in the past four weeks, and to describe the training.

### ***Confidence ratings (Appendix 4.C)***

Participants self-rated their confidence on 7-point-scales regarding their ability to “recognise signs of mild-moderate anxiety symptoms”; “knowing what to do” if they did spot signs; and their confidence in “spotting the difference between “typical” anxiety and when it has become a problem”.

### ***Vignettes questionnaire (Appendix 4.D)***

Vignettes were developed by the research team, based on previous vignette studies investigating teacher recognition of mental health difficulties (Loades & Mastroyannopoulou, 2010; Missenden & Campbell, 2019). The vignettes presented pre and post-training were different, but both included three vignettes of differing levels of severity: ‘severe’; ‘mild-moderate’ and ‘non-anxious’ (non-clinical levels of anxiety) as determined by the DSM-V (American Psychiatric Association, 2013) diagnostic criteria for Generalised Anxiety Disorder (GAD). GAD characteristics were used, as it is the most common anxiety presentation in adolescents (Vizard et al., 2018). There were a total of six different vignettes, two for each level of severity. Vignette students were aged 13 to 15 and gender was not specified. Single letters and neutral pronouns were used, as gender can affect teacher recognition (Loades &

Mastroyannopoulou, 2010). Construct validity was assessed prior to delivery by asking Trainee Clinical Psychologists (n = 24) to categorise the vignettes in terms of severity and disorder type. All vignettes were correctly identified.

After each vignette, participants were asked to: rate their confidence that a mental health problem was present; describe the problem (open response); and rate level of severity; level of concern; and their intention to refer the student (10-point-scales). These questions were adapted from Splett et al (2019) in accordance with the GPM.

### ***Feedback Questionnaire***

A structured feedback questionnaire (Appendix 4.E) was developed to explore participants' experience of the training package and study implementation, using statements with 7-point-scale and open-ended comments boxes.

## **Analysis**

### ***Feasibility and acceptability***

Participants' demographic data, recruitment and retention were reported descriptively. Based on priori power analysis, the study aimed for a sample size of 54, (between 20-80, Cocks & Torgerson, 2013) as a marker for recruitment and retention feasibility. Cocks and Torgerson (2013) argue that pilot studies should have a minimum recruitment of 20 or 9% of the sample size required for the larger trial.

Quantitative data about the feasibility and acceptability of the training video and the research process for participants was reported using descriptive analysis and the direction of mean scores on the Likert scales will be used to determine the feasibility and acceptability of the training video and research process for those who participated. Visual inspection of box plots was carried out to identify extreme outliers. Outliers were noted if in opposite direction to the mean and, due to the small sample size, 10% or more of responses for that item were deemed extreme outliers.

Qualitative content analysis was used to analyse open-ended questions and frequencies reported (Hsieh & Shannon, 2005; Morgan, 1993). Initial reviewing indicated that responses from open-response items about the training video and research process were not distinct from each other. Participants' responses were aggregated and coded together, under two main categories of acceptability of the training video and acceptability of the research process, followed by an inductive coding process. Further details of qualitative content analysis can be found in Chapter 5.

### ***Outcome data***

As feasibility studies are typically insufficiently powered, it is not appropriate to use null-hypothesis significance testing, however, preliminary evaluation of participants' responses to interventions can be carried out to assess whether the intervention demonstrates promise (Bowen et al., 2009; Orsmond & Cohn, 2015). The pre and post means and standard deviation, were calculated and the direction of change described. The estimated effect sizes for within-group differences were calculated, using Cohen's *d*, and confidence intervals reported. A quantitative content analysis approach was used for participants' descriptions of identified mental health difficulty (Kleinheksel et al., 2020; Morgan, 1993), reporting frequency count pre and post-training and direction of change, for further details see Chapter 5.

## **Results**

### **Sample characteristics**

Of the 29 participants, most participants were female and 30-39 years old (see Table 4.1). Most worked in secondary schools and in 'Good' Ofsted rated education settings. Approximately half were non-teaching staff and about half reported having pastoral responsibilities.

### **Table 4.1**

#### *Participant Characteristics*



Characteristic		Number of staff (n)	Percentages of staff (%)
Gender	Female	21	72%
	Male	8	28%
	Other	0	0%
Age range	<20	0	0%
	20-29	3	10%
	30-39	11	38%
	40-49	9	31%
	50-59	6	21%
	60-69	0	0%
	>70	0	0%
Ofsted Rating	Grade 1 (Outstanding)	7 21	24% 72%
	Grade 2 (Good)	1	3%
	Grade 3 (Requires Improvement)	0	0%
	Grade 4 (Inadequate)		
Education Setting	Secondary School	21	72%
	College	8	28%
Role in school	Teacher	14	48%
	Non-teacher role	15	52%
Pastoral Responsibilities	Yes	14	48%
	No	15	52%

## Feasibility

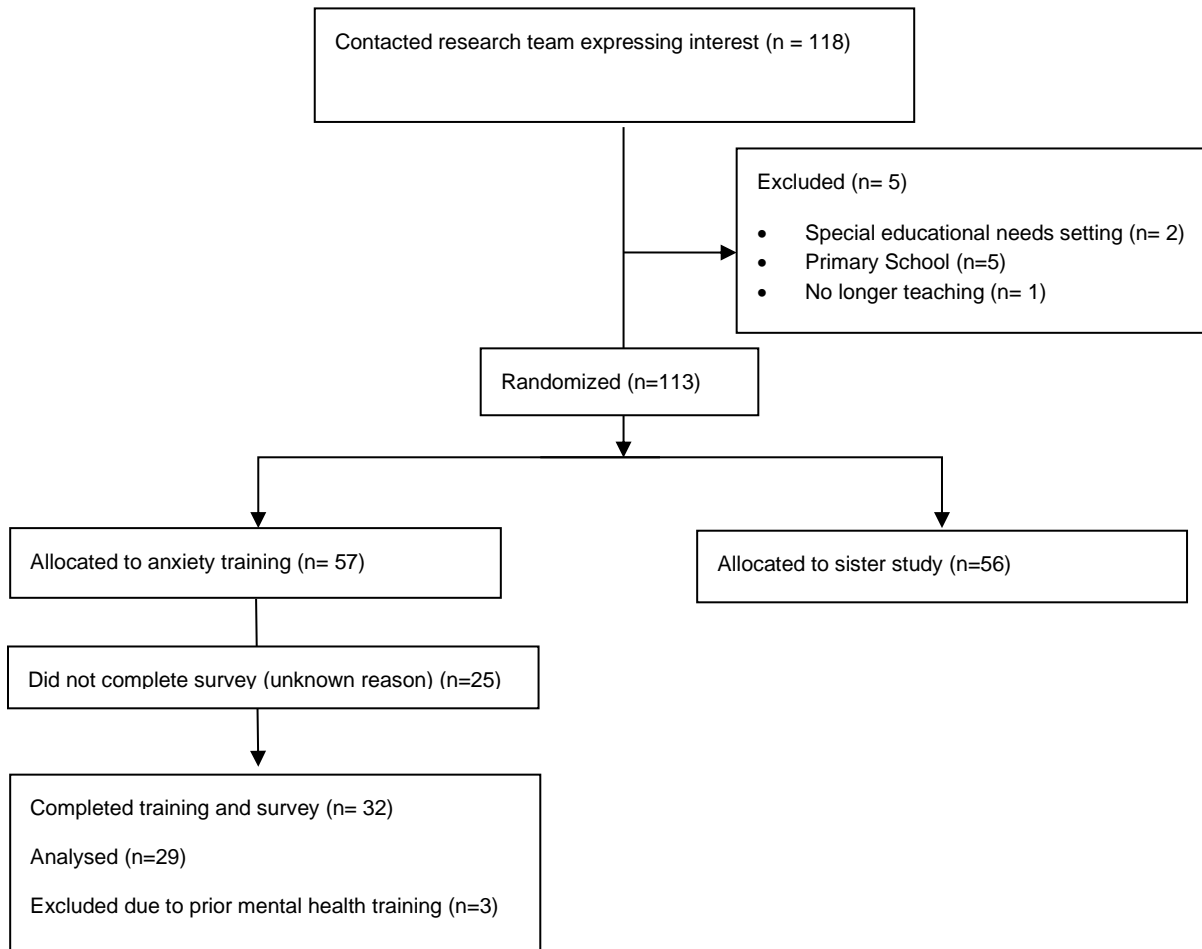
### *Recruitment, retention, and timescales*

Of the 118 education staff, who expressed an interest, 57 were randomly allocated to the anxiety study. Of those randomly allocated to the anxiety study, 32 (56%) completed the online survey and training, of which 29 were included in analysis. Figure 4.2 presents the flowchart of recruitment and study completion. Recruitment and data collection were carried out through May-December 2021. Recruitment was notably slower during school holiday periods and further gatekeepers and the use of social media advertising was needed to support recruitment during these times. Dissemination of information through gatekeeper emails during term time saw the

biggest spikes in expressions of interest. Reasons for non-completion were not collected from participants. Survey analytics showed five incidences where the training video was accessed and one where the first page of post-questionnaires was accessed then the participant left the survey. In two incidences, participants stopped at the penultimate page. In line with this, two participants contacted the research team querying whether their data had been saved as they had closed the browser without clicking finish, highlighting a problem with the online survey not automatically saving or providing an option to save as participants progressed. An option to save and return was then added. There were no other reported difficulties with accessing the JISC online survey or embedded training video.

As screening was not automated through the online survey platform, participants who had received mental health training within the last four weeks (3) were not excluded prior to the participant completing the survey. These were manually excluded, and data from 29 of those randomly allocated to the anxiety study (51%) were analysed.

## **Figure 4.2**

*Consort Flowchart of Participants***Acceptability**

The feedback questionnaire item means and standard deviation are shown in Table 4.2. Overall, mean scores suggest the video was acceptable to participants; it made sense, was engaging, helpful, applicable, and easy to access. Mean scores also suggest participants found the research process acceptable but there was greater variation in responses. There were four notable outliers for “I feel more confused about identifying anxiety than I did before participating in the research study?”, three participants scored 6 and one participants scored 7.

**Table 4.2***Mean and standard deviations of the training video and research process feedback*

	Item	Mean	SD
Statements relating to the training video	"The video made sense to me"	6.97	0.18
	"The video has been/will be helpful to me"	6.48	0.89
	"I would recommend the video to a colleague or other education staff"	6.68	0.65
	"I found the video boring"	1.42	0.89
	"The video content was applicable to an education setting"	6.48	1.26
	"It was too hard to access the video"	1.29	1.10
Statements relating to the research process	"I understood what the questions were asking me"	6.42	0.76
	"It took too long to complete the questionnaires"	2.84	1.61
	"I would have preferred to have been able to choose whether I watched the anxiety or depression video"	2.50	1.74
	"I enjoyed taking part in the research study"	6.09	1.30
	"I feel more confused about identifying anxiety than I did before participating in the research study?"	2.16	2.02
Notes: SD = Standard deviation; Scale scores ranged from 1 (Definitely do not agree) to 7 (Definitely do agree)			

There were fewer free-text responses given, with thirteen comments about the training video; nine comments on the research process and four general comments, see Table 4.3 for examples of codes, sub and main categories. All participants who responded about the quality of the training video commented positively. Three participants thought the training video was well paced and a suitable length. There were three comments about participants' positive experiences of watching the training video, including it being "easy to watch" and "calming". Participants also described the presentation as "clear and concise" (4), easy to understand (5), easy to follow (3), with engaging visuals (2). Most comments about the content were also positive, three reporting that it was informative and two stating it was relevant to the audience.

