

**Childhood Anxiety:**

**The Feasibility of a School Staff Intervention and the Role of Peer Victimisation**

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## Table of Contents

|   |    |
|---|----|
| <b>Abstract</b> .....                                       | 5  |
| <b>Chapter 1: Introduction</b> .....                        | 6  |
| <b>Chapter 2: Systematic Review and Meta-Analysis</b> ..... | 10 |
| Abstract.....   | 12 |
| 1. Introduction .....                                       | 13 |
| 2. Method .....   | 19 |
| 2.1 Search Strategy .....                                   | 20 |
| 2.2 Eligibility Criteria .....                              | 20 |
| 2.3 Study Selection.....                                    | 22 |
| 2.4 Data Extraction.....                                    | 22 |
| 2.5 Assessment of Study Quality.....                        | 23 |
| 2.6 Data Synthesis.....                                     | 23 |
| 3. Results .....  | 24 |
| 3.1 Study Selection.....                                    | 24 |
| 3.2 Study Characteristics.....                              | 25 |
| 3.3 Bidirectional Relationships.....                        | 28 |
| 3.4 Quality Ratings .....                                   | 37 |
| 3.5 Publication Bias .....                                  | 37 |
| 4. Discussion.....  | 37 |
| 4.1 Conceptual and Clinical Implications .....              | 43 |
| 4.2 Limitations and Future Directions.....                  | 44 |
| 4.3 Conclusions .....                                       | 46 |
| 4.4 Acknowledgements.....                                   | 47 |
| 5. References .....   | 48 |
| <b>Chapter 3: Bridging Chapter</b> .....                    | 68 |
| <b>Chapter 4: Empirical Study</b> .....                     | 71 |
| Abstract.....   | 73 |
| 1. Introduction .....                                       | 74 |
| 2. Method .....   | 76 |
| 2.1 Design.....   | 76 |
| 2.2 Participants and Recruitment .....                      | 78 |
| 2.3 Intervention .....                                      | 78 |
| 2.4 Measures.....   | 82 |
| 2.5 Procedure.....  | 83 |

|  |            |
|--|------------|
| 2.6 Ethics .....   | 84         |
| 2.7 Analysis Plan.....                                     | 84         |
| 3. Results.....  | 84         |
| 3.1 Demographic Data .....                                 | 84         |
| 3.2 Preliminary Limited Efficacy Findings .....            | 89         |
| 3.3 Acceptability and Feasibility Findings .....           | 89         |
| 4. Discussion.....   | 91         |
| 4.1 Preliminary Limited Efficacy Findings .....            | 91         |
| 4.2 Acceptability and Feasibility Findings .....           | 92         |
| 4.3 Strengths, Limitations and Future Directions .....     | 93         |
| 4.4 Conclusions .....                                      | 97         |
| 4.5 Acknowledgements.....                                  | 97         |
| 5. References .....  | 99         |
| <b>Chapter 5: Discussion and Critical Evaluation .....</b> | <b>112</b> |
| 1. Overview of Findings.....                               | 112        |
| 1.1 Systematic Review and Meta-Analysis.....               | 112        |
| 1.2 Empirical Study.....                                   | 113        |
| 2. Strengths, Limitations and Future Directions .....      | 114        |
| 3. Clinical and Theoretical Implications .....             | 119        |
| 4. Conclusions .....                                       | 124        |
| 5. References .....  | 126        |
| <b>6. Appendices .....</b>                                 | <b>145</b> |

### Abstract

**Background:** Anxiety is the most common childhood mental health difficulty and is likely to persist into adulthood without intervention. The aims of this thesis were twofold, firstly to examine the role that peer victimisation plays in anxiety development and its maintenance, and then to evaluate a newly developed school staff intervention that intends to support and prevent the escalation of childhood anxiety difficulties. **Methods:** A meta-analysis was conducted to examine the bidirectional effects between several types of peer victimisation and anxiety symptomatology among children and adolescents. The type of anxiety was also examined as a moderator to determine its influence. The empirical study explored the feasibility and acceptability of a newly developed psychoeducation intervention on childhood anxiety for school staff. The intervention was based on cognitive behavioural approaches and aimed to provide an overview of mild to moderate anxiety difficulties, along with strategies that could be implemented by staff within the school setting. **Results:** 14 studies were included in the meta-analysis, and bidirectional effects were found between all types of peer victimisation and anxiety symptoms. Relational forms of peer victimisation were shown to predict social anxiety symptoms to a greater extent than anxiety symptoms more generally. It was also found that general anxiety symptoms moderated overt types of victimisations more so than social anxiety. The empirical study recruited 76 participants in total, who rated the intervention as engaging, useful and appropriate. Participants also reported an improvement in their knowledge of childhood anxiety and increased confidence in applying anxiety strategies in their work. Preliminary efficacy findings showed that school staff responses to children's anxious behaviours were significantly different following the intervention, as they were more likely to adopt responses and strategies supported by cognitive behavioural theory. **Conclusions:** Given the findings, it has been observed that peer victimisation and childhood anxiety in schools are closely linked. Psychoeducation interventions for school staff have been shown to be a feasible and acceptable method in increasing knowledge around anxiety and aids the application of strategies that may support anxious children and prevent the escalation of anxiety difficulties at school.

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## Chapter 1: Introduction

Anxiety disorders are the most common mental health difficulty among children and adolescents (Creswell et al., 2020), with rising prevalence rates in recent years. In the United Kingdom, a 51% increase in anxiety disorders has been reported between 2004 and 2017 (Vizard et al., 2018), with a mean prevalence of 6.5% seen worldwide (Polanczyk et al., 2015). It has been noted that these prevalence rates have been exacerbated by the recent COVID-19 pandemic (Courtney et al., 2020), with some studies reporting that childhood anxiety levels have likely doubled during this period (Racine et al., 2021) and are five standard deviations greater than pre-pandemic levels (Tang et al., 2021). Anxiety difficulties tend to emerge in childhood prior the age of 11 years old and often persist into adulthood if left untreated (Kessler et al., 2005). This can result in a significant negative impact on educational, social and health functioning, as well as an increased risk of ongoing anxiety and other mental health conditions (Copeland et al., 2014).

Globally, the accessibility and availability of mental health support has been unable to meet demands posed by these increasing prevalence rates and under-resourced services (Rocha et al., 2015), and that even with optimal access of current treatments, treatment would only result with less than 30% reduction of symptoms (Andrews et al., 2004). Given this, there has been a noted increase in prevention approaches (Dopp & Lantz, 2020) with educational settings at the forefront for delivery internationally (McLaughlin, 2017). Considering school settings often have established referral pathways for mental health difficulties (Rickwood et al., 2007) and are increasingly being viewed as an unstigmatized point of access for support (Armbruster, 2002), they may be an ideal setting for preventative intervention.

To further understand treatment approaches to support early identification and prevention for anxiety disorders, risk and protective factors need to be identified (Cabral & Patel, 2020). Peer victimisation is a key risk factor noted to be associated with anxiety symptoms, where victims have an increased risk of developing anxiety disorders (Stapinski et al., 2014, 2015; Guimond et al., 2015;

Schleider et al., 2017). Peer victimisation is defined as being the recipient of physical or psychological harm from peers (De Los Reyes & Prinstein, 2004). Several studies have found that children experiencing peer victimisation report higher levels of anxiety (Diaz & Fite, 2019; Landoll et al., 2015; Herge et al., 2016), but interestingly many studies have also shown that anxious children report higher rates of peer victimisation (Siegel et al, 2009; McLaughlin & Nolen-Hoeksema, 2012). Moreover, recent meta-analyses have demonstrated bidirectional effects between peer victimisation and anxiety symptoms (Christina et al., 2021; Chiu et al., 2021), however further exploration is required to examine the bidirectional effects between the specific types of peer victimisation and anxiety symptoms more exclusively.

Positive and supportive relationships with teachers and school staff have been noted as a protective factor in research, as they may help buffer and protect against negative outcomes on mental health (Demaray & Malecki, 2002). In addition, school staff are often the first point of contact for children who are concerned about their wellbeing (Ford et al., 2008), and studies show that emotional support from school staff may improve children's mental wellbeing (Joyce & Early, 2014). There has been an increased acceptance among school staff that the school environment is not only a place for academia but also a place where mental health concerns can be addressed (Beames et al., 2020; Fazel et al., 2014; Patalay et al., 2016), particularly following the COVID-19 pandemic where concerns have become more pronounced (Singh et al., 2020; Thakur, 2020). Specifically, childhood emotional difficulties (e.g., anxiety symptoms) were noted to increase as COVID-19 lockdowns were implemented (Lawrence et al., 2023), and it was found that younger children were impacted more greatly than older children (Creswell et al., 2021). It was hypothesised that this may be the case due to limited opportunities for social interactions during a vital childhood developmental stage. Supporting this, research has demonstrated that continued social interactions through attendance of education facilities at the time of the pandemic showed greater decline in anxiety symptoms, and thus indicated improvements in childhood mental health (Cantiani et al., 2021; Lawrence et al., 2023). This therefore showcases the benefits that the formal school



environment provides and also highlights the importance of the social relationships it fosters (both with peers and school staff).

Considering the importance of social relationships within the school environment that were highlighted through COVID-19 research, it may be no surprise that negative peer relations/lack of peer support are risk factors of peer victimisation and that peer acceptance/positive peer friendships are effective buffers against peer victimisation (Hong & Espelage, 2012). However, this effect is not only limited to peer relations, as the relationships between school staff and the children they work with also impact the system and culture of the school environment. Moreover, these relationships with school staff have been shown to influence children's mental health outcomes (Demaray & Malecki, 2002), relationships between the peer group and children's own perceptions of their school environment including how connected (i.e., a sense of belonging) they feel to the school (Hong & Espelage, 2012). It has been found that a lower sense of school connectedness cultivates a negative school environment which may increase the likelihood of peer victimisation taking place, whereas positive relationships within the environment can act as a protective factor against peer victimisation, and thus protective against poorer mental health outcomes also (Glew et al., 2005; Thornberg et al., 2022). This highlights the significance of integrating social, cultural, and environmental factors, including the consideration of all relationships within the school environment, to better understand mental health difficulties and promote positive change at both a systemic and individual level for children.

To promote change more widely in the school environment, the development and implementation of any school-based prevention programme needs careful consideration, especially as implementation of these types of interventions have proven difficult in previous research due to time pressures (Roth et al., 2008; Taylor et al., 2014) and low acceptance by school staff (Han & Weiss, 2005). Cognitive-behavioural therapy (CBT) is the most commonly delivered preventive intervention for anxiety and has promising outcomes (Werner-Seidler et al., 2021), but the

consideration of its feasibility and acceptability at a local level is critical to ensure design parameters are estimated and optimised prior to further, larger-scale testing (Eldridge et al., 2016; National Institute for Health Research, 2021). Feasibility of an intervention is typically assessed by considering the following factors: appeal, demand, acceptability, practicality, adaptation to a new format, mode of delivery, appropriateness, limited efficacy-testing, implementation, and integration in a new environment (Orsmond & Cohn, 2015; Bowen et al., 2009). To the knowledge of the authors, there has been no known cognitive-behavioural psychoeducation training or intervention relating to childhood anxiety for school staff. This is surprising considering school staff have expressed a need for additional training to increase their confidence and knowledge around mental health difficulties (Graham et al., 2011; Moor et al., 2007) and have voiced feelings of helplessness in situations concerning mental health (Kidger et al., 2009).

This thesis aimed to address the gaps identified. Firstly, Chapter Two presented a systematic review and meta-analysis on the prospective, bidirectional effects between peer victimisation subtypes and anxiety symptomatology. Specifically, this chapter examines whether types of peer victimisation and types of anxiety specifically moderate this relationship. Secondly, Chapter Four examines the feasibility, acceptability, and limited efficacy of a newly developed psychoeducation intervention for school staff. This intervention is based on CBT principles and focuses on providing an overview of mild to moderate childhood anxiety difficulties, along with clear and practical strategies that school staff can implement in their work that may reduce anxiety levels of the children they work with. Theoretical and conceptual links between these studies are discussed in Chapter Three. Finally, Chapter Five provides an overview of findings across both studies and discusses strengths, limitations, and recommendations for future directions. Theoretical and clinical implications from this body of work are also discussed.