Four comments suggested adaptations. Two participants suggested that the training could be adapted to different settings, although gave no further details on how. One was from a college setting reporting that the video was focused more on a school setting rather than college, although they did feel it was still applicable. One participant reflected on language use

and participants' own experience of anxiety. In the training, participants were asked to remember a time they had felt typical levels anxiety. The participant felt that perhaps acknowledging staff may also experience anxiety beyond typical levels, would be more inclusive. One participant also suggested including consent to referrals, highlighting parental/carer consent as a barrier to accessing services.

Participants also commented on further use of the training video. Five participants suggested using the training video with colleagues, existing and new members of staff and the potential for use in teacher training. Two participants planned to use the training video and downloadable resource again themselves. One participant highlighted the need for training due to: increased need for mental health support for students; the challenges of recognising anxiety due to individual differences in presentation; and the limited time staff have seeing students in a week. The same participant also suggest that all staff should be provided with mental health training to support students once a mental health difficulty has been identified.

Five participants commented positively about their experience of taking part in research (e.g. "interesting", "liked the opportunity to take part, learn and provide feedback"). One participant referred to the research process supporting their learning through reading the vignettes. Two participants also felt accessing the training for the sister project would be helpful following participation.

Three participants commented on the clarity of the survey. One stated that it was "easy to follow". However, two reported confusion on two vignette questionnaire items: Q1. "Using the scale below, how confident are you that X is presenting with a mental health difficulty?" was reported to not be clear in what was being asked for; and Q5. "Please tick the box who would best support X at this point.", was not clear whether to choose multiple options or focus on one.

#### Table 4.3

*Categories, Codes and examples from Participants Qualitative Feedback*

Main Categories	Sub-categories	Codes (frequency of code)	Examples
Acceptability of training video	Timing	Length of time (1)	"appropriate lengths of time"
		Pace (2)	"Well paced"
	Presentation	Clear & concise (4)	"dialogue was clear and concise"
		Easy to understand (5)	"Presented in a way that would help to digest, understand, and remember"
		Easy to follow (3)	"Video was easy to follow"
		Engaging visuals (2)	"images maintained interest"
	Experience of watching	Easy to watch (2)	"easy to watch"
		Calming (1)	"calming to watch"
	Content	Informative (3)	"Very informative"
		Relevant (2)	"Great examples which can be related to by teachers"
	Future use	Wider staff use (5)	"Would use with colleagues"
		Future personal use (2)	"Want to watch it again"
	Adaptations	Adaptations for setting (2)	"School focused but could still apply to college settings"
		Inclusive language (1)	"a lot of training of this type talks in a way that assumes professionals themselves have not experienced significant mental health difficulties, and have only had 'regular' levels of stress/anxiety... so I think the language should be inclusive for the professionals as well who are working in this area."
		Additional content (1)	"Issues of consent was not raised and sometimes this has been a barrier to services by parents/carers"
	Need for training	Increased demand (1)	"Crucial that school provide mental health training to all members of staff to provide suitable support where necessary once recognised"
		Barriers to identifying (1)	"difficult to identify anxiety in all cases as it comes in "many shapes and sizes"...only seen by a teacher for 20 mins and 5 hours a week"
	Other	General positive comments (5)	"Video was excellent"
		Confidence (1)	"I feel confident today and the foreseeable"
Acceptability of research process	Clarity of survey	Clear (1)	"Well set out and easy to follow"
		Confusion of question (2)	"First question not clear...they had a mental health difficulty or how big the mental health difficulty was"
	Participation in research	Access to resources (2)	"looking forward to accessing the other video"
		Positive opinion of participation (4)	"liked the opportunity to take part, learn and provide feedback"

		Learning from participation (1)	"Scenarios helped gain understanding of difficulties"
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### Preliminary analysis of outcome data

Table 4.4 shows the frequency counts for the content analysis codes of participant descriptions when asked "If you did think X was presenting with a mental health difficulty, how would you describe it?". The frequency counts suggest a pre- to post- training improvement in identification of anxiety for mild-moderate symptoms; from 38% to 70% of participants explicitly referencing anxiety in their description. There were no other mental health difficulties described pre or post training for mild-moderate vignettes. There were also fewer blank responses and uncertainty from participants post training for the mild-moderate vignettes.

**Table 4.4**

*Frequency Count of Codes from Participant Descriptions*

Codes	Description	Example	Frequency Counts					
			Non-anxious		Mild-Moderate		Severe	
			Pre	Post	Pre	Post	Pre	Post
Identified Anxiety	Responses explicitly identify anxiety, using the word anxiety. It does not include responses that used the word anxiety but described typical levels or not problematic.	"Showing signs of anxiety through stomach and headaches, avoidance and concern about talking /thinking about future and options. Seems distracted and not engaging."	2	2	11	20	13	17
Anxiety +	It includes those that explicitly referenced anxiety and potential comorbidities.	"showing signs of anxiety and perhaps even depression..."	0	0	0	0	6	2

Codes	Description	Example	Frequency Counts					
			Non-anxious		Mild-Moderate		Severe	
			Pre	Post	Pre	Post	Pre	Post
Language indicative of anxiety	Responses that include descriptions of symptoms and or use of terms such as worry, stress, anxious, that are indicative of anxiety but do not explicitly reference anxiety.	“impact on their physical health sleeping etc., worrying over and above and for a longer time, difficulty switching off”	5	1	6	3	2	3
No mental health difficulty	Responses that state there is no mental health difficulty present. This includes those that suggest the level anxiety presented is “typical”. This also includes that responded N/A.	“They seem to just be concerned with exams and school. No alarm bells.”	19	9	0	0	0	0
Low Mood	Responses that reference explicitly identify low mood or depression. This does not include those that suggest depression/low mood comorbidly with anxiety.	“depression, about not enjoying course, and is impacting on her health, feeling sick, being tired, not wanting to go outside, and isolating herself in the library away from friends”	0	0	0	0	1	0
Unsure	Responses that explicitly referenced uncertainty in their description of anxiety, using terms such as “possible” or “probable”.	“Potential signs of Anxiety are showing, would need to learn more about home life etc to determine the severity”	1	0	3	1	0	0



Codes	Description	Example	Frequency Counts					
			Non-anxious		Mild-Moderate		Severe	
			Pre	Post	Pre	Post	Pre	Post
Other	Responses that do not meet the criteria for the above codes	“Concerning, it is impacting on their social wellbeing.”	1	0	0	0	1	1
Blank	Responses that were left blank.		1	17	9	5	6	6

Table 4.5 and 4.6 show the measures of central tendency and dispersion, alongside estimated effect size of pre-post differences. All within-group differences were in a direction indicating training had improved recognition, perceived severity, and concern for students. All had small-medium effect sizes except likelihood to refer for the non-anxious vignette. Participants' general confidence of identifying mild-moderate symptoms of anxiety; their confidence in knowing what to do if they did spot symptoms; and confidence in spotting the difference between typical levels of anxiety and problematic levels all suggest a positive shift following training, with large effect sizes.

**Table 4.5**

*Within-group difference from vignette questionnaires at pre and post training*

Item	Severity of Vignette	Mean (SD)		ES of within-group difference (95% CI)
		Pre	Post	
How confident are you that X is presenting with a mental health difficulty?	Non-anxious*	1.97 (2.69)	1.41 (2.21)	<b>0.32</b> (-0.06 - 0.69)
	Mild-Moderate	5.66 (1.74)	6.97 (1.82)	<b>-0.74</b> (-1.15 - -0.32)
	Severe	7.38 (1.88)	8.52 (1.70)	<b>-0.62</b> (-1.01 - -0.21)
How serious are X's difficulties?	Non-anxious*	1.48 (1.43)	1.07 (1.28)	<b>0.37</b> (-0.01 - 0.74)
	Mild-Moderate	4.86 (1.77)	5.66 (1.50)	<b>-0.50</b> (-0.89 - -0.12)

Item	Severity of Vignette	Mean (SD)		ES of within-group difference (95% CI)
		Pre	Post	
	Severe	6.83 (1.71)	7.83 (1.73)	<b>-0.62</b> (-1.01 - -0.21)
How concerned would you be if X was one of your students?	Non-anxious*	1.41 (1.55)	1 (1.34)	<b>0.33</b> (-.04 - 0.71)
	Mild-Moderate	5.24 (1.77)	5.86 (1.55)	<b>-0.37</b> (-0.74 - 0.01)
	Severe	7.17 (1.73)	8.00 (1.711)	<b>-0.57</b> (-0.96 - -0.18)
How likely are you to refer this student for mental health support?	Non-anxious*	1 (.23)	0.9 (1.35)	0.10 (-0.26 - 0.47)
	Mild-Moderate	5.14 (2.15)	6.31 (2.11)	<b>-0.49</b> (-0.87 - -0.1)
	Severe	7.14 (1.81)	8.17 (1.77)	<b>-0.62</b> (-1.02 - -0.22)

Notes: SD = Standard deviation; ES = Effect Size, using Cohen's *d*; Scale scores ranged from 0-10. Small-medium effect sizes are presented in bold. Items with an \*, a positive ES is favorable. All other items a negative ES is favourable.

**Table 4.6**

*Within-group differences of confidence items pre and post training*

Survey item	Mean (SD)		ES of within-group difference (95% CI)
	Pre	Post	
How confident are you that you could recognise signs of mild-moderate anxiety symptoms?	4.72 (1.28)	6.10 (0.67)	<b>-1.07</b> (-1.52 - -0.6)
If you spotted these signs would you be confident in knowing what to do?	4.52 (1.43)	6.10 (0.61)	<b>-1.22</b> (-1.7 - -0.73)
How confident are you in spotting the difference between "typical" anxiety and when it has become a problem?	4.21 (1.57)	5.79 (0.77)	<b>-1.06</b> (-1.51 - -0.6)

Notes: Notes: SD = Standard deviation; IQR = Interquartile range; ES = Effect Size, using Cohen's *d*; Scale scores ranged from 1-7. A negative ES is favorable for all items. Large effect sizes are presented in bold

## Discussion

This feasibility study demonstrates that brief online training aiming to improve recognition and referrals of anxiety symptoms in students (11-19 years old) appears to be a feasible and acceptable method for those that participated in the study. However, the feasibility of recruitment and retention was poor, with only 56% of those who expressed an interest completing the study. However, Preliminary findings suggest promise and warrant further testing.