**Chapter 2: Systematic Review and Meta-Analysis**

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**Longitudinal Associations between Peer Victimization Subtypes and Children and Adolescents'  
Anxiety: A Meta-Analysis**

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**Abstract**

This meta-analysis examined the bidirectional effects between types of peer victimisation and anxiety. It also investigated types of anxiety as a potential moderator of this relationship, which has not been examined within a meta-analytic framework previously. Five electronic databases were searched and longitudinal studies exclusively utilising published and validated measures for peer victimisation subtypes and anxiety symptomology were included. A total of 3,760 articles were screened and 14 studies with a total of 11,307 participants met inclusion criteria. Results showed significant bidirectional effects between anxiety and several subtypes of victimisations including cyber, overt, relational, and reputational victimisation. Although significant effects were seen among all associations, these were all deemed as small, except for relational peer victimisation predicting anxiety over time which was considered to be a moderate effect size. Moderator analysis of anxiety types suggested that relational peer victimisation predicted social anxiety to a greater and more significant extent than general symptoms of anxiety. It was also found that general anxiety symptoms were significantly greater at predicting overt peer victimisation over time than social anxiety symptoms. These results hold implications for theories around the development and maintenance of anxiety, as well as providing evidence to inform treatments and interventions for both anxiety disorders and programmes aimed to prevent peer victimisation.

*Keywords:* Peers, Victimisation, Bullying, Meta-Analysis, Anxiety, Social Anxiety

## 1. Introduction

Peer victimisation is defined as being the recipient of physical or psychological harm from peers (De Los Reyes & Prinstein, 2004), and is associated with mental health comorbidities (Reijntjes et al., 2010; Ranta et al., 2009). It is estimated that one in three children experience peer victimisation throughout their school years (Modecki et al., 2014), with 25% of schools considering peer victimisation to be a daily or weekly occurrence (Dinkes et al., 2007). Rigby (1998) has estimated that 50% of adolescents experience face-to-face peer victimisation at least once throughout each academic year and that this high prevalence rate is consistent across a variety of schools, cultures, and countries (Craig et al., 2009).

Research has shown that peer victimisation has been associated both cross-sectionally and prospectively to internalising symptoms such as anxious symptomatology (Graham et al., 2009; Olweus, 1994), leading to several clinical and developmental implications (Forbes et al., 2019). In addition, a review found that mental health difficulties associated with peer victimisation are stable over time (Pouwels et al., 2016), and may persist into adulthood and impact physical and socioeconomic outcomes (Arseneault, 2017). It is therefore unsurprising that peer victimisation has been defined as a critical public health issue internationally (World Health Organisation, 2010).

Several forms of peer victimisation have been identified and have been shown to have a unique and distinct impact on mental health difficulties (La Greca & Harrison, 2005; Siegel et al., 2009; Ranta et al., 2009). Peer victimisation types are either classified as direct forms which include overt victimisation (i.e., being hit, pushed, or verbally threatened by peers), indirect forms such as relational victimisation (i.e., being socially excluded by peers) and reputational victimisation (i.e., being the focus of peers' attempts to impair one's reputation) (De Los Reyes & Prinstein, 2004). Cybervictimisation refers to peer victimisation of any type that occurs via the internet or other electronic media (Tokunga, 2010; Landoll et al., 2015).

Few studies have investigated the unique contributions of individual forms of victimisation, with some showing the distinctive role of relational victimisation in predicting symptoms of internalised distress (Storch et al., 2005) and others showing no significant associations (Khatri et al., 2000; McLaughlin et al., 2009; Tran et al., 2012). In addition, it has been shown that relational peer victimisation is more strongly related to symptoms of social anxiety compared with overt or reputational victimisation among adolescents (La Greca & Harrison, 2005; Siegel et al., 2009), with some studies suggesting that relational and reputational types of peer victimisation are the most common in childhood (De Los Reyes & Prinstein, 2004; La Greca & Harrison, 2005; Siegel et al., 2009; Herge et al., 2016). Additionally, research has shown that face-to-face forms of peer victimisation were more directly associated with social anxiety compared with cybervictimisation (Ranta et al., 2009). However, some studies have shown that children who are victimised in a face-to-face context are often also victimised by peers online (Del Rey et al., 2012; Salmivalli et al., 2013), highlighting the complexity and multifaceted nature of peer victimisation. Therefore, although fewer studies have explored the potential unique contributions of distinct types of peer victimisation (Doyle et al., 2017), there are benefits to viewing and examining these different forms as separate constructs.

Due to the high comorbidity between anxiety and depression, many studies use general measures of internalised distress to investigate the association between peer victimisation and mental health difficulties, rather than utilising distinct and separate measures for anxiety and depression (Casper & Card, 2016). However, anxiety and depression have numerous distinctive differences in their characteristics, prevalence rate, and outcomes (Trosper et al., 2012). This reinforces the value and importance of viewing and exploring them as separate constructs. A unique study found that peer victimisation was more directly related to social anxiety than depression, and that the association between depression and peer victimisation could be explained by the shared differences between the two conditions (Ranta et al., 2009). Despite this, fewer studies have examined the association between peer victimisation and anxiety exclusively, in comparison with depression. In a recent meta-analysis that investigated the bidirectional effects between internalised

distress and peer victimisation, it was observed that a majority of studies included exclusively looked at depression ( $n = 41$ ) in comparison with studies examining anxiety ( $n = 9$ ) (Christina et al., 2021), therefore demonstrating a gap in the evidence-base that needs addressing. The current review aims to explore this identified gap further by examining anxiety exclusively as either a predictor or outcome of peer victimisation.

While all forms of anxiety have been shown to be relevant to peer victimisation, research has also demonstrated unique relationships between peer victimisation and specific types of anxiety, for instance, social anxiety has been found to be a stronger precursor to victimisation in longitudinal studies among early adolescence (Tillfors et al., 2012; van den Eijnden et al., 2014). In support of this finding, it has been shown that those experiencing social anxiety also experienced greater levels of peer victimisation (de Lijester, 2018). In addition, the relationship between anxiety and peer victimisation appears to vary depending on the subtype of peer victimisation; for example, anxiety levels appear to be greater for indirect relational victimisation as opposed to overt forms of victimisation (Casper & Card, 2016). Therefore, this evidence suggests that different types of anxiety may moderate different types of victimisations, and the current review will aim to explore and review this.

Early research that investigated the longitudinal relationship between peer victimisation and anxiety tended to assume a unidirectional association with peer victimisation leading to the development of anxiety symptoms (Olweus, 1993; Slee, 1994). However, recent research has indicated that high levels of anxiety have been shown as both an antecedent and consequence of peer victimisation types (Christina et al., 2021; Forbes et al., 2019). Having said this, potential theories or mechanisms for these associations are mostly unexplored. It has been observed that in experimental research studies, children, and adolescents report that peers with emotional behaviours are disliked and have a strong belief amongst them that these peers will be victimised (Luchetti & Rapee, 2014). Additionally, it has been suggested that the social behaviours of anxious



children may evoke unfavourable peer reactions that may lead to peer rejection or victimisation (Leigh & Clark, 2018), and that it may be these negative peer interactions that reinforce social fears and avoidance that maintain anxiety symptoms (Epkins & Heckler, 2011; Sentse et al., 2017). This concept is supported by a proposal that peer victimisation and negative peer evaluations, are likely to largely impact the development and maintenance of anxiety (Wong & Rapee, 2016). This concept is also in line with the stress generation hypothesis, which predicts that those experiencing internalised distress will generate greater interpersonal stress than those without (Liu & Alloy, 2010).

However, several longitudinal studies have shown that children with strong social relationships are less likely to be victimised despite the display of overtly emotional behaviours (Egan & Perry, 1998), and that supportive friendships among peers may act as a protective factor against peer victimisation (Fitzpatrick & Bussey, 2011; Singh & Bussey, 2011). Therefore, it's necessary to consider the social context more broadly, including other peer relations, that may influence the likelihood that anxious children will be victimised. It is important to note that children tend to spend more time with their peers during their schooling years than at any other time in their lives (Furman & Buhrmester, 1992), therefore their ability to build positive peer relations and integrate in their peer group effectively is of great significance (Prinstein et al., 2000). Having said this, children who are victimised by their peers regardless of the subtype, are reported to have great difficulties bonding with their peers and feeling connected to their school group (Bierman, 2004), and may behave in ways that prevent them forming or maintaining positive peer relationships (Biggs et al., 2012).

Despite the growing evidence suggesting bidirectionality, much of the existing research still continues to examine these associations cross sectionally or unidirectionally (Hawker & Boulton, 2000; Moore et al., 2017). However, this use of cross-sectional design prevents the testing of causal implications, instead utilising longitudinal study design can help test and explore the bidirectional

effects over time and determine prospective relationships between the variables (Sameroff & Mackenzie, 2003).

Taking this into account, the current meta-analysis will investigate the bidirectional nature of the relationship between peer victimisation and anxiety, while viewing types of anxiety and types of peer victimisation as separate constructs in order to draw conclusions on these factors distinctly. Two recent meta-analyses examined similar bidirectional relationships (Christina et al., 2021; Chiu et al., 2021) and both showed significant bidirectional correlations between the two variables. However, limitations of the literature were highlighted in these reviews; for example, a large number of studies included in the analysis used variable measures of victimisation and anxiety that were study-specific, unpublished and unvalidated, and many of which relied on single items only (Christina et al., 2021).

Limitations observed in both studies, is that they lacked exploration of the social context in which the victimisation takes place (i.e., school, community, clinical samples), which may impact the generalisability and validity of the findings about the relationship in different contexts. Additionally, Chiu et al. (2021) did not examine or explore different types of anxiety or peer victimisation subtypes. Although, the review by Christina et al. (2021) did measure anxiety, depression, and types of victimisations as moderators, the study largely looked at depression and internalised distress and thus did not reflect on or explore different types of anxiety as potential moderators of the relationship.

To address the limitations noted above outlined above, the current meta-analysis was conducted to examine bidirectional associations between types of peer victimisation and types of anxiety within a meta-analytic framework. The studies included were required to be of longitudinal design carried out in any social context (i.e., school, community or clinical), and measures were required to be published, validated, and distinct measures for both peer victimisation and anxiety subtypes.

Due to the limited studies that met inclusion criteria ( $n = 14$ ), age, sex, country, ethnicity, social environment, and interval length (i.e., the period of time between baseline and follow-up data collection) were identified and described, but moderator analysis was not conducted for these variables. Previous reviews have shown that sex, age, and interval variables were not found to be significant moderators of this bidirectional relationship (Chiu et al., 2021; Christina et al., 2021). It has been observed that multiple studies have shown similar sized relationships regardless of age or gender (Siegel et al., 2009, Moore et al., 2017), however some show some minor differences (Juvonen & Graham, 2014). Generally, most studies have shown relatively consistent results across a variety of demographic factors.