### **Feasibility and acceptability of brief online training and research process**

The training and research process appears feasible and acceptable to those that took part, however there were challenges to the feasibility of recruitment and retention. Initial expressions of interest exceeded the recruitment feasibility marker of 54. However, approximately half of the prospective participants did not complete the training and surveys. The study did exceed the minimum requirements (20) set by Cocks and Torgerson (2013).

Recruitment took place during the COVID-19 pandemic, where teachers were faced with increased demands (e.g. workload, changes to working practices and juggling multiple roles), and limited resources (Kim & Asbury, 2020). Time constraints prior to Covid-19 were already a barrier to delivering training (Roth et al., 2008). Retention rates have been low for other MHL training programmes, arguably due to time constraints and demands on staff (Parker et al., 2021). The brevity and online aspects of this training aimed to overcome this barrier, but it is unlikely that research participation was a priority for education staff during the pandemic. Positively, recruitment was still possible despite the pressured context, but future studies should consider: timing of recruitment: automated randomisation to study allowing interested staff instant access to the training and survey; offering additional incentives for participation; and sending further reminders to encourage staff to take up training.

Regarding the video acceptability, participants rated the video positively, suggesting that it was easy to access, understand, and was helpful. Though fewer responded, overall qualitative feedback on the training video was positive, including: the presentation; pace; content; and desire to share the online training with colleagues or return to it themselves. The video was rated as engaging and relevant to education settings, which Shelemy et al. (2019b) highlighted as important to education staff for mental health training. Qualitatively, there were some suggestions for adaptations including that it could be adapted to better apply to colleges. Secondary school but not college staff were involved in the development of the video, which may have led to a bias in focus.

The sample characteristics suggested that both teaching and non-teaching staff, including those without pastoral responsibilities, could be recruited for brief online training. This indicates a demand for mental health training across staff in education settings. This appears in line with qualitative research on education staff's recognition of responsibilities and need for training (Rothì et al., 2008; Shelemy et al., 2019a, 2019b). Both non-teaching and teaching staff showed shifts in favour of training regarding: confidence to identify a problem and its severity, concern and intention to refer. Non-teaching education staff have been found to improve identification of students with common mental health problems (Campbell, 2004) and should be included in research as they too play a role in recognising students showing signs of mental health difficulties and support help-seeking behaviours.

The research process also appeared acceptable to participants. Overall average scores for length of time and understanding of questionnaires were positive, though not as strongly as the video ratings and with greater variation. Qualitative feedback suggested two questions needed further clarification. This was also reflected in the challenges in interpretation of results. Using descriptions of identified problems was difficult for the researchers to interpret whether anxiety had been identified by participants. There were greater numbers of descriptions pre-training that were indicative of symptoms but did not explicitly mention anxiety. This could

indicate a lack of confidence or avoidance in using diagnostic terms and psychological language, particularly as there was a reduction in this code post training. Qualitative research has suggested that staff feel more comfortable using educational terminology and that more medical terminology is avoided due to stigma (Rothi et al., 2008). Educational settings typically use terms such as behavioural, emotional and social difficulties (BESD) and not diagnostic labels. This may contribute to uncertainty in mental health problem recognition and suggest a need to consider language used in mental health training for education settings.

### **Preliminary limited efficacy findings**

Preliminary findings suggest the brief online training showed promise, though caution is needed when interpreting results and no firm conclusions can be drawn. The shift in favour of training on participant confidence and recognition using vignettes, and intention to refer, is in line with MHL training research (Jorm et al., 2010; Vieira et al., 2014) as well as online training (Robinson-Link et al., 2020). It is unclear whether there is a correlation between confidence and actual recognition or helping behaviours. However, Rossetto et al. (2016) found that those with higher confidence in supporting someone with a mental health problem were more likely to carry out helping behaviours. Further research is needed to establish how the two relate.

As with the GPM model (Stiffman et al., 2004) and Splett et al. (2019), who found severity and concern were predictors of intention to refer, preliminary analysis did find increases in perceived severity, level of concern, and intention to refer for the mild-moderate vignette and severe vignette in favour of the training. Decreases were seen in the 'non-anxious' vignettes. However, both pre and post training, staff's ratings reflected the level of severity posed by the vignettes. This shows potential for the training to support staff's ability to recognise and their intention to refer, but firm conclusions cannot be drawn and further research is needed.

There were small-medium within-group effect size estimates in favour of the training, for recognition of a problem, perceived severity, level of concern and likelihood of referral, with large effect size estimates for confidence. However, effect size estimates are more likely to be

elevated as extraneous variables cannot be ruled out and therefore highlights the importance of future research using control groups to overcome this.

### **Strengths & Limitations**

This study differs from other MHL training as it draws upon the GPM (Stiffman et al., 2004) to target training to improve recognition and gatekeeper referrals. To our knowledge this is the first study to develop training for education staff using the GPM and the first to focus on brief online training on staff recognition of anxiety symptoms in students and intention to refer. This feasibility study enabled evaluation of the research process and consideration of refinements to the research processes, prior to more rigorous testing (Bowen et al., 2009; Orsmond & Cohn, 2015).

Online training minimised researcher burden in terms of delivery and data collection. However, the recruitment, screening and random allocation process was carried out manually which slowed the process down. A more streamlined online process that allows random allocation and automated screening using conditional answers to screen participants would reduce researcher burden, allow interested education staff immediate access to the online survey and training, possibly reducing attrition rates, and preventing participants completing the survey unnecessarily.

Like many other studies in this area, a novel vignette questionnaire was developed for the purposes of the study (Loades & Mastroiannopoulou, 2010; Missenden & Campbell, 2019; Splett et al., 2019). Vignettes provide a standardised way of measuring recognition and intention to refer anxiety symptoms and is less time-consuming than recruiting students. However, differences in teacher responses to vignettes versus real students (Lucas et al., 2009; Wickson et al., in preparation) questions the ecological validity of this method. Furthermore, data was collected immediately after training when participants were most likely to be able to recall and apply their learnt knowledge and skills. There is a lack of follow up outcomes reported in mental

health literacy training research as well as behavioural change outcomes (Yamaguchi et al., 2020). This should be considered in future trials of this intervention.

Although the face validity of the vignette questionnaire was assessed, further refinement is required. For example, in future research, a dichotomous question (e.g. “Does X present with a mental health problem?”), followed by a multiple-choice answer to identify what mental health difficult they thought the student was presenting with, if any, would be clearer for both participant and researcher. Few studies have used validated measures to evaluate mental health training (Yamaguchi et al., 2020) so developing, assessing and improving the psychometric properties of measures should be a priority in future research.

There is also a risk of bias due to volunteer sampling methods. Participants who volunteered and completed the training and survey are likely to have an interest in student mental health and were willing/able to give up their own time to participate. Positively, we did recruit staff with and without pastoral responsibilities and teaching and non-teaching staff. However, attempts should be made to hear the voice of those that do not typically volunteer to participate in research exploring training on student mental health. Data should also be collected on those that did not complete the training and surveys. Both these groups provide relevant information about the feasibility and acceptability of training such as this.

### **Future research**

Given that the brief online training shows promise, further research is warranted (Bowen et al., 2009). This study provided details about the implementation of the training and research process, including recruitment and sample biases, likely adaptations needed, and ways to streamline the research process for participants and researchers. A lack of reporting of methodology and process impacts the quality of evidence (Yamaguchi et al., 2020). Providing details about the implementation of delivery and evaluation ensures barriers and facilitators can be considered and targeted in future research (Proctor et al., 2009). For example, prior to

carrying out a RCT, consideration is needed on timing of recruitment; use of technology to streamline random allocation and screening; and adaptations to outcome measures.

Exploring the efficacy of the brief online training by piloting an RCT, using a waiting list control group, would help to isolate the effect of the brief online training. Initially recruiting a single school or college would help to control for extraneous variables such as school or local authority initiatives outside of the intervention.

Future research should also include measuring behaviour change directly and longitudinally. Yamaguchi et al (2020) found only two studies evaluating mental health literacy training that reported on the effects of improving behaviour of helping students. This was typically measured by intention to, as seen in this study; by asking participants whether they had talked to school staff in the past month (Jorm et al., 2010); or whether they had helped a student once a month in the past academic year (Kidger et al., 2016). Measuring number of referrals, discussions with students or with appropriate school staff pre and post intervention could also help evaluate the impact on help-seeking behaviours following the training intervention or using student outcomes e.g. using the Emotion-Focused Interactions scale (Cipriano et al, 2019) to measure teacher's responsiveness to students' emotional concerns.

Limited research has explored delivering online MHL training to education staff (Carroll et al., in preparation; Yamaguchi et al., 2020). Health and social care research has suggested that e-learning can provide flexible, low-cost, easily accessible, user-centered learning and is equally effective as traditional training (McCutcheon et al., 2015; Ruggeri et al., 2013). However, the effectiveness of e-learning does appear to be context specific (Ruggeri et al., 2013). Further research is needed to investigate the effectiveness of online mental health training within the context of different education settings, including comparisons to in-person training.

## **Conclusion**

Brief online training targeting education staff's ability to recognise and refer students (11-19 years old) with mild-moderate anxiety, was feasible and acceptable to education staff, who



participated. However, further consideration is needed in the feasibility of the research process particularly in terms of recruitment and retention. The preliminary outcomes appear promising, with shifts in favour of the training in recognition, perceived severity, concern, confidence and intention to refer, although we are unable to draw any firm conclusions at this point. Suggested improvements were made to streamline the research process and refine the outcome measure, to support warranted future trials to evaluate effectiveness.

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**CHAPTER FIVE**

Additional Methods

## **Chapter 5. Additional Methods**

### **Co-production**

A project refinement team contributed to the development of the brief online training video. The project refinement team included clinical psychologists; secondary school teachers from a variety of schools with pastoral responsibilities; and an education mental health practitioner (EMHP) from a mental health support team (MHST), who were recruited through contacts of the research team. Those who volunteered were asked to work alongside the research leads to develop the brief online training, details of this process can be found below. The project refinement team had a contributory role as they were significantly involved in the development of the training but decisions were ultimately made by the researchers (Schneider, 2012). Co-production allowed the research project to be meaningful and relevant to key stakeholders (Schneider, 2012). This seemed particularly important when developing novel interventions as they need to be relevant, acceptable and accessible to be effective.

### **Intervention development**

This study was one of two projects: this one focusing on recognition of anxiety symptoms in students while the sister-project focused on recognition of depression symptoms. This began with discussion between HW and BC and consultation with KM and LP. Authors drew upon the literature around teachers' wants and needs in regards to mental health training (Shelemy et al., 2019b). Staff wanted training on how to identify and provide initial support without taking on a therapeutic role. The key themes drawn from the literature when developing the training were: engagement, applicability, evidence-based and expert-led. The authors therefore felt it to be appropriate to develop brief, online training as an engaging and accessible means of delivery, particularly with the introduction of Covid-19 restrictions. Online learning has been found to be easily accessible and cost-effective (Hadley et al., 2010; Rees et al., 2022) and video-based MHL training has been found to improve teachers' mental health knowledge (Robinson-Link et al., 2020; Ueda et al., 2021).