2. Method

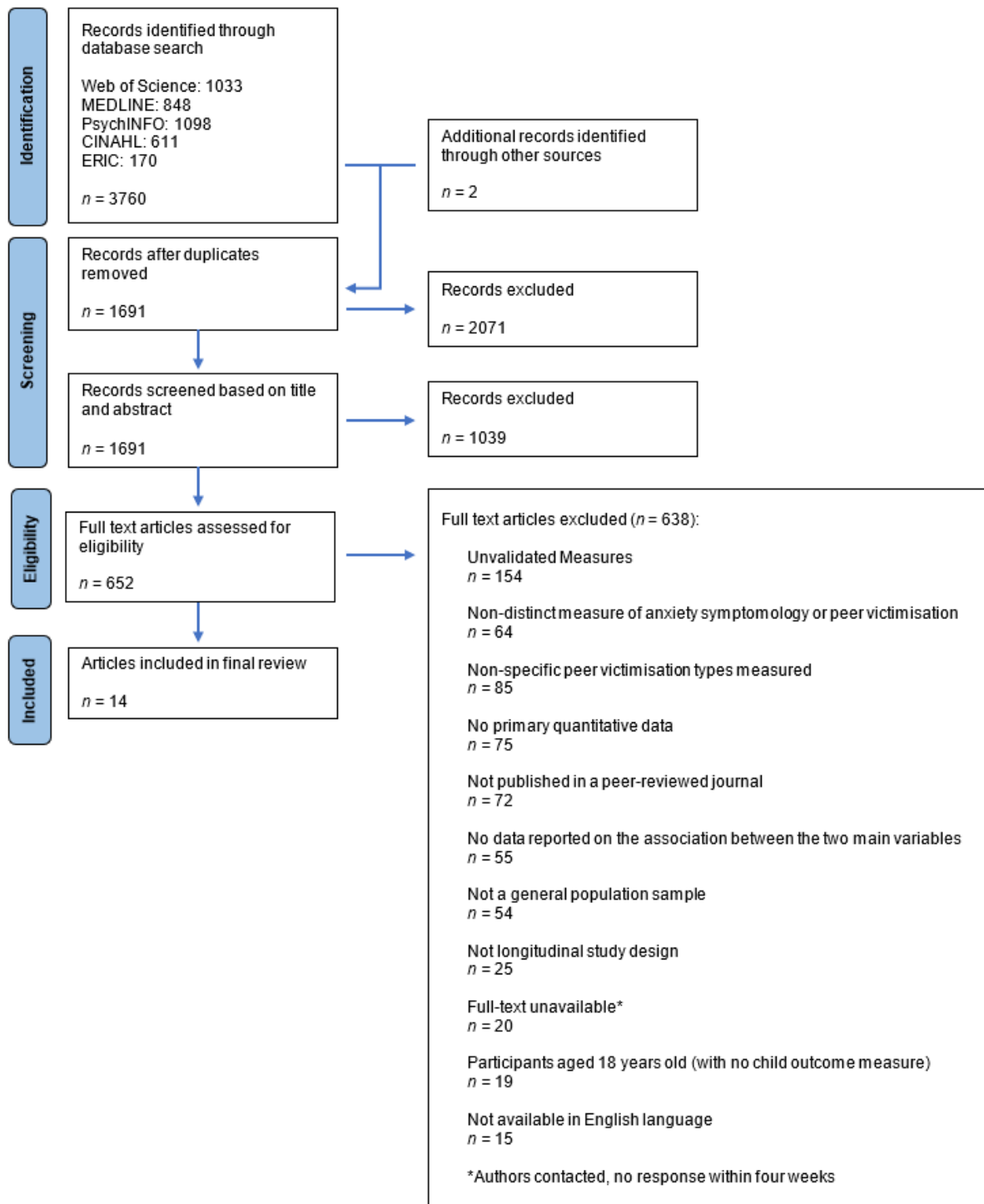


Figure 1: PRISMA diagram of the study selection process

The protocol for the current meta-analysis was registered on the International Prospective Register of Systematic Reviews (PROSPERO; protocol number: CRD 42022314946) on the 24<sup>th</sup> of March 2022.

## 2.1 Search Strategy

Five electronic databases (Web of Science, MEDLINE, PsychINFO, CINAHL and ERIC) were searched from inception until 9<sup>th</sup> December 2022. The details for the search terms and syntax for each database are available in the PROSPERO protocol (see Appendix B). Reference lists of relevant review articles were screened to identify further studies that may have been missed by the electronic search. Two records were identified through this method and included in this review.

## 2.2 Eligibility Criteria

Studies were included if they met the following criteria:

1. Participants who completed outcome measures must be children or adolescents who are 18.0 years old or under, or the mean age of the sample is equal to or less than 18.0 years old.
2. Participants must include children or adolescents who have reported anxiety symptoms through a validated, standardised, and distinct outcome measure or a recognised diagnostic tool for anxiety. Measures without specific subscales for anxiety symptomatology were not included e.g., general internalised distress symptom measures.
3. Participants must include children or adolescents who have reported experiencing a subtype of victimisation by their peers through a validated, standardised, and distinct measure. Measures collecting data on the bully/victim role or bullying perpetration were not included.
4. Papers were required to be written in the English language or with a published translation.
5. Papers were required to either have a longitudinal or prospective research design that examined the relationship between peer victimisation and anxiety symptomatology over time.
6. Papers were required to be published in a peer-reviewed journal.

Studies without primary data (e.g., reviews, secondary analysis of data, or use of an existing sample that has been identified and included in the current review) were excluded, along with

studies that report qualitative data exclusively. In circumstances where the full text was unavailable and inaccessible, authors were contacted via email and given four weeks to provide the information required, before the study was excluded from the analysis. In addition, studies were excluded if they failed to report baseline and follow-up data examining the direct relationship between anxiety symptoms and peer victimisation. This data was crucial as it enabled conclusions drawn to reflect direction and change over time. Studies that exclusively focused on samples of children and adolescents with intellectual disabilities, neurodevelopmental disorders or specific health conditions were also excluded as the current review is focused on drawing broad associations from the general population. Research has shown that power imbalance is an important feature between victims and preparators of peer victimisation, and that it can be especially difficult to capture among those with disabilities or intellectual differences (Arseneault, 2017). Therefore, more specific criteria may be required to illustrate particular findings relating to these groups, and this may be an area for future research to address and explore.

Building on limitations recorded in previous meta-analyses in this area (Chiu et al., 2020, Christina et al., 2021), papers without validated measures that analyse specific types or constructs of peer victimisation were excluded. Peer victimisation was defined as involving several subtypes including overt (defined as physical or verbal threats by peers), relational (which is largely characterised by social exclusion and rejection by peers), reputational (i.e., being the focus of peers' attempts to damage one's reputation) and cybervictimisation (i.e., peer victimisation of any type that occurs via electronic media and the internet) (De Los Reyes & Prinstein, 2004; Tokunga, 2010). Previously, reviews have included a wide range of unpublished or study specific measures, many of which were single items (Christina et al., 2021). This review further builds on this by focusing solely on studies that used standardised, validated, and distinct measures of peer victimisation and anxiety constructs. Measures were considered appropriate for this review if they have been previously published in a peer-reviewed journal either as a full measure or as an adaption of an existing measure. Stewart et al. (2012) highlights that any modification or adaptation of a published measure

which will have likely undergone extensive development or testing, may be problematic and that there is limited practical and appropriate guidance on how retain the strength of a measure following modifications. Therefore, adaptations must be avoided to help retain and preserve the existing reliability and validity of the measure (Juniper, 2009). Thus, any modifications of any published measure without a previous validation study would mean the measure was no longer valid for the purpose of this review and were excluded.

### 2.3 Study Selection

Figure 1 shows a summary of the search and screening method using a Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flowchart. Two authors (EN and HR) independently screened 20% of retrieved abstracts and titles ( $n = 340$ ) for eligibility. There was 95.6% agreement on eligibility between raters at this stage. The inter-rater reliability calculated between raters was deemed as 'almost perfect', Cohen's  $\kappa = 0.91$  (Landis & Koch., 1977; Altman, 1999). EN and HR independently screened 20% of the full texts of eligible studies ( $n = 130$ ). There was an agreement of 82.3% on inclusion between raters, where the inter-rater reliability was classified as 'substantial', Cohen's  $\kappa = 0.65$  (Landis & Koch., 1977; Altman, 1999). Any disagreements were resolved through discussion.

### 2.4 Data Extraction

Data was extracted and coded by EN. To ensure accuracy, 100% of studies were cross-checked by HR. The following information was extracted: author, year, study design, sample size, mean and SD of age, majority ethnicity (%), female (%), country, setting for data collection (i.e., school, clinical or community), interval length between baseline and follow-up data, type of peer victimisation and anxiety, the names of the validated measures for peer victimisation and anxiety, the direction of the relationship and the reported effect sizes for each direction. Authors were contacted when there was insufficient data for extraction detailed in the study and were asked to

provide the required information. See Table 1 for the characteristics and outcomes of the included studies.

## 2.5 Assessment of Study Quality

Study quality was assessed using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Heart, Lung & Blood Institute, 2014). This 14-question checklist is well-established, comprehensive and is regarded as a suitable tool for assessing key characteristics of longitudinal cohort studies (Ma et al., 2020). A total quality score was calculated by tallying the responses (yes = 1, no = 0) and one of three total quality ratings were allocated to each study depending on the value of the total score (<10 'poor', 10 = 'fair', >10 'good'), which is consistent with similar reviews (Chiu et al., 2021). Studies were assessed independently by two assessors (EN and HR). Percentage agreement for the individual items in the scale was 96.4%, and the inter-reliability utilising the interclass correlation coefficient (ICC) was calculated to be 0.76, indicating a good reliability between raters. Any discrepancies in scorings were discussed and resolved.

## 2.6 Data Synthesis

Analyses were performed using Meta-Analysis via Shiny (MAVIS version 1.1.3; Hamilton et al., 2017). Random effects models were used to account for the expected heterogeneity in effect sizes between studies due to the diversity in type of outcome measures used, duration of intervals and age range of participants. All outcome statistics were transformed into Pearson's  $r$  for the analysis. Standardized regression coefficients ( $n = 1$ ; Landoll et al., 2015) were converted to  $r$  as suggested by Peterson and Brown (2005). Odds ratios ( $n = 1$ ; Fahy et al., 2016) were transformed to  $r$  following the recommendations by Borenstein et al. (2009). When studies used two or more questionnaire measures for the anxiety variable, effect sizes obtained from each measure were averaged.

The effect size of each study was transformed to Fisher's  $Z$  for the meta-analysis, and the summary Fisher's  $Z$  score was transformed back to a summary correlation (Pearson's  $r$ ). Cohen's



guidelines (Cohen, 1988) were referred to for interpretation of effect sizes ( $r = 0.10$  'small',  $r = 0.30$  'moderate',  $r = 0.50$  'large') as recommended in the guidance by Akoglu (2018). To assess the degree of heterogeneity between studies, the Cochran's Q test and the Higgins and Thompsons  $I^2$  test were applied. The presence of heterogeneity is suggested if a statistically significant result from the Cochran's Q test is produced ( $p < 0.05$ ). A greater  $I^2$  value signifies a larger degree of heterogeneity (25% = 'low', 50% = 'moderate', 75% = 'substantial') (Higgins et al., 2003). The risk of publication bias across studies was assessed by examining funnel plots generated by performing the Egger's test (Egger et al., 1997). A significant Egger's test result ( $p < 0.05$ ) indicates asymmetry is present in the funnel plot and therefore is suggestive of publication bias. Several meta-regressions were conducted to examine types of anxiety (i.e., general anxiety symptoms or social anxiety) as potential moderators of the relationship between anxiety symptoms and types of peer victimisations.

### 3. Results

#### 3.1 Study Selection

A total of 3,762 records were identified through the search procedure described. Six studies investigated cybervictimisation in isolation and one study studied cybervictimisation along with other types of in-person peer victimisation. Six studies investigated overt victimisation (verbal or physical or both), eight studies explored relational victimisation and three studies assessed reputational victimisation. Out of the 14 included studies, a majority of studies examined bidirectional effects ( $n = 11$ ) and the remainder looked exclusively at peer victimisation as a predictor of anxiety symptoms ( $n = 4$ ). Regarding the types of anxiety, six studies explored general anxiety symptoms and seven studies looked at social anxiety specifically. One study (Chu et al., 2019) used two measures that captured different dimensions of anxiety. The effect sizes of these questionnaires were averaged for the purpose of this review and this value was included in the general anxiety moderator group.

### 3.2 Study Characteristics

Table 1 summaries the characteristics of all the studies and participants included in the meta-analyses, as well as the outcomes and results. A total of 11,307 participants were included. The majority of studies were carried out in the United States ( $n = 10$ ), but participants' ethnicity varied greatly among these studies. Four studies stated, 'African American' as the majority ethnicity of participants, two studies indicated 'Caucasian' participants as the majority, three described 'Hispanic' participants as the majority and the remaining study described the majority ethnicity as 'non-Hispanic White'. The remaining four studies were conducted in China ( $n = 2$ ) with 'Chinese' population groups; United Kingdom with 'White UK' being described as the majority ( $n = 1$ ); and Sweden with a 'Swedish' population group ( $n = 1$ ). Participants mean age ranged between 12.2 years (McLaughlin & Nolen-Hoeksema, 2012) and 16.0 years (Sigel et al., 2009). Two studies (Doyle & Sullivan, 2017; Rose & Tynes, 2015) did not report the mean age of participants, however age ranges were estimated through school years that had been reported. These authors were contacted for more specific data, but no responses were received. All but one study (Van Zalk & Van Zalk, 2019) collected data exclusively from school-based samples, whereas this study collected data both from a school-based sample and through online data collection open to the wider community. Sex was generally balanced across all studies (ranging from 39.2% - 64% female). Despite all studies employing a longitudinal design, the intervals between the data collection points differed greatly, from six weeks (Herge et al., 2016; Landoll et al., 2015) to a year (Fahy et al., 2016; Rose & Tynes, 2015; Tynes et al., 2020; Storch et al., 2005).

Although standardised, published, and validated measures were exclusively included in this meta-analysis, a variety of measures were still present. The most common measures for peer victimisation were the Revised Peer Experiences Questionnaire (R-PEQ; De Los Reyes & Prinstein, 2004;  $n = 4$ ), the Social Experience Questionnaire (SEQ; Cullerton-Sen & Crick, 2005;  $n = 3$ ), and the Online Victimization Scale (OVS; Tynes et al., 2010;  $n = 2$ ). The most common measures for anxiety symptoms were the Social Anxiety Scale for Adolescents (SAS; La Greca & Lopez, 1998;  $n = 4$ ), the

Multidimensional Anxiety Scale for Children (MASC; March et al., 1997,  $n = 2$ ), the Depression and Anxiety Scale (DASS; Taouk et al., 2001,  $n = 2$ ) and the Profile of Mood States-Adolescent (POMS; Terry et al., 1999;  $n = 2$ ).

Table 1

## Characteristics and Outcomes of Included Studies

| Study                              | Sample Size | Mean Age or Age Range | Majority Ethnicity %       | Female % | Country        | Situation | Interval (months) | Type of PV                    | Validated Measure for PV | Type of Anxiety | Validated Measure for Anxiety | Reported Effect Size T1 PV - T2 AX | Reported Effect Size T1 AX - T2 PV | Quality Assessment Score Total |
|------------------------------------|-------------|-----------------------|----------------------------|----------|----------------|-----------|-------------------|-------------------------------|--------------------------|-----------------|-------------------------------|------------------------------------|------------------------------------|--------------------------------|
| Chen & Zhu (2022)                  | 1987        | 12.32                 | Chinese (% NR)             | 43.9     | China          | School    | 6                 | Cyber                         | EBQ                      | General Anxiety | DASS                          | 0.22                               | 0.24                               | 12 (Good)                      |
| Chu et al. (2019)                  | 661         | 12.86                 | Chinese (% NR)             | 39.2     | China          | School    | 6                 | Cyber                         | R-CBI                    | General Anxiety | DASS-21 & SCSR-SA             | 0.13                               | 0.15                               | 13 (Good)                      |
| Diaz & Fite (2019)                 | 260         | 12.24                 | Caucasian (% NR)           | 47       | United States  | School    | 5                 | Cyber Relational Overt        | ECIPQ & SEQ              | General Anxiety | PROMIS EDAS                   | 0.22                               | NR                                 | 12 (Good)                      |
| Doyle & Sullivan (2017)            | 485         | 11-12                 | African American (65.2%)   | 52       | United States  | School    | 6                 | Overt Relational              | PBFS -Youth Form         | General Anxiety | RCMAS                         | 0.34                               | 0.37                               | 11 (Good)                      |
| Fahy et al. (2016)                 | 2480        | 12-13                 | White UK (16.9%)           | 44.8     | United Kingdom | School    | 12                | Cyber                         | CI                       | Social Anxiety  | M-SPI                         | 0.11                               | NR                                 | 10 (Fair)                      |
| Hamilton et al. (2016)             | 410         | 12.84                 | African American (51%)     | 53       | United States  | School    | 9                 | Relational                    | SEQ-S                    | Social Anxiety  | MASC                          | 0.37                               | 0.16                               | 11 (Good)                      |
| Herge et al. (2016)                | 1162        | 15.8                  | Hispanic (80%)             | 57       | United States  | School    | 1.38 (6 weeks)    | Overt Relational Reputational | R-PEQ; C-PEQ             | Social Anxiety  | SAS-A                         | 0.26                               | NR                                 | 11 (Good)                      |
| Landoll et al. (2015)              | 839         | 15.8                  | Hispanic (73%)             | 58       | United States  | School    | 1.38 (6 weeks)    | Relational                    | R-PEQ                    | Social Anxiety  | SAS-A                         | 0.27                               | NR                                 | 11 (Good)                      |
| McLaughlin & Nolen-Hoeksema (2012) | 1065        | 12.2                  | Non-Hispanic White (13.2%) | 48.8     | United States  | School    | 7                 | Overt Relational Reputational | R-PEQ                    | General Anxiety | MASC                          | 0.24                               | 0.26                               | 11 (Good)                      |
| Rose & Tynes (2015)                | 559         | 11-18                 | African American (32.7%)   | 55.1     | United States  | School    | 10-12             | Cyber                         | OVS                      | General Anxiety | POMS-A                        | 0.15                               | 0.20                               | 11 (Good)                      |
| Siegel et al. (2009)               | 228         | 16                    | Hispanic (78%)             | 58       | United States  | School    | 2                 | Overt Relational Reputational | R-PEQ                    | Social Anxiety  | SAS-A                         | 0.22                               | 0.20                               | 12 (Good)                      |
| Storch et al. (2005)               | 144         | 13.9                  | Caucasian (83%)            | 64       | United States  | School    | 12                | Overt Relational              | SEQ-S                    | Social Anxiety  | SAS-A and SPAI-C              | 0.45                               | 0.25                               | 10 (Fair)                      |
| Tynes et al. (2020)                | 526         | 14.47                 | African American (62.6%)   | 56       | United States  | School    | 12                | Cyber                         | OVS                      | General Anxiety | POMS-A                        | 0.11                               | 0.14                               | 10 (Fair)                      |
| Van Zalk & Van Zalk (2019)         | 501         | 13.96                 | Swedish (% NR)             | 51.9     | Sweden         | Community | 8                 | Cyber                         | CV                       | Social Anxiety  | SPSQ                          | 0.11                               | 0.10                               | 10 (Fair)                      |

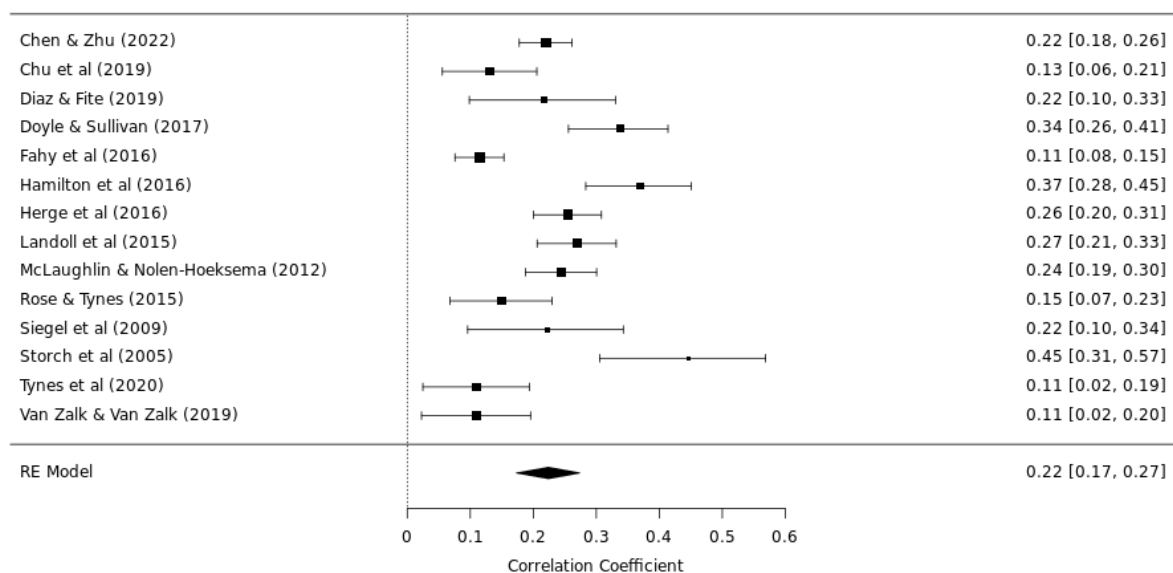
Notes: NR - Not Reported, PV – Peer Victimization, AX – Anxiety, EBQ - Chinese version of the brief adaptation of the Electronic Bullying Questionnaire (Moore et al., 2012; Tian et al., 2018), RCI - The Revised Cyberbullying Inventory (Chinese Version; Chu & Fan, 2017), ECIPQ - European Cyberbullying Intervention Project Questionnaire Items (Del Rey et al. 2015), SEQ - Social Experience Questionnaire (Cullerton-Sen & Crick 2005), PBFS – The Problem Behaviour Frequency Scale–Youth Form (Farrell et al., 2000), CI - Cyberbullying Involvement (Ybarra et al., 2007), R-PEQ - Revised Peer Experiences Questionnaire (De Los Reyes & Prinstein, 2004), C-PEQ - Cyber Peer Experiences Questionnaire - (Landoll et al., 2015), OVS - Online Victimization Scale (Tynes et al., 2010), CV - Cybervictimisation (Katzner et al, 2006), SEQ-S - Social Experience Questionnaire—Self Report Form (Crick & Grotpeter, 1996), DASS - The Depression Anxiety Stress Scales (Chinese Version; Taouk et al., 2001), DASS-21 - The 21-item Depression Anxiety Stress Scale (Chinese Version; Chan et al., 2012), SCSR – SA - Social Anxiety Subscale in the Self-Consciousness Scale (Chinese Version; Wang et al., 1999), PROMIS EDAS – The PROMIS Emotional Distress and Anxiety Scale (PROMIS Health Organization; Ader, 2007), RCMAS - Revised Children’s Manifest Anxiety Scale (Reynolds & Richmond, 1978), MSPI - Mini Social Phobia Inventory (Connor et al., 2001), SAS-A -Social Anxiety Scale for Adolescents (La Greca & Lopez, 1998), MASC - The Multidimensional Anxiety Scale for Children (March et al., 1997), POMS – A – The Profile of Mood States-Adolescent (Terry et al., 1999), SPSQ - Social Phobia Screening Questionnaire for Children (Gren-Landell et al., 2009), SPAI- C - The Social Phobia and Anxiety Inventory for Children (Beidel et al., 1995).

### 3.3 Bidirectional Relationships

#### 3.3.1 Overall Peer Victimization

The meta-analysis ( $n = 14$ ) examining peer victimisation (T1) as predictor of anxiety symptoms (T2) showed a significant and small correlation effect size,  $r = 0.22$ ,  $p < 0.0001$ , 95% CI (0.17, 0.27). This result suggests higher levels of peer victimisation at baseline were associated with higher levels of anxiety at follow-up. Heterogeneity was statistically significant and substantial across studies,  $Q = 79.81$ ,  $p < 0.0001$ ,  $I^2 = 83.7\%$ . The forest plot of the weights assigned for each study is shown in Figure 2a. Additional analyses were conducted to evaluate whether types of anxiety were potential moderators of the relationship between anxiety symptoms and peer victimisation. Types of anxiety were found to be a significant moderator of this relationship ( $Q=79.81$ ,  $df = 13$ ,  $p < 0.000$ ) with the largest effects in studies measuring social anxiety ( $n = 7$ ,  $r = 0.25$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.17, 0.31), followed by studies measuring overall general anxiety ( $n=7$ ,  $r = 0.20$ ,  $z=1.0$ ,  $p < 0.000$ , 95% CI 0.13, 0.27). These two types of anxiety were not found to be significantly different from each other ( $p = 0.39$ ).