Further discussion was held regarding the content of the brief online training video. We included an introduction of the narrators (HW & BC) to provide accreditation based on the authors' clinical experience and drew upon cognitive-behavioural theory as part of the psychoeducation of anxiety symptoms and maintenance. The aim of the training was to support education staff to recognise and appropriately refer students presenting with anxiety symptoms, including early signs of these difficulties. The Gateway Provider Model (GPM; Stiffman et al., 2004), which provides a framework of key factors that influence gatekeepers', such as education staff's decision to refer, was used to develop the training video. The GPM suggests that gatekeepers' perception and knowledge of a young person's needs (e.g. presence, severity, impairment, comorbidity); predisposing factors (e.g. risk and protective factors); enabling factors (e.g. resource/service availability, accessibility, affordability and acceptability), and structural characteristics (e.g. organisation, management and psychological climate) influence their decision regarding service provision. The key GPM components drawn upon for the training were:

- 1) Predisposing factors of anxiety disorder (e.g. adverse childhood experiences, risk factors and protective factors)
- 2) Needs of a young person with anxiety (e.g. how it might present in schools, impact/impairment, severity including differentiating between "normal" anxiety and when it becomes problem).
- 3) Enabling factors (e.g. what services are available and how to access them)
- 4) Structural factors (e.g. what organisational structure is in place in school to support staff identifying mental health difficulties and referring to support).

A script for the video was drawn up with the support of the project refinement team. The project refinement team included clinical psychologists; secondary school teachers from a variety of schools with pastoral responsibilities; and an education mental health practitioner

(EMHP) from a mental health support team (MHST). Liaising with the project refinement team allowed the authors to develop ideas, check engagement and that case illustrations were applicable to an education setting. The script was refined, and alterations made based on the project refinement team's feedback. The only major addition requested by the project refinement team was to provide an interactive component where staff were asked to reflect on what symptoms they recognised in a case example. This was in line with the findings of Shelemy et al. (2019b).

Following the development of the script, HW and BC created the corresponding video animation using Videoscribe software. The license for Videoscribe was provided by the University of East Anglia's (UEA) Learning and Technology Department. The project refinement team was used to gather feedback about the acceptability of the images used, speed of animation, and level of engagement. Free audio recording software -Audacity and BlueYeti professional microphones were used to ensure the quality of the audio recordings. HW and BC provided the narration for the animation using the finalised script. Animation development, audio recordings and editing took approximately 85 hours to complete. This does not include script development and time with the project refinement team reviewing components of the training.

Screen shots of the final animation can be found in Appendix 4.B and the full animation can be accessed through the following link: <https://vimeo.com/539538824>

### **Development and rationale for outcome measures**

Vignette-based questionnaires have been used in previous research exploring both education staff's ability to recognise mental health difficulties and the effects of MHL training (Wickson et al., in preparation; Yamaguchi et al., 2020). The vignette-based questionnaire was adapted from the questions used in previous research (Loades & Mastroyannopoulou, 2010; Splett et al., 2019). Vignettes were adapted from previous research as studies had focused on different anxiety disorders (Loades & Mastroyannopoulou, 2010; Splett et al., 2019) and developed in line with DSM-V criteria for generalised anxiety disorders (GAD). The 'mild-

moderate' vignettes included early signs of excessive worry and difficulties controlling worries, signs of fatigue, difficulties sleeping and concentrating, indicating that this had been going on for a few months. For the 'severe' vignettes there were clear signs of excessive worry and difficulties controlling worries, difficulties concentrating in class and mind going blank, signs of fatigue and difficulties sleeping, irritability, and muscle tension, all of which had been going on for at least 6 months, with clear impairment to social or academic functioning. The 'non-anxious' vignettes included some worry about specific events (e.g. exams, sports matches) but not ongoing, generalised or impairing social or academic functioning. An example of a vignette can be found in Appendix 4.D as part of the vignette-questionnaire.

The questions asked following the vignettes were also adapted from those used by Loades & Mastroyannopoulou (2010), Missenden & Campbell (2019) and Splett et al. (2019). However, the questions included more variation in responses to Likert Scale questions, from a three-point-scale to a seven-point-scale and the recognition question was converted from a dichotomous yes/no response to recognition of a problem, 'how confident are you that this student is presenting with a mental health problem?' on a Likert-Scale, followed by open response description of the problem. These adaptations were made to allow for greater variations in responses.

## **Ethical considerations**

### ***Ethical approval***

The study received ethical approval from the UEA Faculty of Medicine and Health Sciences Research Ethics Committee (UEA FMH-REC; ref: 2020/21-031; see Appendix 5.A). Amendments to the research procedure were approved by the UEA FMH-REC. Amendments included: adding additional gatekeepers and requesting approval for advertising the study on social media.

***Gatekeeper and Participant Consent***

Emails were sent to potential gatekeepers for participants. The email asked recipients whether they would be happy to act as a gatekeeper to disseminate information and poster advertisement to potential participants via email. Seven gatekeepers consented, via email, to support the dissemination of study information.

Informed consent was given via the online platform. Participants were given a detailed information sheet, developed using the Health Research Authority guidance (2017). The information sheet provided details of the study, its aims, rationale and ethical considerations. It clearly stated what data would be collected and how it would be used, in accordance with the General Data Protection Regulation (GDPR, 2018). Following the information sheet, participants went on to the consent form page. Participants were asked to confirm that they had read, understood and consented to participate, prior to proceeding. Participants were advised to close the browser if they did not consent to participate in the study. All participants were over the age of 16 years old, and capacity was assumed (British Psychological Society [BPS], 2014).

***Coercion and withdrawal***

Gatekeepers were asked to remind potential participants that participation was completely voluntary, and the brief online training was not offered as a school/college wide professional development training. Participants did not receive remuneration for participating. Participants were informed that they could withdraw from the study at any time, by closing the browser and that their information would not be stored. Participants were sent a reminder email two-weeks after they registered an interest in the study.

***Data management***

Data collected was pseudo-anonymised and stored on a password protected cloud-based storage and researchers ensured that they were working in a confidential setting when working with the data (GDPR, 2018). The minimum amount of identifiable information was

collected and only the research team were able to access this. Data is stored in line with the UEA research data management policy (UEA, 2019).

### ***Distress***

Researchers did not anticipate participants to be distressed by participating in the study. However, the study discusses mental health and this may result in participants reflecting on personal experiences or experiences of working with students with mental health difficulties. The information sheet provided contact details of the researchers, using a study specific joint email account for BC & HW. If participants were to share their distress or seek advice from the researchers, the following agencies were to be signposted: GP, Mind Support Line and Samaritans. Reminders of this advice was included at the bottom of each page of the survey. The final module of the training video covered how to seek help if participants were concerned about a young person but if participants were to raise concerns directly with the research team they would have been signposted in the same way. No participants contacted the research team directly to raise concerns about themselves or a student.

### ***Debrief***

In line with BPS ethics guidelines (2014) a debrief message was presented to participants at the end of the survey on the penultimate page of the online platform. The message included a reminder of the aims of the research project and sister-project; links to information about adolescent mental health (e.g. YoungMinds, Anna Freud Centre, Charlie Waller Trust and Samaritans); and signposting should participants be concerned about their own wellbeing, advising to contact GP or seek help from mental health organisations (e.g. Mind, Samaritans, SANE, and Papyrus). Participants were also reminded of the research team's contact details if they had any further questions. The final page was a thank you message regarding their participation.

## **Additional Analysis**

### ***Additional vignette question analysis***

Question 5b asked participants to select “Who would best support ‘x’ at this point”. Frequency of selected options are reported and described in Chapter 6.

### ***Null hypothesis significance testing***

A power analysis was carried out as part of the research design to establish the required sample size, using G\*Power 3.1, a statistical power analysis program. Using the following parameters: an effect size of 0.5 (medium), an alpha significance of 0.05, and power of 0.95, for a two-tailed, paired-samples t-test, the study would require 54 participants. Unfortunately, recruitment did not meet the required sample size. Often feasibility studies are underpowered (Orsmond & Cohn, 2015) and inappropriately focus on null hypothesis testing, with a higher risk of type II error. Given that this was not the primary purpose of the study, statistical analysis was not carried out.

### ***Content Analysis***

Quantitative content analysis (Morgan, 1993) was used to analyse participants' descriptions of the mental health problem presented in the vignettes. Quantitative content analysis describes a positivist perspective, with the belief that there is an objective truth that can be drawn from the data (Kleinheksel et al, 2020). A coding framework was developed, using a mixed inductive and deductive approach (Forman & Damschroder, 2007). The coding framework and frequencies reported can be seen in Chapter 4, allowing the researcher to compare responses pre- and post-training.

Qualitative content analysis was also used to analyse the limited open-ended feedback questions and frequencies reported (Hsieh & Shannon, 2005; Morgan, 1993). From a critical realist perspective, it can be argued that data is informative of reality but that an objective reality is “imperfectly apprehendable” (Guba & Lincoln, 1994, p.110), in that perspectives on reality are viewed through the lenses of individuals contextual experience (e.g. language, culture,

situation). I was aware of my own position as lead researcher and my previous career in teaching and how this could impact my own interpretation during the qualitative process. Credibility was established through triangulation with quantitative methods of feedback; using a prolonged iterative process, repeatedly returning to the raw data to ensure meaning was not lost; and discussing the developed codes and categories not only with the research team but also with a fellow trainee who was neutral to the research project (Hsieh & Shannon, 2005).

Initially the researchers familiarised themselves with the data from the open response feedback questions by reading and rereading the responses. Through discussion with the research team, it felt appropriate to use an inductive and deductive approach based on research questions and questions posed in the feedback questionnaire (Forman & Damschroder, 2007). There were two predetermined main categories: acceptability of the training video and acceptability of the research process. The researcher remained open to emerging categories from the data. Responses were limited, mainly consisting of short phrases or single sentences. Where necessary these were condensed or used verbatim as meaning units, close to the manifest content of the text. The meaning units were assigned codes, which were organised into sub-categories, under the two main categories. See Appendix 5.B for diagram of codes and categories including frequencies of codes.

**CHAPTER SIX**

Additional Results



### Chapter 6. Additional Results

Table 6.1 summarises participant selected options, from fixed-multiple-choice options, for who they believed would best support the student in each vignette. For the 'non-anxious' vignettes there was a reduction in selected support options post-training and was the only vignette to have "no one" selected. The total number of support options selected for the 'mild-moderate' vignette (72) and the 'severe' vignette (71) were similar pre-training. Both saw an increase in options selected post training, with a greater increase to the 'severe' vignette (98) than the 'mild-moderate' vignette (82). Selection of the use of Mental Health Support Teams increased for both 'mild-moderate' and 'severe' vignettes post training. 'Severe' vignettes saw an increase in selected Child and Adolescent Mental Health Services (CAMHS) post-training and had the most formal external support options selected compared to other vignettes pre- and post-training.