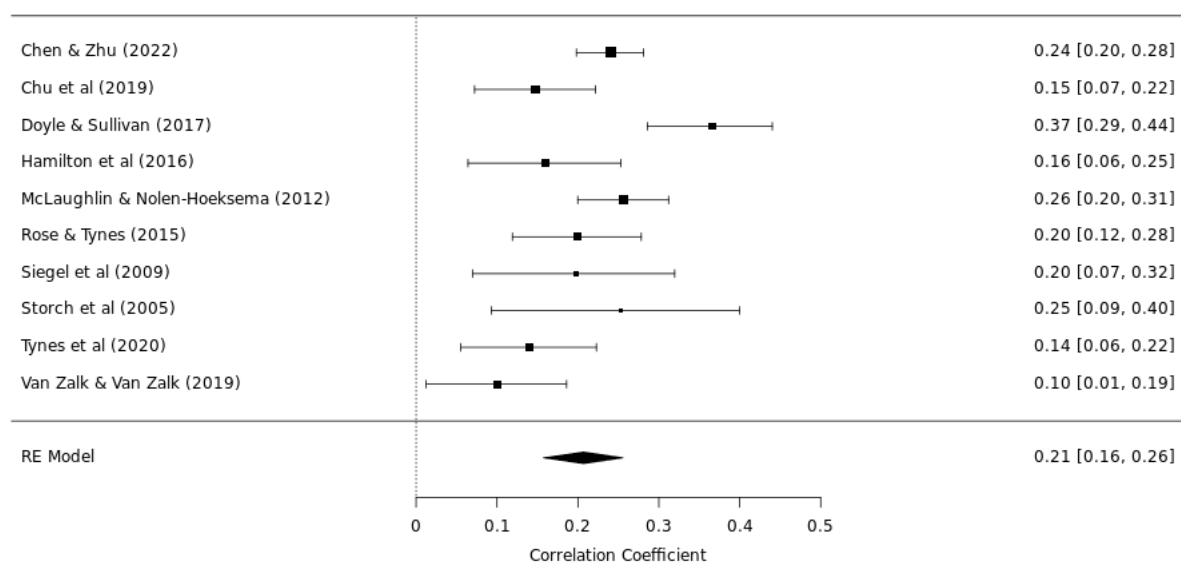
**Figure 2a:** Forest plot of peer victimisation predicting anxiety over time



The meta-analysis ( $n = 10$ ) exploring anxiety (T1) as a predictor of general peer victimisation (T2) showed a significant and small correlation effect size,  $r = 0.21$ ,  $p < 0.0001$ , 95% CI (0.16, 0.26).

This suggests that higher levels of anxiety at baseline were associated with higher levels of peer victimisation at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 31.57$ ,  $p = 0.0002$ ,  $I^2 = 71.5\%$ . The forest plot of the weights assigned for each study is shown in Figure 2b. Types of anxiety were a significant moderator of the relationship between peer victimisation and anxiety symptoms ( $Q = 31.57$ ,  $df = 9$ ,  $p = 0.0002$ ) with the largest effects in studies measuring overall general anxiety ( $n = 6$ ,  $r = 0.23$ ,  $z = 1.0$ ,  $p = 0.0006$ , 95% CI 0.17, 0.28). Studies measuring social anxiety specifically were found to be a non-significant moderator ( $n = 4$ ,  $r = 0.17$ ,  $z = 1.00$ ,  $p = 0.32$ , 95% CI 0.09, 0.24). The two different types of anxiety were not found to be significantly different from each other ( $p = 0.205$ ).

**Figure 2b:** Forest plot of anxiety predicted peer victimisation over time

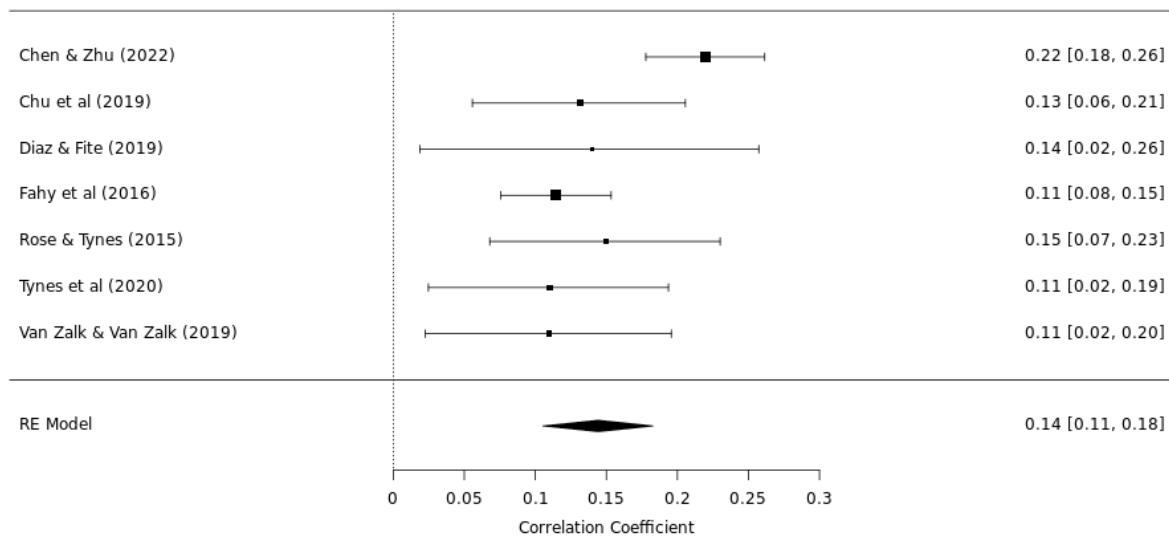


### 3.3.2 Cybervictimisation

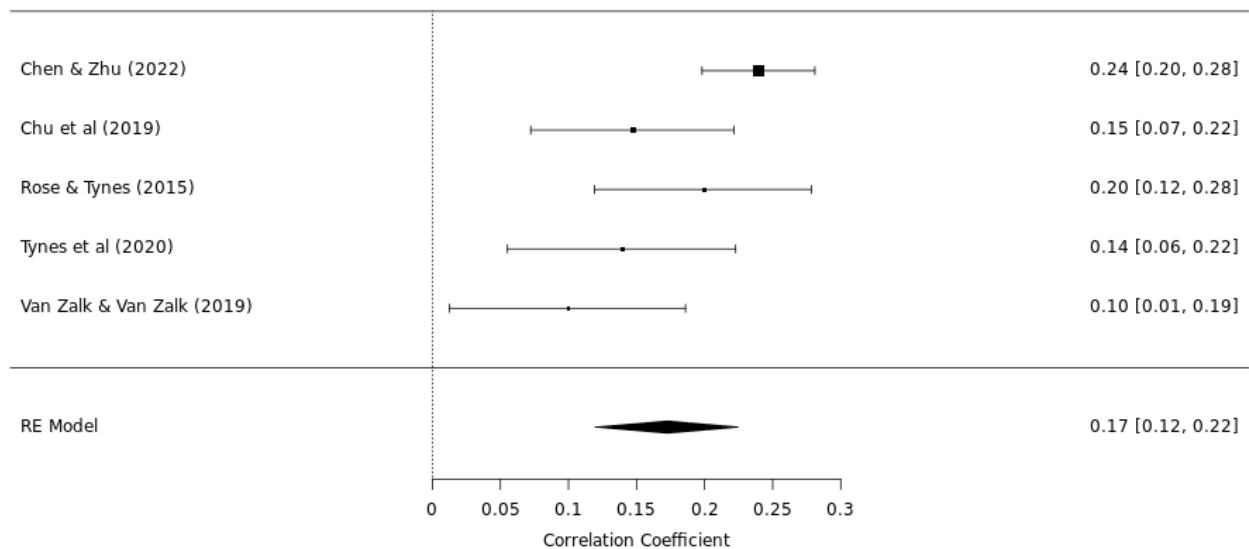
The meta-analysis ( $n = 7$ ) investigating cybervictimisation (T1) as a predictor of anxiety symptoms (T2) showed a significant and small correlation effect size,  $r = 0.14$ ,  $p < 0.0001$ , 95% CI (0.10, 0.18). This result suggests higher levels of cybervictimisation at baseline were associated with higher levels of anxiety at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 15.59$ ,  $p = 0.0162$ ,  $I^2 = 61.5\%$ . The forest plot of the weights assigned for each study is shown in Figure 3a. Types of anxiety were found to be a significant moderator of the relationship between cybervictimisation and anxiety symptoms ( $Q = 15.59$ ,  $df = 6$ ,  $p < 0.0000$ ) with the largest

effects in studies measuring general anxiety symptoms ( $n = 5, r = 0.16, p = 0.0000, z=1, 95\% \text{ CI } 0.12, 0.21$ ), followed by studies measuring social anxiety ( $n = 2, r = 0.11, z = 1.0, p < 0.000, 95\% \text{ CI } 0.05, 0.17$ ). These two types of anxiety were not significantly different from each other ( $p = 0.2$ ).

**Figure 3a:** Forest plot of cybervictimisation predicting anxiety over time



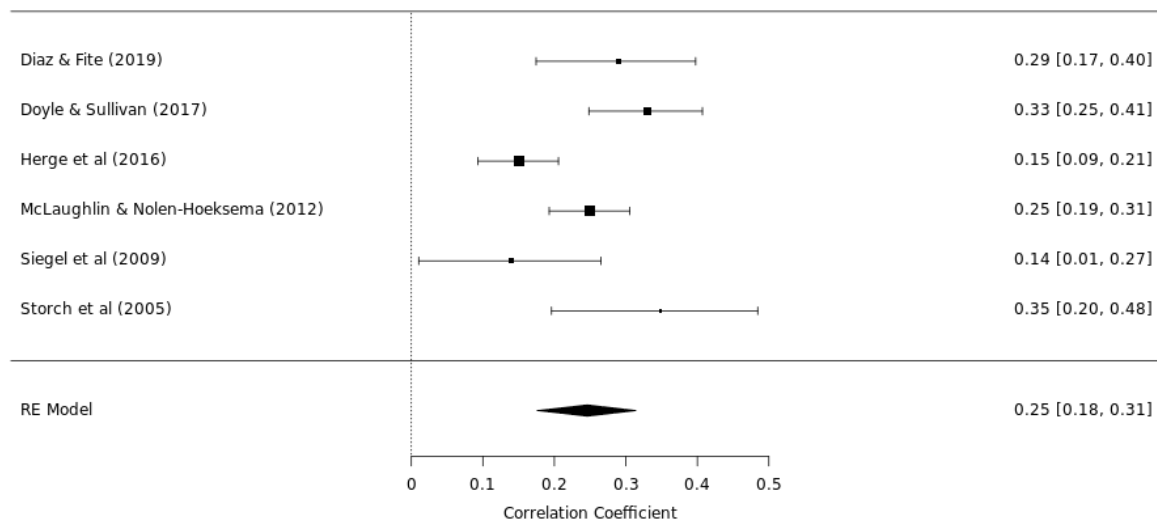
The meta-analysis ( $n = 5$ ) assessing anxiety symptoms (T1) as a predictor of cybervictimisation (T2) showed a significant and small correlation effect size,  $r = 0.17, p < 0.0001, 95\% \text{ CI } (0.12, 0.23)$ . This result suggests higher levels of anxiety symptoms at baseline were associated with higher levels of cybervictimisation at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 12.34, p = 0.015, I^2 = 67.6\%$ . The forest plot of the weights assigned for each study in this relationship is shown in Figure 3b. Type of anxiety measured was found to be a significant moderator of the relationship between cybervictimisation and anxiety symptoms ( $Q = 12.34, df = 4, p < 0.000$ ) in studies measuring general anxiety ( $n = 4, r = 0.19, p < 0.000, z=1, 95\% \text{ CI } 0.14, 0.24$ ). Studies measuring social anxiety specifically was found to be a non-significant moderator ( $n = 1, r = 0.1, z = 0.92, p = 0.1045, 95\% \text{ CI } -0.02, 0.22$ ). These two types of anxiety were not found to be significantly different from each other ( $p = 0.18$ ).

**Figure 3b:** Forest plot of anxiety predicting cybervictimisation over time

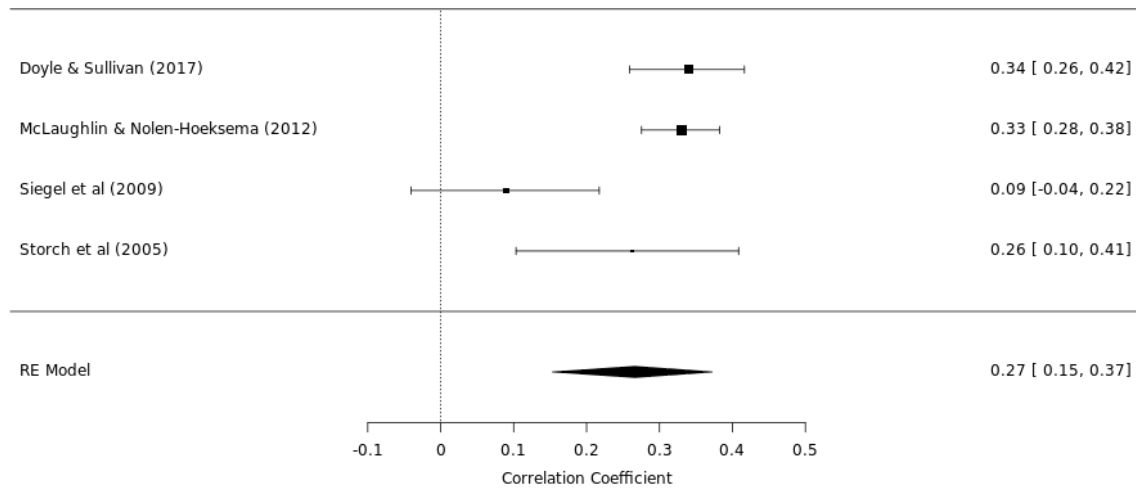
### 3.3.3 Direct (Overt) Peer Victimization

The meta-analysis ( $n = 6$ ) examining overt peer victimisation (T1) as a predictor of anxiety symptoms (T2) showed a significant and small correlation effect size,  $r = 0.25$ ,  $p < 0.0001$ , 95% CI (0.18, 0.31). This result suggests higher levels of peer victimisation at baseline were associated with higher levels of anxiety at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 19.53$ ,  $p = 0.0015$ ,  $I^2 = 74.4\%$ . The forest plot of the weights assigned for each study is shown in Figure 4a. The type of anxiety measured were seen to be significant moderators of the relationship between overt peer victimisation and anxiety symptoms ( $Q = 19.53$ ,  $df = 5$ ,  $p < 0.000$ ) with the largest effects seen in studies measuring general anxiety ( $n = 3$ ,  $r = 0.29$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.21, 0.36), followed by social anxiety ( $n = 3$ ,  $r = 0.19$ ,  $z = 1.0$ ,  $p < 0.000$ , 95% CI 0.10, 0.27). These two types of anxiety were not found to be significantly different from each other in this relationship ( $p = 0.08$ ).



**Figure 4a:** Forest plots of overt peer victimisation predicting anxiety over time

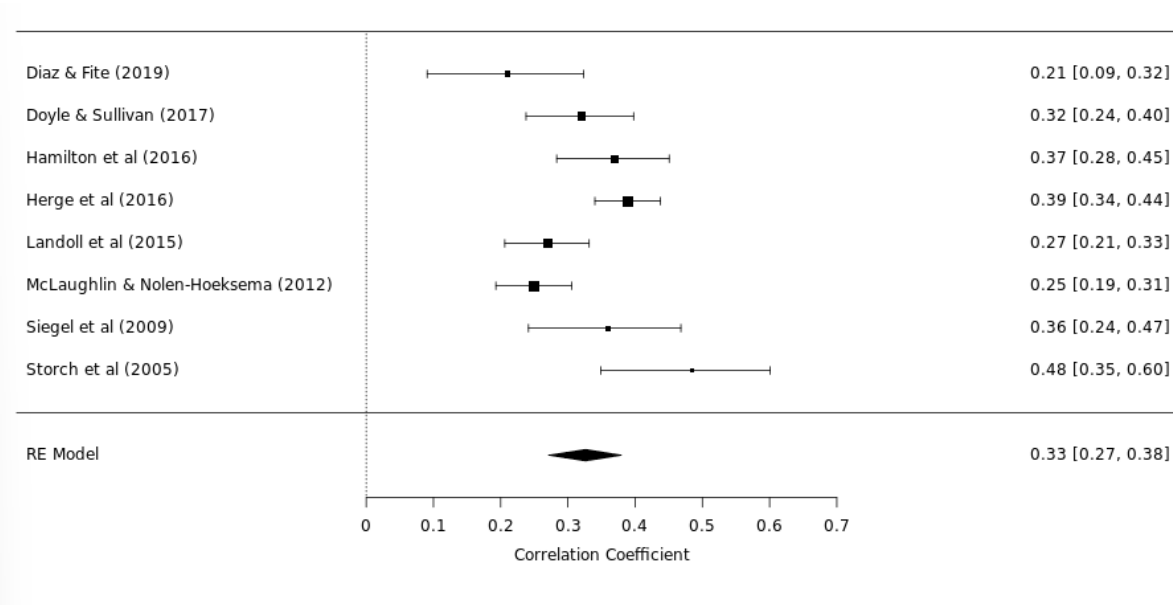
The meta-analysis ( $n = 4$ ) exploring anxiety symptoms (T1) as a predictor of overt victimisation (CV) showed a significant and small correlation effect size,  $r = 0.27$ ,  $p < 0.0001$ , 95% CI (0.17, 0.36). This result suggests higher levels of anxiety symptoms at baseline were associated with higher levels of overt victimisation at follow-up. Heterogeneity was statistically significant and substantial across studies,  $Q = 13.19$ ,  $p = 0.0042$ ,  $I^2 = 77.3\%$ . The forest plot of the weights assigned for each study is shown in Figure 4b. Types of anxiety were a significant moderator in the relationship between anxiety symptoms and overt victimisation ( $Q = 13.19$ ,  $df = 3$ ,  $p < 0.000$ ) with the largest effects in studies measuring general anxiety ( $n = 2$ ,  $r = 0.33$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.27, 0.39), followed by studies measuring social anxiety specifically ( $n = 2$ ,  $r = 0.16$ ,  $z = 1.00$ ,  $p = 0.0044$ , 95% CI 0.05, 0.27). In this relationship, types of anxiety were found to be significantly different from each other ( $p = 0.0052$ ), therefore suggesting that general anxiety had a significantly larger difference than social anxiety on predicting overt victimisation.

**Figure 4b:** Forest plot of anxiety predicting overt peer victimisation over time

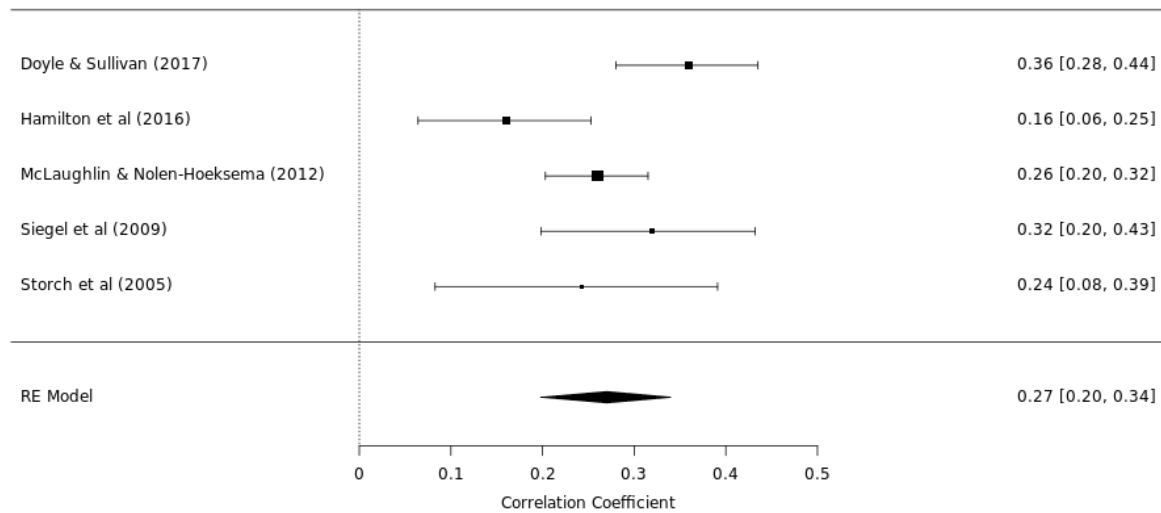
### 3.3.4 Indirect Peer Victimization

#### 3.3.4.1 Relational Peer Victimization

The meta-analysis ( $n = 8$ ) investigating relational victimisation (T1) as a predictor of anxiety symptoms (T2) showed a significant and moderate correlation effect size,  $r = 0.33$ ,  $p < 0.0001$ , 95% CI (0.29, 0.35). This result suggests higher levels of relational peer victimisation at baseline were associated with higher levels of anxiety at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 27.02$ ,  $p = 0.0003$ ,  $I^2 = 74.1\%$ . The forest plot of the weights assigned for each study is shown in Figure 5a. Types of anxiety were a significant moderator in the relationship between relational victimisation and anxiety symptoms ( $Q = 27.02$ ,  $df = 7$ ,  $p < 0.000$ ) with the largest effects in studies measuring social anxiety ( $n = 5$ ,  $r = 0.36$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.30, 0.42) followed by studies measuring general anxiety ( $n = 3$ ,  $r = 0.26$ ,  $z = 1.00$ ,  $p < 0.00$ , 95% CI 0.18, 0.34). The types of anxiety were found to be significantly different from each other ( $p = 0.0435$ ), therefore suggesting that relational peer victimisation predicted social anxiety to a greater, and more significant extent than general anxiety symptoms.

**Figure 5a:** Forest plot of relational peer victimisation predicting anxiety over time

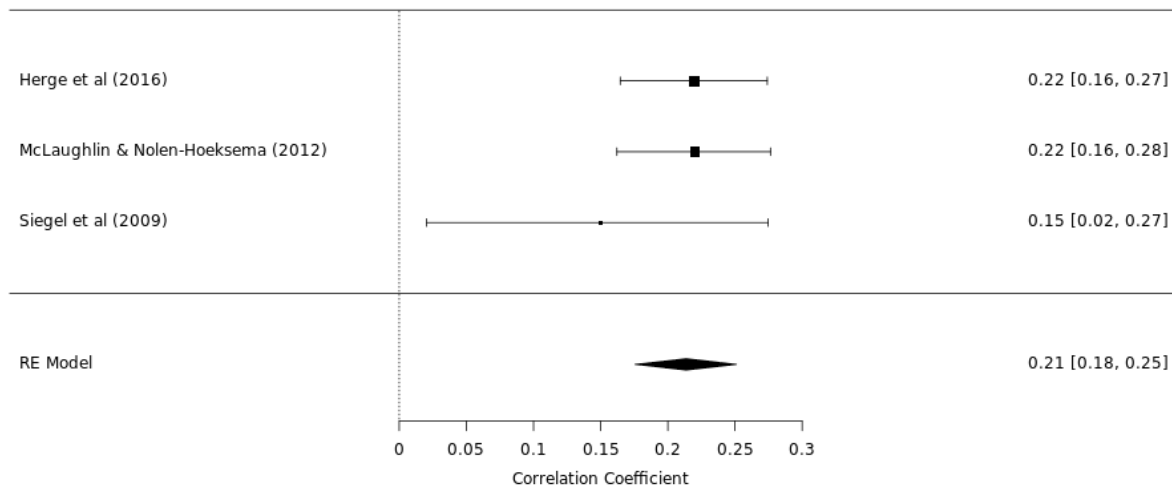
The meta-analysis ( $n = 5$ ) examining anxiety symptoms (T1) as a predictor of relational victimisation (T2) showed a significant and small correlation effect size,  $r = 0.27$ ,  $p < 0.0001$ , 95% CI (0.20, 0.34). This result suggests higher levels of anxiety symptoms at baseline were associated with higher levels of relational peer victimisation at follow-up. Heterogeneity was statistically significant and moderate across studies,  $Q = 11.16$ ,  $p = 0.0248$ ,  $I^2 = 64.2\%$ . The forest plot of the weights assigned for each study is shown in Figure 5b. Types of anxiety were a significant moderator in the relationship between relational victimisation and anxiety symptoms ( $Q = 11.16$ ,  $df = 4$ ,  $p < 0.000$ ) with the largest effects in studies measuring general anxiety ( $n = 2$ ,  $r = 0.31$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.20, 0.40) followed by studies measuring social anxiety specifically ( $n = 3$ ,  $r = 0.23$ ,  $z = 1.00$ ,  $p < 0.00$ , 95% CI 0.13, 0.33). Types of anxiety were not found to be significantly different from each other in this relationship ( $p = 0.3223$ ).