**Table 6.1***Frequency of selected options of support for each vignette*

		Informal Support			Formal Support					
		No one	Teachers	Parents	Pastoral Team	School nurse/Counsellor	MHSTs	GP	CAMHS	Other
Non-anxious	Pre-training	9	17	9	10	1	0	0	0	0
	Post-training	11	14	7	7	1	0	0	0	0*
Mild-moderate	Pre-training	0	14	17	23	10	3	3	1	1
	Post-training	0	15	17	23	12	9	3	1	2
Severe	Pre-training	0	10	12	15	12	9	10	3	0
	Post-training	0	15	17	17	17	16	7	9	0

**CHAPTER SEVEN**

Critical Discussion

## Chapter 7. Critical Discussion

The overall aim of this thesis was to explore how we enable education staff to recognise and seek help for children and young people with common mental health problems. There are growing demands on education settings to play a central role in early detection and intervention for children and young people with emerging and existing mental health difficulties (Department of Health and Social Care [DHSC] & Department for Education [DfE], 2017; Public Health England [PHE] et al., 2021). As outlined earlier in the portfolio, education staff are uniquely positioned to identify signs of mental health difficulties (DHSC & DfE, 2017; Johnson et al., 2011) and have been found to be a key gatekeeper for adolescents accessing services (Cognigni et al., 2012). The scoping review aimed to explore the existing literature regarding education staff's ability to recognise anxiety and depression in students aged 4-19 years old, without the use of screening tools or assessment measures, as these are not commonly used in education settings (Burns & Rapee, 2021; Wood & McDaniel, 2020). The review explored what methods were used and what variables had been investigated in regard to staff recognition of anxiety and depression. The empirical study aimed to explore the feasibility of a brief online training video to support education staff in identification and help-seeking of anxiety symptoms in students aged 11-19 years old.

As outlined in the scoping review, there was a scarcity of literature investigating education staff's ability to recognise anxiety and depression in students, and the literature found was heterogeneous in methodology. This highlighted a number of gaps in knowledge including: limited research using non-teaching staff; a lack of standardised measures; and limited research in recognition of anxiety in secondary school settings, low mood in primary school settings, and no identified research in further education settings. The findings of the existing literature varied, arguably due to the heterogeneity of methods used, highlighting a need for further quality research, and the development and use of standardised measures. Overall, education staff's ability to recognise anxiety and depression in students appeared to be somewhat limited,

particularly when symptoms were less observable or less disruptive in classroom settings (e.g. less severe or internalised).

Given the increased expectations of education staff to identify early signs of mental health difficulties to allow students to access appropriate and timely support, and the demand for training (Shelemy et al., 2019b), finding effective ways to improve and support education staff's ability to carry out this role was needed. However, to be effective, training needs to be feasible and acceptable to education staff. Careful consideration was given to developing training that was brief, flexible and easy to access; to accommodate the needs and constraints of, and demands on, education staff. My background prior to pursuing a career in clinical psychology was teaching in a secondary school. This insight was beneficial to researching this field, as I am uniquely positioned to bridge the gap between education and health. Alongside the existing literature and project refinement group, having an awareness of education settings allowed me to recognise the demands on education staff and how to make the intervention fit the needs of this population.

The empirical paper aimed to assess the feasibility of a brief (15 minute) online training video as a method of improving education staff's ability to identify students with anxiety and refer to appropriate support, drawing upon the Gateway Provider Model (GPM; Stiffman et al., 2004). A pre-post design was used for preliminary analysis, and feedback on both the intervention and research process was collected. Overall, the delivery of the intervention and research process was feasible and acceptable to participants, with positive comments about the video in regard to clarity, engagement, and usefulness. However, the feasibility of recruitment and retention was limited, not reaching the target of 54 participants with only 56% of those interested completing the study. However, education staff were under the extreme pressures of the COVID-19 pandemic throughout the data collection phase, and this needs to be taken into consideration. Participant feedback and researcher reflections did highlight the need to further refine the research process and vignette questionnaire. However, although firm conclusions

cannot be drawn, the limited efficacy analysis showed promise, and, given the cost and time efficiency of this training, it is worthy of further evaluation. Prior to this, noted areas of improvement are needed to refine the intervention and research design, while considering the overall time taken to participate and watch the training video to maintain the feasibility and acceptability of the training and research process.

### **Strengths and limitations**

A key strength of the scoping review was that, to our knowledge, this was the first review to map out the existing literature on education staff's ability to recognise anxiety and depression symptoms in students, without the use of screening tools of assessment measures. As outlined in chapter two, universal screening is not widely used (Burns & Rapee, 2021; Wood & McDaniel, 2020) and, in reality, education staff would not use them to initially recognise common mental health problems before considering onward referrals and support. Use of a scoping review was appropriate as the topic had not yet been reviewed and was likely to be heterogenous in nature (Mays et al., 2001). A strength of this scoping review included pooling and summarising the extent of existing literature, which identified gaps and suggested that there is currently limited scope for a more focused systematic review given the scarcity and heterogeneity of the literature.

Furthermore, this scoping review used a methodological framework (Arksey & O'Malley, 2005) to develop a protocol that was reviewed by the research team and shared on the Open Science Framework, to transparently and comprehensively identify and analyse relevant literature. Scoping reviews are often critiqued as less rigorous than the systematic counterparts, however both can demonstrate systematic rigour, as seen here, as they have different purposes (Brien et al., 2010; Pham et al., 2014). For example, the purpose of this scoping review was to identify the existing literature, key gaps in the literature and direction for future research, using the PRISMA-ScR checklist and scoping review framework (Arksey & O'Malley, 2005) to systematically and transparently carry this out.

As outlined in the review discussion, a quality assessment of the included studies was not carried out. This is not a requirement of scoping reviews (Arksey & O'Malley, 2005) as the purpose of a scoping review is to map the existing literature without evaluating the standard of the evidence. However, the lack of critical appraisal has been debated and raised as a limitation across many scoping reviews with some arguing that critical appraisals should be included as a scoping review component (Daudt et al. 2013). Quality assessment can determine biases caused by methodology and as such whether results should be interpreted with caution and whether its inclusion in systematic reviews is warranted. Due to the time scale and feasibility of this trainee thesis project, it was not included. However, the merit of including this step is acknowledged.

One of the challenges with the scoping review was establishing a balance between breadth and depth of analysis. The depth of analysis was perhaps limited due to the time and resources available to conduct the review, which has been reported by a number of scoping reviews (Pham et al., 2014). However, scoping reviews such as this review provide an important contribution to map out the current breadth of the literature that was unknown prior to the review and so breadth was prioritised. An iterative process was used to refine the focus of the review. Refinement decisions were discussed and agreed by the research team. For example, from the initial search there was a clear distinction between articles that used screening tools and assessment measures and those that did not. Given that education settings do not commonly use universal screening tools (Burns & Rapee, 2021; Wood & McDaniel, 2020) and extensive reviews have been carried out on multi-informant and cross-informant approaches to clinical assessments (Achenbach et al., 1987; De Los Reyes et al., 2016), it was appropriate to further refine the focus to studies not using screening tools and assessment measures. This reduced the breadth of the review but provided a more refined and meaningful review.

A feasibility study was appropriate for the empirical paper as we were implementing a novel brief online training video with limited existing research exploring this method of delivery in

UK education settings, and to our knowledge was the first online mental health training specifically targeting anxiety, that had used the GPM model (Stiffman et al., 2004). This contributes to expanding the literature on mental health training for education staff, particularly as the use of behavioural change models to develop mental health training appears limited (Kelly et al., 2007) and the GPM provides a specific framework that allows training to target factors that influence staff referral decisions, fundamental to students accessing support.

Null-hypothesis significance testing was not used as this was not the purpose of the feasibility study, and feasibility studies are often underpowered. While this does limit the findings, it can be seen as a strength of this study, as feasibility and pilot studies have been criticised for inappropriately emphasising hypothesis testing when this is not the primary purpose of the study (Arain et al., 2010). Furthermore, this study used a within-groups pre-post design which further limits the conclusions that could be drawn as comparisons to a control could not be conducted to establish causation of effect. Larger trials should consider randomised control methodology to evaluate effectiveness. This could include comparison to in-person training, given the movement away from in-person training, towards online training and resources post-pandemic. The majority of MHL training literature is in-person, therefore further research is needed to assess the effectiveness of online training, cost-effectiveness and comparison to in-person training given the direction of travel in this area.

There were several limitations to the empirical paper. For example, a vignette-based questionnaire was developed for the purposes of the study, as there were no appropriate existing measures. The vignette-based questionnaire requires refinements and clarification of questions. Although face validity of the novel vignettes was assessed, using the expertise of trainee clinical psychologists, a more rigorous assessment of validity and reliability was not used. Pre-piloting novel questionnaires before use in a feasibility study is not essential or feasible within the time constraints of this project. However, developing standardised measures would help to reduce heterogeneity of methodology and allow for the synthesis of findings



beyond a narrative, both in the field of understanding education staff's existing ability and training to support them in identification of students with mental health difficulties and help-seeking. This limitation was highlighted in the scoping review but the empirical paper was designed, and data collection began prior to completion of the review. The limitation of this study strengthens the argument for the need to develop a valid and reliable measure of education staff's recognition and intention to refer. Methods used by Haddad & Tylee (2013) to develop the QUEST measure to evaluate school nurse knowledge and recognition of depression may be helpful in this process.

Furthermore, as with existing MHL training programmes, there is also a need to evaluate long-term behavioural change and consider student outcomes (e.g. access to services). This was beyond the scope of the current study and a later stage of research activity after feasibility and acceptability testing of the training itself. Large trials evaluating the efficacy of the training could use a longitudinal design including follow up outcomes measures and collecting data on student outcomes such as numbers referred and what support was accessed pre/post staff training. The benefit of brief online training such as the one presented in this study is that it can be referred back to and reviewed easily, acting as a reminder for staff, which was suggested from feedback by participants. This could be helpful in maintaining the effects of training, but further research would be needed.

Another limitation of the feasibility study was limited data collection regarding retention rates and attrition. The online platform used was not able to collect data on this, so exploring other platforms that can would be useful for future trials. Also, we did not collect data on how participants were recruited, which would be helpful to know for recruitment in future trials, particularly as academic holidays and exam periods can impede recruitment. An additional question such as, "How did you hear about the research project?" could be added to the demographics questionnaire using a multiple-choice format.

MHL research has been criticised for having a mental-ill health focus (Chambers et al., 2015). One of the challenges of research investigating education staff's ability to recognise students with mental health difficulties is how to measure recognition. The scoping review highlighted variations in this. Measuring recognition based on the use of diagnostic labels can be criticised for promoting a medical model of mental illness (Chambers et al., 2015). Expecting education staff to use medical and diagnostic labels as a means of recognition may result in early predictors being ignored and risk of stigma (Kinderman et al., 2013; Schomerus et al., 2012). Education staff have been reluctant to use medical language (Rothì et al., 2008) but we are seeing rapid changes in mental health and wellbeing promotion, prevention and early intervention in education. With the roll out of Mental Health Support Teams and training of Senior Mental Health Leads, the use of diagnostic language, rightly or wrongly, may become more common practice in education settings. This is an area for further exploration, as building an understanding of language differences and developing a joint language that enables collaboration and multi-agency working is crucial for children and young people to be able to access the right support at the right time.

### **Clinical and theoretical implications**

Scoping reviews and feasibility studies are important initial stages in the research process. The scoping review provides a summary of the existing literature, highlighting clear gaps in our knowledge regarding education staff's ability to carry out their role as gatekeepers to identify and refer students with mental health difficulties. Developing measures and advancing the quality of the literature in this area can help us to consider how to target training and support for education staff in this role, given the expectations on education settings through government transformation plans (DHSC & DfE, 2017). There has been a rapid shift in school and college involvement in mental health support and promoting positive mental health, wellbeing and resilience. However, there appears to be a gap between expectations from government (DHSC & DfE, 2017; Ofsted, 2022) and knowledge, skills, resources and training in schools and

colleges and pre-service teacher training. To be able successfully support students with existing or emerging mental health difficulties this gap needs to be closed with training and support for school and colleges in achieving these expectations. With the introduction of Mental Health Support Teams and Senior Mental Health Lead roles in schools, as part of transformation plans (DHSC & DfE, 2017) training and support can be offered through these teams and are included in the Education Mental Health Practitioner programme curriculum (Health Education England, n.d.).

The empirical paper contributed to the clinical and theoretical knowledge of mental health training for education staff in a number of ways. It expanded the literature regarding the development and implementation of online training for education staff. The online design made the study more robust to increased demands on education settings, such as those seen during the Covid-19 pandemic. The use of remote online resources and training has been critical to education settings during the Covid-19 pandemic. In-person training was not possible so developing online training and resources was important during this time but the benefits of easily accessible, flexible and cost-effective methods of training extend far beyond the pandemic (O'Connell et al., 2021).

It also is one of few studies to include non-teaching staff who also play a part in the wider system around the student. This is an area of limited research; however this empirical paper would suggest there is significant demand from non-teaching staff to access training too. Approximately 50% of the school workforce in England are non-teaching staff, of which approximately 30% are teaching assistants (DfE, 2021). A Whole school/college approach to mental health and wellbeing is recommended by National Institute for Health Care Excellence (NICE; 2008, 2009) and government guidelines (DHSCE & DfE, 2017; Public Health England et al., 2021). This approach necessarily requires whole school/college involvement, so all staff should be included in promoting mental health and wellbeing. This includes the identification of risk and early signs of mental health difficulties so targeted support and access to specialist

services can be provided when required. All education staff working alongside students can be part of identification and help-seeking, therefore all should be included in research to develop and receive formal training.

The novel use of the GPM model to design the empirical paper training provides a framework that considers contextual factors such as structural characteristics and enabling factors (Stiffman et al., 2004). The use of models and theories in developing mental health literacy training appears limited (Kelly et al., 2007). Although the Theory of Planned Behaviour (TPB; Ajzen, 1991) has been used, this model has been criticised for ignoring environmental or contextual factors in behaviour change (Sniehotta et al., 2014). Gatekeepers' perception and knowledge of these contextual factors, as well as predisposing and needs-based factors, play a role in the decision to refer students identified as in need of support. Developing training around these factors may contribute to education staff helping students to access appropriate support, within the context of a more holistic whole school approach to student mental health and wellbeing.

The GPM highlights the importance of enabling factors such as availability, accessibility, affordability and acceptability of mental health and wellbeing services which directly impact service provision (Stiffman et al., 2004). Improving knowledge and perception of gatekeepers can only improve access to services if appropriate services exist and have capacity. Child and adolescent mental health services are under-resourced (Rocha et al., 2015), education settings are being asked to play a greater role in preventative initiatives and work with still emerging and establishing mental health support teams (Caldwell et al., 2019; DHSC & DfE, 2017; McLaughlin, 2017). However, current research is held within a rapidly evolving context. In line with the GPM, there is a movement to increase resources to improve enabling factors. School-based interventions delivered by non-clinical staff (Caldwell et al., 2019; Feiss et al., 2019; O'Connor et al., 2018) and the introduction of Mental Health Support Teams in schools, provide an increased workforce and capacity to improve student access to mental health support

(DHSC & DfE, 2017). According to the GPM, this should improve referral decisions allowing students to access early interventions and prevent the development of chronic difficulties and long-term consequences.

### **Overall conclusion**

Supporting education staff in their new and growing role in identifying and supporting students with mental health difficulties is important for early detection and intervention. Education staff and other key stakeholders consider the need for effective training for education staff a key priority both in terms of continued professional development and research (McPin Foundation, 2018; Shelemy et al., 2019b). This thesis portfolio scoped the existing literature on education staff's ability to recognise anxiety and depression in students aged 4-19 years old (without the use of screening tools or assessment measures) and suggested a feasible and acceptable brief online method of delivering training to support education staff's role in recognising anxiety symptoms in their students. The literature exploring recognition is limited and heterogenous in method and, as a result, the findings are inconclusive. However, there does appear to be a need to support staff in recognising less severe or internalised problems. The brief online training to support education staff in their role does appear feasible and acceptable and warrants further research, with discussed limitations and areas of development.

Identifying the most effective ways of training education staff to recognise early signs of mental health difficulties in children and young people is a key research priority for children and young people, parents/carers, education staff, mental health services and the UK government. This thesis portfolio has contributed to this research by scoping the existing literature on current ability and factors associated with this, as well as developing training that is feasible and acceptable to education staff and shows promise. This work and future research is important in finding effective ways to train and enable education staff to accurately identify students with common mental health problems and encourage help-seeking behaviours to access timely and evidence-based support.



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## **Appendices**

### **Chapter 2 Scoping review**

Appendix 2.A: Child and Adolescent Mental Health Journal Author Guidelines

Appendix 2.B: Search Term Strategy Employed for Scoping Review

### **Chapter 4 Empirical Study**

Appendix 4.A British Journal of Educational Psychology Author Guidelines

Appendix 4.B VideoScribe

Appendix 4.C Demographic Questionnaire/Confidence Questionnaire

Appendix 4.D Vignette Questionnaire

Appendix 4.E Feedback Questionnaire

### **Chapter 5 Additional Methods**

Appendix 5.A Ethical approval

Appendix 5.B Diagram of codes and categories **from open-ended feedback questions**

**Appendix 2.A: Child and Adolescent Mental Health Journal Author Guidelines**

1. Contributions from any discipline that further clinical knowledge of the mental life and behaviour of children are welcomed. Papers need to clearly draw out the clinical implications for mental health practitioners. Papers are published in English. As an international journal, submissions are welcomed from any country. Contributions should be of a standard that merits presentation before an international readership. Papers may assume any of the following forms: Original Articles; Review Articles; Innovations in Practice; Narrative Matters; Debate Articles.

CAMH considers the fact that services are looking at treating young adults up until the age of 25, with the evidence that brains continue to develop until the age of 25, as well as the fact that a lot of issues that affect young adults and students are also relevant and topical to older adolescents. CAMH offers a discretionary approach and will take into consideration papers that extend into young adulthood, if they are pertinent developmentally to the younger population and contribute further to a developmental perspective across adolescence and early adult years.

Authors are asked to remember that CAMH is an international journal and therefore clarification should be provided for any references that are made in submitted papers to the practice within the authors' own country. This is to ensure that the meaning is clearly understandable for our diverse readership. Authors should make their papers as broadly applicable as possible for a global audience.

ORIGINAL ARTICLES: Original Articles make an original contribution to empirical knowledge, to the theoretical understanding of the subject, or to the development of clinical research and

practice.

**REVIEW ARTICLES:** These papers offer a critical perspective on a key body of current research relevant to child and adolescent mental health. The journal requires the pre-registration of review protocols on any publicly accessible platform (e.g. The International Prospective Register of Systematic Reviews, or PROSPERO).

**SHORT RESEARCH ARTICLES:** Short Research Articles should consist of original research of any design that presents succinct findings with topical, clinical or policy relevance. For example, preliminary novel findings from pilot studies, important extensions of a previous study, and topical surveys.

**LETTERS TO THE EDITOR:** These are short articles that offer readers the opportunity to respond to articles published in CAMH. Letters must only discuss issues directly relevant to the content of the original article such as to add context, correction, offer a different interpretation, or extend the findings.

**INNOVATIONS IN PRACTICE:** These papers report on any new and innovative development that could have a major impact on evidence-based practice, intervention and service models.

**NARRATIVE MATTERS:** These papers describe important topics and issues relevant to those working in child and adolescent mental health but considered from within the context and framework of the Humanities and Social Sciences.

**DEBATE ARTICLES:** These papers express opposing points of view or opinions, highlighting current evidence-based issues, or discuss differences in clinical practice.

**TECHNOLOGY MATTERS:** These papers provide updates on emerging mental health technologies and how they are being used with and by children and young people.

2. Submission of a paper to *Child and Adolescent Mental Health* will be held to imply that it represents an original submission, not previously published; that it is not being considered for publication elsewhere; and that if accepted for publication it will not be published elsewhere without the consent of the Editors.

3. Manuscripts should be submitted online. For detailed instructions please go to: [http://mc.manuscriptcentral.com/camh\\_journal](http://mc.manuscriptcentral.com/camh_journal) and *check for existing account* if you have submitted to or reviewed for the journal before, or have forgotten your details. If you are new to the journal *create a new account*. Help with submitting online can be obtained from the Editorial Office at ACAMH (email: [publications@acamh.org](mailto:publications@acamh.org))

4. Authors' professional and ethical responsibilities

#### *Disclosure of interest form*

All authors will be asked to download and sign a full Disclosure of Interests form and acknowledge this and sources of funding in the manuscript.

#### *Ethics*

Authors are reminded that the *Journal* adheres to the ethics of scientific publication as detailed in the [\*Ethical principles of psychologists and code of conduct\*](#) (American Psychological Association, 2010). These principles also imply that the piecemeal, or fragmented publication of small amounts of data from the same study is not acceptable. The Journal also generally conforms to the Uniform Requirements for Manuscripts of the International Committee of Medical Journal Editors ([ICJME](#)) and is also a member and subscribes to the principles of the Committee on Publication Ethics ([COPE](#)).

#### *Informed consent and ethics approval*

Authors must ensure that all research meets these ethical guidelines and affirm that the

research has received permission from a stated Research Ethics Committee (REC) or Institutional Review Board (IRB), including adherence to the legal requirements of the study county. Within the Methods section, authors should indicate that 'informed consent' has been appropriately obtained and state the name of the REC, IRB or other body that provided ethical approval. When submitting a manuscript, the manuscript page number where these statements appear should be given.

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CAMH will consider for review articles previously available as preprints. Authors may also post the submitted version of a manuscript to a preprint server at any time. Authors are requested to update any pre-publication versions with a link to the final published article. Please find the Wiley preprint policy [here](#).