**Figure 5b:** Forest plot of anxiety predicting relational peer victimisation over time

### 3.3.4.1 Reputational Peer Victimization

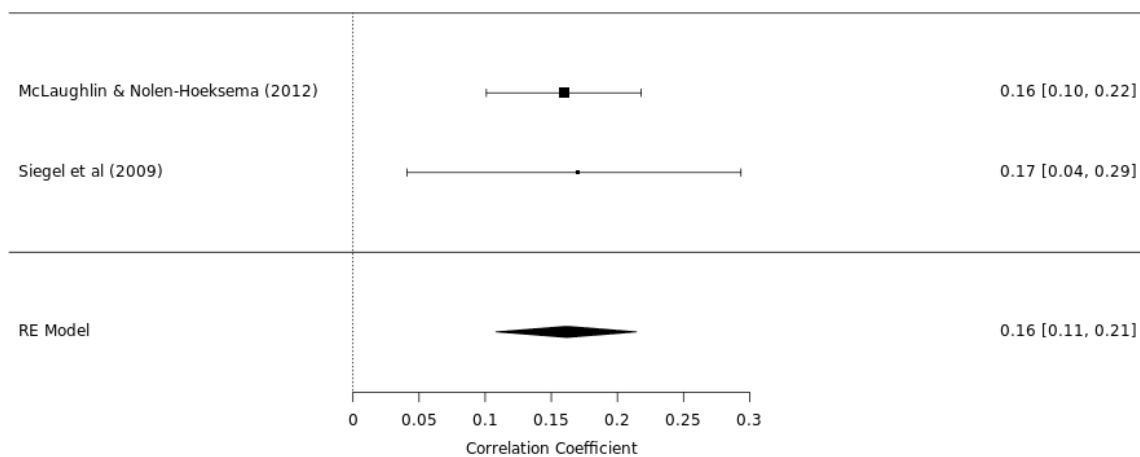
The meta-analysis ( $n = 3$ ) assessing reputational victimisation (T1) as a predictor of anxiety symptoms showed a significant and small correlation effect size,  $r = 0.21$ ,  $p < 0.0001$ , 95% CI (0.18, 0.25). This result suggests higher levels of reputational peer victimisation at baseline were associated with higher levels of anxiety at follow-up. Heterogeneity was statistically non-significant across studies,  $Q = 1.07$ ,  $p = 0.5844$ ,  $I^2 = 0\%$ . The forest plot of the weights assigned for each study is shown in Figure 5c. Types of anxiety were a significant moderator in the relationship between reputational victimisation and anxiety symptoms ( $Q = 1.07$ ,  $df = 2$ ,  $p < 0.000$ ) with the largest effects in studies measuring general anxiety ( $n = 1$ ,  $r = 0.22$ ,  $p < 0.000$ ,  $z = 1$ , 95% CI 0.16, 0.28), followed by studies measuring social anxiety specifically ( $n = 2$ ,  $r = 0.21$ ,  $z = 0.99$ ,  $p < 0.00$ , 95% CI 0.16, 0.26). The two types of anxiety were found to not be significantly different from each other ( $p = 0.77$ ).

**Figure 5c:** Forest plot of reputational peer victimisation predicting anxiety over time



The meta-analysis ( $n = 2$ ) exploring anxiety symptoms (T1) as a predictor of reputational victimisation (T2) showed a significant and small correlation effect size,  $r = 0.16$ ,  $p < 0.0001$ , 95% CI (0.11, 0.21). This result suggests higher levels of anxiety symptoms at baseline were associated with higher levels of reputational peer victimisation at follow-up. Heterogeneity was found to be statistically non-significant across the two studies,  $Q = 0.02$ ,  $p = 0.88$ ,  $I^2 = 0\%$ . The forest plot of the weights assigned for each study is shown in Figure 5d. Moderator analysis of anxiety types within the relationship was not performed due to a small number of studies ( $n = 2$ ).

**Figure 5d:** Forest plot of anxiety predicting reputational peer victimisation over time



### 3.4 Quality Ratings

All 14 included studies were deemed to be of fair/acceptable or good quality (National Heart, Lung & Blood Institute, 2014). This suggests that the methodological quality of the primary research included was primarily high and therefore findings can be interpreted with some certainty.

### 3.5 Publication Bias

Funnel plots were used to detect asymmetry (see Appendix C). There was no indication of asymmetry in the plots consisting of greater than 10 studies, as seen by the non-significant results of the Egger's tests ( $p = 0.52$ ,  $p = 0.15$ ). Thus, there was no conclusive evidence of publication bias within these studies.

Given the limited number of studies included in a majority of the plots ( $n < 10$ ), it is not recommended for funnel plot asymmetry testing as the 'test power' is too low to distinguish chance from real asymmetry (Sterne et al., 2011). Therefore, it was not feasible to reach firm conclusions about publication bias in a majority of the associations.

## 4. Discussion

This meta-analysis aimed to synthesise findings on the longitudinal associations between types of peer victimisation and anxiety symptomatology. The analysis of 14 studies showed significant effect sizes between all peer victimisation subtypes as predictors of later anxiety symptoms, and that anxiety symptoms were also prospectively associated with later peer victimisations across all subtypes. All associations were classified as small, except for the prospective relationship between relational peer victimisation predicting anxiety symptoms which produced a significant and moderate effect size ( $r = 0.33$ ) according to Cohen's guidelines (Cohen, 1988). These results demonstrated substantial evidence for bidirectional and reciprocal relationships between anxiety symptoms and peer victimisation subtypes. However, it is important to note that not all studies narrowed down to the full-text screening stage were accessible, therefore there is a degree of uncertainty in the robustness of the relationships found.

Although all forms of peer victimisation were associated with anxiety, relational peer victimisation appeared to be a slightly stronger predictor of anxiety symptoms ( $r = 0.33$ ), followed by overt peer victimisation ( $r = 0.25$ ), reputational ( $r = 0.21$ ) and finally by cybervictimisation ( $r = 0.14$ ). Anxiety symptoms appeared to be a slightly stronger predictor of relational and overt peer victimisation ( $r = 0.27$  for both), compared with cybervictimisation ( $r = 0.17$ ) and reputational victimisation ( $r = 0.16$ ). This contrasts with previous meta-analyses results that showed cybervictimisation was deemed the strongest predictor of internalising symptoms compared with in-person forms of peer victimisation (Christina et al., 2021). However, this previous review incorporated depression along with anxiety symptoms when evaluating the outcomes. Landoll et al. (2015) found that cybervictimisation predicted depressive symptoms, while controlling for other forms of peer victimisation and anxiety symptoms. The same effect was not found with anxiety symptoms, when depression and other victimisation forms were controlled, therefore highlighting that cybervictimisation may be more closely linked with depressive symptoms compared with anxiety. This finding is also supported by research conducted by Olweus (2012) and Kowalski et al. (2014), who suggest cybervictimisation does not have a unique effect on anxiety levels of children. In addition, Ranta et al. (2009), also found that face-to-face forms of peer victimisation were more related to anxiety than depression.

On the other hand, it may be that the results found reflect the lower frequency and prevalence rate of cybervictimisation reported in studies compared with other forms of peer victimisation (Landoll et al., 2015; Christina et al., 2021). It's important to note that the current meta-analysis targeted all ages throughout childhood, leading to a calculated mean age of 12.2 years across all the studies included. Research has shown that cybervictimisation studies have typically taken place with adolescent populations (Kowalski et al., 2019), as technology is commonly accessed by adolescents for social media purposes in order to maintain relationships with their peers, and consequently they may be at a greater risk of experiencing peer cybervictimisation (Lenhart, 2015). This contrasts considerably with younger children who usually utilise technology for video watching

or playing games (Lenhart, 2015). This is supported by research into developmental trajectories which has shown that as children become older there is an increase in their development of cognitive capabilities (Batanova & Loukas, 2011), and an increasingly greater emphasis on peer relationships and building a greater social status within their peer group (Casper & Card, 2010; Pronk & Zimmer-Gembeck, 2010). As peer victimisation by definition takes place among similar aged peers, it is therefore understandable that research has also found there to be a developmental trajectory that moves from overt aggression to relational types of aggression as children progress into their adolescent years (Björkqvist et al., 1992), which may also reflect peer victimisation trajectories (Casper & Card, 2016). Therefore, having a sample in this review that captured children across the ages, with a calculated mean age in the lower end of the adolescent range, may not have adequately addressed and captured the differences in developmental stages across the age span, and thus may have impacted findings gathered regarding not only cybervictimisation but the data into the varying victimisations more widely. Future research should aim to have a greater restriction on the age criteria to allow for more robust conclusions around childhood development to be drawn.

Moderator analysis of anxiety types in the relationship between anxiety symptoms and peer victimisation showed that there was a non-significant difference between anxiety types (social anxiety and general anxiety symptoms) in a majority of the associations investigated in this review. However, they were found to be significantly different from each other in two of the prospective relationships investigated. Results suggested that relational peer victimisation predicted social anxiety to a greater, and more significant extent than general anxiety symptoms ( $p = 0.0052$ ), and that general anxiety symptoms had a significantly larger difference than social anxiety on predicting overt peer victimisation ( $p = 0.0052$ ). This is supported by findings by Landoll et al. (2015) who found that relational victimisation was a strong and unique predictor of social anxiety among adolescents when compared with other forms of victimisation. In addition, Chiu et al. (2021) found that peer victimisation had the strongest bidirectional association with social anxiety when compared with other areas of peer functioning (i.e., friendship quality and peer acceptance). This result is also



consistent with findings that suggest negative evaluations from peers, which is a core component of relational victimisation, are likely to influence the development and maintenance of social anxiety (Wong & Rapee, 2016). In addition, Casper and Card (2016) found that the association between relational victimisation and anxiety was stronger, as opposed to overt forms of victimisation.

This review also found that general anxiety symptoms were a significantly greater predictor of overt victimisation, in comparison with social anxiety. This is line with research that has suggested that children who are socially withdrawn and emotionally sensitive, which are notable features of anxiety more generally, are more likely to experience victimisation (Juvonen & Graham, 2014). However, it is important to note that the moderator analysis for this relationship had very few studies in each investigation which may be overinflating or underinflating the results. Regardless, we are able to observe a significant difference in these relationships, and thus can determine that some effect may be occurring between the different subtypes. Taking this all into account, these identified patterns between types of anxiety and peer victimisation subtypes have been important to explore as distinct relationships have been found, which may inform future research and clinical interventions.