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Pursuant to NIH mandate, Wiley-Blackwell will post the accepted version of contributions authored by NIH grant-holders to PubMed Central upon acceptance. This accepted version will be made publically available 12 months after publication. For further information, see [www.wiley.com/go/nihmandate](http://www.wiley.com/go/nihmandate).

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The Journal requires authors to conform to CONSORT 2010 (see [CONSORT Statement](#)) in relation to the reporting of randomised controlled clinical trials; also recommended is the [Extensions of the CONSORT Statement](#) with regard to cluster randomised controlled trials). In particular, authors must include in their paper a flow chart illustrating the progress of subjects through the trial (CONSORT diagram) and the CONSORT checklist. The flow diagram

should appear in the main paper, the checklist in the online Appendix. Trial registry name, registration identification number, and the URL for the registry should also be included at the end of the methods section of the Abstract and again in the Methods section of the main text, and in the online manuscript submission. Trials must be registered in one of the ICJME-recognised trial registries:

**[Australian New Zealand Clinical Trials Registry](#)**

**[Clinical Trials](#)**

**[Netherlands Trial Register](#)**

**[ISRCTN Registry](#)**

**[UMIN Clinical Trials Registry](#)**

Manuscripts reporting systematic reviews or meta-analyses will only be considered if they conform to the **[PRISMA Statement](#)**. We ask authors to include within their review article a flow diagram that illustrates the selection and elimination process for the articles included in their review or meta-analysis, as well as a completed PRISMA Checklist. The journal requires the pre-registration of review protocols on any publicly accessible platform (e.g. The International Prospective Register of Systematic Reviews, or PROSPERO).

The **[Equator Network](#)** is recommended as a resource on the above and other reporting guidelines for which the editors will expect studies of all methodologies to follow. Of particular note are the guidelines on qualitative work **<http://www.equator-network.org/reporting-guidelines/evolving-guidelines-for-publication-of-qualitative-research-studies-in-psychology-and-related-fields>** and on quasi-experimental **<http://www.equator-network.org/reporting-guidelines/the-quality-of-mixed-methods-studies-in-health-services-research>** and mixed method designs **<http://www.equator-network-or/reporting->**



[guidelines/guidelines-for-conducting-and-reporting-mixed-research-in-the-field-of-counseling-and-beyond](#)

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An initiative started by *CrossRef* to help its members actively engage in efforts to prevent scholarly and professional plagiarism. The journal to which you are submitting your manuscript employs a plagiarism detection system. By submitting your manuscripts to this journal you accept that your manuscript may be screened for plagiarism against previously published works.

5. Manuscripts should be double spaced and conform to the house style of *CAMH*. The title page of the manuscript should include the title, name(s) and address(es) of author(s), an abbreviated title (running head) of up to 80 characters, a correspondence address for the paper, and any ethical information relevant to the study (name of the authority, data and reference number for approval) or a statement explaining why their study did not require ethical approval.

*Summary:* Authors should include a structured Abstract not exceeding 250 words under the sub-headings: Background; Method; Results; Conclusions.

*Key Practitioner Message:* Below the Abstract, please provide 1-2 bullet points answering each of the following questions:

- WHAT IS KNOWN? - What is the relevant background knowledge base to your study? This may also include areas of uncertainty or ignorance.
- WHAT IS NEW? - What does your study tell us that we didn't already know or is novel regarding its design?
- WHAT IS SIGNIFICANT FOR CLINICAL PRACTICE? - Based on your findings, what should practitioners do differently or, if your study is of a preliminary nature, why should more research be devoted to this particular study?

*Keywords:* Please provide 4-6 keywords use [MeSH Browser](#) for suggestions

6. Papers submitted should be concise and written in English in a readily understandable style, avoiding sexist and racist language. Articles should adhere to journal guidelines and include a word count of their paper; occasionally, longer article may be accepted after negotiation with the Editors.

7. Authors who do not have English as a first language may choose to have their manuscript professionally edited prior to submission; a list of independent suppliers of editing services can be found at [http://authorservices.wiley.com/bauthor/english\\_language.asp](http://authorservices.wiley.com/bauthor/english_language.asp). All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

8. Headings: Original articles should be set out in the conventional format: Methods, Results, Discussion and Conclusion. Descriptions of techniques and methods should only be given in detail when they are unfamiliar. There should be no more than three (clearly marked) levels of subheadings used in the text.

9. All manuscripts should have an Acknowledgement section at the end of the main text, before the References. This should include statements on the following:

*Study funding:* Please provide information on any external or grant funding of the work (or for any of the authors); where there is no external funding, please state this explicitly.

*Contributorships:* Please state any elements of authorship for which particular authors are responsible, where contributorships differ between author group. (All authors must share responsibility for the final version of the work submitted and published; if the study include original data, at least one author must confirm that he or she had full access to all the data in the study and takes responsibility for the integrity of the data in the study and the accuracy of

the data analysis). Contributions from others outside the author group should also be acknowledged (e.g. study assistance or statistical advice) and collaborators and study participants may also be thanked.

*Conflicts of interest:* Please disclose any conflicts of interest of potential relevance to the work reported for each of the authors. If no conflicts of interest exist, please include an explicit declaration of the form: "The author(s) have declared that they have no competing or potential conflicts of interest".

10. For referencing, *CAMH* follows a slightly adapted version of APA

Style <http://www.apastyle.org/>. References in running text should be quoted showing author(s) and date. For up to three authors, all surnames should be given on first citation; for subsequent citations or where there are more than three authors, 'et al.' should be used. A full reference list should be given at the end of the article, in alphabetical order.

References to journal articles should include the authors' surnames and initials, the year of publication, the full title of the paper, the full name of the journal, the volume number, and inclusive page numbers. Titles of journals must not be abbreviated. References to chapters in books should include authors' surnames and initials, year of publication, full chapter title, editors' initials and surnames, full book title, page numbers, place of publication and publisher.

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See <http://authorservices.wiley.com/bauthor/illustration.asp> for further guidelines on

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#### DATA SHARING AND SUPPORTING INFORMATION

CAMH encourages authors to share the data and other artefacts supporting the results in the paper by archiving them by uploading it upon submission or in an appropriate public repository. Examples of possible supporting material include intervention manuals, statistical analysis syntax, and experimental materials and qualitative transcripts.

1. If uploading with your manuscript please call the file 'supporting information' and reference it in the manuscript.

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#### ORIGINAL ARTICLES

Original Articles make an original contribution to empirical knowledge, to the theoretical understanding of the subject, or to the development of clinical research and practice. Adult data is not usually accepted for publication unless it bears directly on developmental issues in childhood and adolescence.

Your Original Article should be no more than 5,500 words including tables, figures and references.

#### REVIEW ARTICLES

Research Articles offer our readers a critical perspective on a key body of current research relevant to child and adolescent mental health and maintain high standards of scientific practice by conforming to systematic guidelines as set out in the [PRISMA STATEMENT](#). These articles should aim to inform readers of any important or controversial issues/findings, as well as the relevant conceptual and theoretical models, and provide them with sufficient information to evaluate the principal arguments involved. All review articles should also make clear the relevancy of the research covered, and any findings, for clinical practice.

Your Review Article should be no more than 8,000 words excluding tables, figures and references and no more than 10,000 including tables, figures and references.

#### SHORT RESEARCH ARTICLES

Short Research Articles should consist of original research of any design that presents succinct findings with topical, clinical or policy relevance. For example, preliminary novel findings from pilot studies, important extensions of a previous study, and topical surveys. Short Research

Articles will be peer reviewed and authors might be asked to revise and edit their article to acceptable standards for publication. Short Research Articles should follow standard guidelines, such as STROBE for observational studies, CONSORT extension for pilot trials etc.

Your Short Research Article should be 1500 words, excluding references, tables and graphs/figures. Your article should be structured, including the subheadings

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#### NARRATIVE MATTERS: THE MEDICAL HUMANITIES IN CAMH

These articles are both submissions and directly commissioned papers. They will be peer-reviewed. The articles should be on a humanities topic relevant to those working in child and adolescent mental health. The topics can include but are not restricted to: aspects of child mental health service history; representations of abnormal mental states or mental illness in children and teenagers in film, literature or drama; depictions of child mental health clinicians within popular culture; ethical dilemmas in the speciality. Interest and originality are valued. If in doubt, please contact the section editor: [Gordonbates@virginmedia.com](mailto:Gordonbates@virginmedia.com)

The essays should be between 1500 and 2000 words and written for an audience of child mental health professionals. For publishing reasons, there is an upper limit of 8 references for the article. Additional references may be given in the text if necessary.

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Letters to the Editor are short articles that offer readers the opportunity to respond to articles published in CAMH. Letters must only discuss issues directly relevant to the content of the original article such as to add context, correction, offer a different interpretation, or extend the

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Letters should be submitted not later than 2 weeks after publication of the print issue of the Journal containing the paper of interest. Please note - all papers are published on Early View as soon as they are accepted. The letters should avoid personal attacks and unscholarly communication.

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Due to the short length of this article type, your Letter should be between 500 and 700 words with a maximum of one figure or table. If in doubt, please contact the section editor [C.ANI@IMPERIAL.AC.UK](mailto:C.ANI@IMPERIAL.AC.UK)

#### INNOVATIONS IN PRACTICE

Innovations in Practice promote knowledge of new and interesting developments that have an impact on evidence-based practice, intervention and service models. These might have arisen through the application of careful, systematic planning, a response to a particular need, through the continuing evolution of an existing practice or service, or because of changes in circumstances and/or technologies. Submissions should set out the aims and details of the innovation including any relevant mental health, service, social and cultural contextual factors, and give a close, critical analysis of the innovation and its potential significance for the practice of child and adolescent mental health.

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Our debate articles express opposing points of view or opinions, highlighting current evidence-based issues, or discuss differences in clinical practice. Although discussion of evidence is welcome, these articles generally do not include primary data. The evidence on which your arguments are based and how that was sourced should be explicit and referenced, and the quality of your evidence made clear.

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#### TECHNOLOGY MATTERS

Technology Matters provides updates on emerging mental health technologies and how they are being used with and by children and young people. We aim to cover established technologies such as computer-assisted psychological interventions as well as more novel technologies (e.g. mobile apps, therapeutic games, virtual reality). We will present the evidence base for their use, showcase how they can complement other interventions and are being used in practice and address wider cross-cutting issues (such as technology accreditation, regulation, cost etc.) relevant to practitioners and service funders.

Your paper should be between 1000 and 1500 words. Please do not include more than 7 references. If in doubt, please contact the section

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**Appendix 2.B: Search Term Strategy Employed for Scoping Review**

<b>Search</b>	<b>Limiters</b>	<b>Expanders</b>	<b>Search Mode</b>	<b>Database</b>	<b>Citations</b>
S1 (Teacher* OR educator* OR "education staff" OR "school staff" OR "school practitioner*" OR "school nurse*" OR "college staff" OR "teaching assistant*" OR "learning support assistant*" OR "learning support staff" OR SENCO OR "special educational needs coordinator*") N3 ( recognise OR recogni* OR screen* OR identif* OR detect* OR assess* OR nominat* OR "case finding" OR "case-finding" OR knowledge)	English language 1997 (Peer reviewed)	Apply related words Apply equivalent subjects	Find all my search terms	Medline Complete	2576
S2 (DE "Teachers" OR DE "College Teachers" OR DE "Cooperating Teachers" OR DE "Elementary School Teachers" OR DE "High School Teachers" OR DE "Junior High School Teachers" OR DE "Middle School Teachers" OR DE "Preschool Teachers" OR DE "Preservice Teachers" OR DE "Resource Teachers" OR DE "Special Education Teachers" OR DE "Student Teachers" OR DE "Teacher Characteristics" OR DE "Vocational Education Teachers" OR DE "Educational Personnel" OR DE "School Administrators" OR DE "School Counsellors" OR DE "School Nurses" OR DE "Teacher Aides" OR DE "Teachers") AND ( recognise OR recogni* OR screen* or identif* OR detect* OR assess* OR nominat* OR "case finding" OR "case-finding" OR knowledge)				PsycINFO	3900

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S3	S1 or S2	CINHAL Complete	1369
S4	(anx* OR "anxiety disorder*" OR "generalized anxiety disorder*" OR "generalised anxiety disorder*" OR "GAD" OR "social anxiety" OR "phobia" OR "claustrophobia" OR "agoraphobia" OR "separation anxiety" OR "separation anxiety disorder" OR "panic disorder" OR "post traumatic stress disorder" OR "PTSD" OR "OCD" OR "obsessive compulsive disorder" OR depress* OR "MDD" OR "major depressive disorder" OR "affective disorder*" OR "mood disorder*" OR "internalising symptom*" OR "internalising disorder*" OR "internalizing symptom*" OR "internalizing disorder*") N3 (student* OR "college student*" OR pupil OR "school age*" OR "youth" OR "young person" OR adolescent* OR teen* OR child*)	ERIC	1575
S5	(DE "Affective Disorders" OR DE "Disruptive Mood Dysregulation Disorder" OR DE "Major Depression" OR DE "Seasonal Affective Disorder" OR DE "Anxiety Disorders" OR DE "Generalized Anxiety Disorder" OR DE "Obsessive Compulsive Disorder" OR DE "Panic Attack" OR DE "Panic Disorder" OR DE "Phobias" OR DE "Separation Anxiety Disorder" OR DE "Internalizing Symptoms") AND (student* OR "college student*" OR pupil OR "school age*" OR "youth" OR "young person" OR adolescent* OR teen* or child*)	British Education Index	19

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S6 S4 OR S5

S7 S3 AND S6

Raw 9438

Duplicates 2578

Without  
duplicates 6860

---

## **Appendix 4.A: British Journal of Educational Psychology Author guidelines**

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Papers describing quantitative research (including reviews with quantitative analyses) should be no more than 5000 words (excluding the abstract, reference list, tables and figures). Papers describing qualitative research (including reviews with qualitative analyses) should be no more than 6000 words (including quotes, whether in the text or in tables, but excluding the abstract, tables, figures and references). Appendices are included in the word limit. In very exceptional cases the Editor retains discretion to publish papers beyond this length where the clear and concise expression of the scientific content requires greater length (e.g., explanation of a new theory or a substantially new method). The authors should contact the Editor first in such a case. All systematic reviews must be pre-registered.

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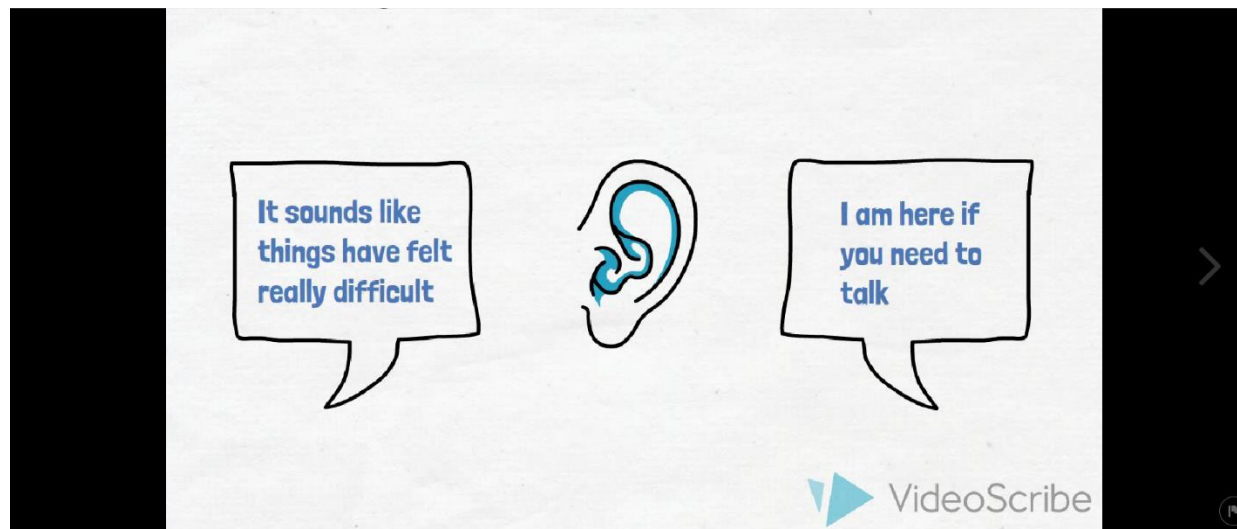
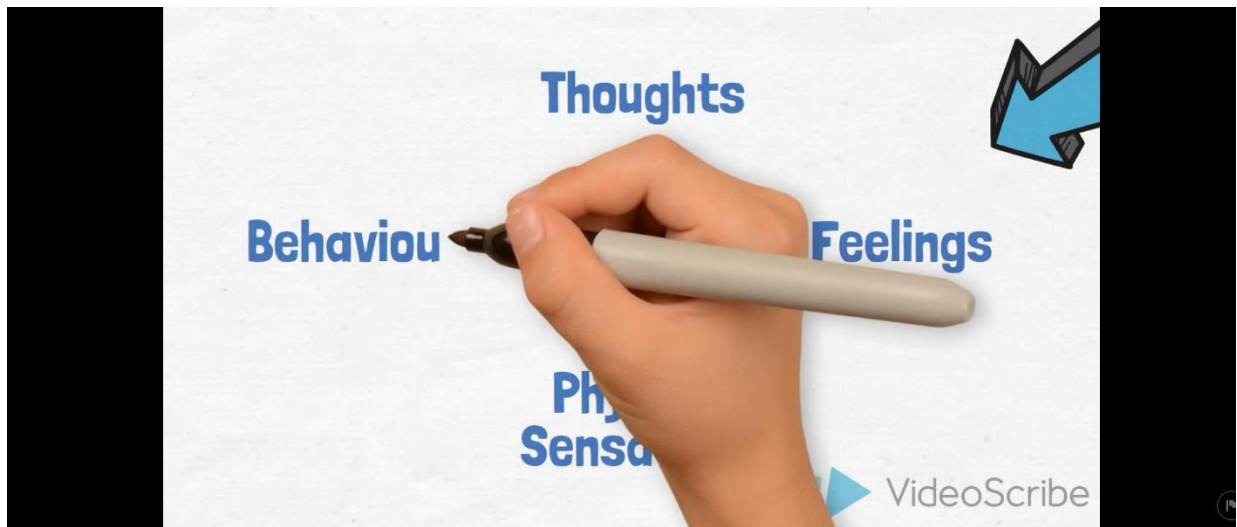
Author Guidelines updated April 2019

**Appendix 4.B: Video content summary and screen shot**

Section one: Introduction to student mental health difficulties and the role of education staff

Section two: Recognising anxiety symptoms

Sections three: What to do if you spot signs of anxiety?



Full training video can be found at: <https://vimeo.com/539538824>





5b. Please tick the box who would best support M at this point.

No one	School nurse or counsellor
GP	Mental Health Support Team
Parents	Child and Adolescent Mental Health Service (CAMHS)
Pastoral member of staff	Other

5c. Please explain your answer in 5b: .....



### Appendix 4.E: Feedback Questionnaire

**Please answer all questions as honestly and accurately as possible.**

#### Section 1

**The following questions focus on the training package itself**

1. The video made sense to me.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

2. The video has been/will be helpful to me.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

3. The additional resources that I can download made sense to me.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

4. The additional resources have been/will be helpful to me.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

5. I would recommend the video to a colleague or other education staff.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

6. I found the video boring.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

7. The video content was applicable to a secondary school setting.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

8. It was too hard to access the video

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

9. It was too hard to download the additional resource.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

Please provide any comments about the computer task:

## Section 2

The following questions are focused on your experience of the research process itself:

1. I understood what the questionnaires were asking me.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

2. It took too long to complete the questionnaires.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

3. I did not like being randomly assigned to different groups.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

4. I enjoyed taking part in the research study.

1	2	3	4	5	6	7
Definitely do not agree			Maybe agree			Definitely agree

Please provide any comments about the research process:

### Section 3

The following questions ask about your experiences since participating in the research study.

1. How confident are you that you could recognise signs of mild-moderate anxiety symptoms?

	1	2	3	4	5	6	7	
Not at all confident								Completely confident

2. If you spotted these signs would you be confident in knowing what to do?

	1	2	3	4	5	6	7	
Not at all confident								Completely confident

3. How confident are you in spotting the difference between "typical" anxiety and when it has become a problem?

	1	2	3	4	5	6	7	
Not at all confident								Completely confident

4. I feel more confused about identifying anxiety than I did before participating in the research study?

	1	2	3	4	5	6	7	
Not at all confident								Completely confident

Please provide any other comments:

Thank you for taking the time to complete the feedback questionnaire.

**Appendix 5.A: Ethics Approval Letter**

Faculty of Medicine and Health Sciences Research Ethics Committee



Ben Carroll and Harriet Wickson  
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University of East Anglia  
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7<sup>th</sup> May 2021

Dear Ben and Harriet

**Title: A brief online training intervention to support education staff to recognise and refer young people aged 11-19 with anxiety and depression symptoms: A feasibility study**

**Reference: 2020/21-031**

Thank you for your email of 21<sup>st</sup> April 2021 notifying us of the amendments you would like to make to your above proposal. These have been considered and I can confirm that your amendments have been approved.

Please can you ensure that any further amendments to either the protocol or documents submitted are notified to us in advance, and that any adverse events which occur during your project are reported to the Committee.

Approval by the FMH Research Ethics Committee should not be taken as evidence that your study is compliant with GDPR and the Data Protection Act 2018. If you need guidance on how to make your study GDPR compliant, please contact your institution's Data Protection Officer.

Please can you arrange to send us a report once your project is completed.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Dr Jackie Buck', is written over a horizontal line.

Dr Jackie Buck  
Chair  
FMH Research Ethics Committee

**Appendix 5.B: Diagram of codes and categories from open-ended feedback questions**