Generally, these results are consistent with previous meta-analyses addressing similar questions (Chiu et al., 2021; Christina et al., 2021), emphasising the robustness of the effects observed. When evaluating peer victimisation as predictor of anxiety, the effect size in this review was found to be  $r = 0.22$ , compared with  $r = 0.23$  (Chiu et al., 2021). When evaluating anxiety as the predictor, the effect size was found to be  $r = 0.21$ , as compared with  $r = 0.17$  (Chiu et al., 2021). However, it's important to note that this previous review only evaluated social anxiety as a predictor and outcome, whereas the current review investigated both general anxiety and social anxiety associations, and the differences between these. Another recent meta-analysis also found significant bidirectional associations, where peer victimisation predicted internalising distress ( $r = 0.18$ ), and internalising distress also predicted peer victimisation ( $r = 0.19$ ; Christina et al., 2021). Interestingly,

the results in the current review show a somewhat stronger relationship in both directions when including studies with validated measures exclusively and focusing solely on anxiety symptoms. This may indicate that the effect is larger than initially estimated, which has been enabled to be observed through the use of more sensitive, reliable, and validated measures. Although, the result from the previous review may have also been influenced by the depressive symptoms that had also been measured as part of the internalised distress variable. This suggests that depression may have a weaker relationship with peer victimisation than anxiety among children and adolescents. However, regardless of the small differences of effect sizes, the conclusions among all reviews are broadly consistent.

It is important to note that within this review, reputational victimisation was only captured in a very small number of studies, however a significant effect was still observed in both directions. Supporting this finding, long-term peer exclusion, a core feature of reputational victimisation, has been shown to lead to a negative view of oneself and a raised expectation of threat, which may increase the risk of developing anxiety (Hankin, 2012; Rappe et al., 2009). In order for more robust and firm conclusions to be drawn, more research is required to investigate the unique relationship between reputational peer victimisation and anxiety.

Furthermore, samples included in this meta-analysis were primarily school based, with only one study carried out in the community. Therefore, the findings are more generalisable to school environments as opposed to the general population in the community or in clinical settings. Having said this, other studies have found that the results from this review are also consistent with clinical (Hunt et al., 2022) and community samples (Jadambaa et al., 2019; van Eijnden et al., 2014). As well as this, it has been noted that face-to-face peer victimisations among children tends to occur mostly during the school day and are more common than cybervictimisation (Landoll et al., 2015; Modecki et al., 2014). However, it is important to consider that research on cybervictimisation has grown exponentially over the last few years, and the research field in this area is still in its forming phase

(Strohmeier & Gradinger, 2022). Moreover, measurements for cybervictimisation are a challenge as scales tend to become rapidly outdated due to the consistent technological development (Del Rey et al., 2015). Therefore, the findings of this review may reflect these limitations in the evidence-base, and it may be that the prevalence rate of cybervictimisation among children is greater than initially estimated in the earlier studies identified.

Although the limitations in the evidence base may make it difficult to determine and compare the prevalence rates of the different victimisations and the environments they may be more likely to occur in, the school environment is nevertheless important to explore, especially as programs aiming to prevent peer victimisation tend to take place within schools and the issue is often targeted through whole school approaches (Cross et al., 2011, Karna et al., 2011; Ttofi & Farrington, 2011),. A review has shown that studies have consistently reported that negative school environments can increase the frequency of peer victimisations (Hong & Espelage, 2012). Moreover, children with a lower level of school connectedness (i.e., sense of belonging in the school) are more likely to be victimised by their peers and increases their involvement in bullying (Glew et al., 2005). Other studies have shown that supportive relationships within the school environment (e.g., with peers and teachers) can act as a protective factor against peer victimisation (Thornberg et al., 2022). Overall, there are many components to the school environment that may influence the relationship between anxiety symptoms and peer victimisation, but future research is required to explore associations both within school settings further and in other environments beyond school.

It has been helpful to examine the different types of peer victimisation as separate constructs, as this may provide more targeted information for interventions. However, it is important to note that types of peer victimisation often overlap. Specifically, previous research has found that children who experience physical or relational victimisation are also likely to experience incidents of cybervictimisation (Kowalski et al., 2014; Wigderson & Lynch, 2013). This finding acknowledges that experiences of peer victimisations may not be happening in isolation and may be

overlapping with other experiences of victimisation. Additionally, this review focused on those who were exclusively victims, however research has shown that anxious children who are aggressive to other peers are also more likely to be targets of overt forms of victimisation (Hunt et al., 2022). Supporting this, some children who experience peer victimisations tend to also engage with victimisation behaviours (Pellegrini et al., 1999), and are likely to exhibit internalising (Egan & Perry, 1998) and externalising difficulties (Kelly et al., 2015). These findings suggest that there may be several factors at play within this association and illustrates that the issue of peer victimisation is multifaceted. Further research is required to explore the mechanisms that may underpin peer victimisation and its bidirectional relationship with anxiety. It is also important to consider that anxiety can often co-occur with depression (Melton et al., 2016) and it has been extensively shown in previous research to be associated with peer victimisation (Christina et al., 2021). Therefore, it's important to not neglect that depression may be partially accounted for the bidirectional relationships observed, despite the current review focusing exclusively on anxiety difficulties.

#### **4.1 Conceptual and Clinical Implications**

Current research suggests only half of school-based programs intended to address anxiety difficulties result in a lessening of anxiety (Calear & Christensen, 2010) and only 16% of anti-bullying programs lead to a reduction of peer victimisation (Gaffney et al., 2019). Additionally, most anti-bullying programmes tend to focus on peer bystanders and perpetrators (Chaux et al., 2019) rather than addressing victimisation directly. However, in the context of school, it has been shown that peer victimisation does not often take place between the bully and victim exclusively (Salmivalli, 2010) and others such as bystanders, defenders or reinforces are also involved (Zych et al., 2017). Therefore, targeted interventions that encompass all involved (i.e., whole school approaches) may be beneficial and a more effective approach to tackling peer victimisation.

Clinically, the results of this review have demonstrated a bidirectional relationship, and therefore may potentially imply that reducing one variable will have a positive effect on the other.

However, it's important to note that other confounding variables not measured may also be influencing these relationships. Nevertheless, these results suggest that future research should aim to maximise these observed bidirectional benefits by designing programmes to manage both experiences simultaneously. This potential programme or intervention can be designed by either including a component that directly targets peer victimisation within anxiety treatment (Berry & Hunt, 2009) or by incorporating anxiety management strategies in school-based peer victimisation programs (Rapee et al., 2020). In addition, school-based intervention programs that target relational victimisation may be helpful in preventing the development of social anxiety (La Greca et al., 2016). Therefore, the development and implementation such interventions could potentially improve peer relationships, as well as improve the management of anxiety, which may simultaneously play an important role in prevention against both. Importantly, any newly developed intervention based on these findings is recommended to be tested for its feasibility and evaluated robustly.

In clinical settings, it has been observed that interventions that target the treatment of anxiety have had a significant impact on the ongoing risk to peer victimisation (Berry & Hunt, 2009; Chu et al., 2015; La Greca et al., 2016). This may be a new direction forward, as research has proposed that addressing anxiety might be a more acceptable pathway to care than targeting peer victimisation (Hunt et al., 2022). Parents or guardians are more likely to be aware of anxiety that their child is experiencing, rather than be cognizant of whether they have been victimised due to low disclosure rates (Stavriniades et al., 2015; Rapee et al., 1994).

#### **4.2 Limitations and Future Directions**

There are several limitations to discuss. A key limitation of the eligibility criteria within this review is that all papers included were required to be self-report studies which may inflate or underestimate the relationship as they are subject to response bias and demand characteristics (Hoskin, 2012) and the findings obtained may not be consistent across the sample groups (Austin et al., 1998). In addition, without informant reports (i.e., parents or teachers), it is possible that anxiety

does not increase the likelihood of victimisation, but rather the child's perceptual bias leads to a misinterpretation of interactions or situations and the potential to evaluate these excessively negatively (Calleja & Rapee, 2020; Hunt et al., 2022).

Having said this, literature has shown limited agreement between informants across a broad range of areas (De Los Reyes et al., 2005)., Research has shown that informant reports may be affected by their own personal biases and perspectives (De Los Reyes et al., 2011; Juvonen et al., 2014). To mitigate these limitations, future research should aim to collect a range of perspectives through observations, informant and self-report measures which can help inform a more robust conclusion and consensus of these relationships. Having said this, Christina et al. (2021) who completed a moderator analysis on different informant measures in a similar review, showed that bidirectional relationships were still significant regardless of the reporting measure used (i.e., cross-informant, self-report), which further supports the strength of these associations. Even so, future research would benefit by exploring these associations further with different reporting measures and examining any differences found between them.

In consideration of demographics, gender differences have been observed in the disclosing and reporting of peer victimisation, with some studies showing that females report more relational victimisation and males report more overt victimisation (La Greca & Harrison, 2005; Siegel et al., 2009). In addition, females tend to report more symptoms of mental health difficulties (Essau et al., 2010; Hyde et al., 2008). This therefore suggests that differences in reporting may underrepresent or overrepresent the results found in this review, as well as indicating a query around external validity and poses a limitation on the generalisability of these results. Further research is required to specifically look at these differences among the sexes and explore reasons and mechanisms behind them. Furthermore, this review also captured a diverse population sample spanning across several countries; however, all studies included were required to be in English, which may introduce systematic bias. Despite this, the effect of language restriction in reviews was shown to not impact

systematic bias in conventional medicine but highlighted that further research is required in particular areas of health (Morrison et al., 2012). In addition, most studies in the current review were conducted within the United States, therefore further research is required in different population groups and different countries to determine consistency and improve the external validity of the findings.

Despite the intention to explore the school environment and social context as a risk factor to peer victimisation, studies in the evidence-base meeting criteria with varying environments were limited, therefore conclusions were unable to be drawn and a moderator analysis among these factors could not be conducted. There is evidence that the type of school environment is a risk factor, where classroom size has been shown to be negatively associated with victimisation with popularity of bullies being stronger in smaller classrooms (Garandeanu et al., 2019). In addition, attitudes of teachers (Veenstra et al., 2014; Oldenburg et al., 2015) and peer bystanders (Salmivalli et al., 2011), as well as status in the classroom (Garandeanu et al., 2014), have also been shown to influence peer victimisation prevalence rates. These individual factors within the school environment and their relationship with anxiety symptoms would benefit from further exploration in future research. In addition, future literature should aim to replicate the findings from this review in other sample groups (including, community and clinical settings) to improve external validity and allow for findings to be generalised more widely than just the school environment. This will also provide an opportunity for any differences between environments to be examined and explored.

Finally, studies that measured reputational bullying were limited in the evidence base. Despite this, a significant association was still found in both directions. Future research is required to explore this construct further and determine a more robust conclusion on its effects.

### **4.3 Conclusions**

The effects found are relational and cannot definitely determine cause, and it is possible that additional variables not included are responsible for changes in both variables. Despite the inability

to draw causal conclusions, the results show a clear, significant bidirectional relationship between anxiety and peer victimisation subtypes, which is consistent with previous research and holds relevance to different developmental and cognitive theories. In addition, these findings have implications for informing possible clinical and school-based interventions to support anxious children and adolescents who have been victimised by their peers. Future research is needed to improve the generalisability and validity of the bidirectional associations found.

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### Chapter 3: Bridging Chapter

The meta-analysis in Chapter Two found bidirectional effects between peer victimisation and anxiety symptoms for children and adolescents, therefore implying that reductions in one variable (e.g., peer victimisation or anxiety) may potentially reduce the other. Additionally, included studies were predominately from school-based samples, impacting the generalisability of the findings to other settings. However, currently, interventions that aim to target peer victimisation often take place within schools and adopt whole school approaches (Cross et al., 2011, Karna et al., 2011; Ttofi & Farrington, 2011). However, findings from school interventions have been mixed (Gaffney et al., 2019) and even with a strongly evidence-based programme, a considerable proportion of children remain victimised (Kaufman et al., 2018).

Moreover, research has shown that disclosing rate of victimisation is low, with many cases that are never disclosed (Bjereld, 2018). In support of this, several studies have reported low disclosure rates (Blomqvist et al., 2020; Petrosino & Guckenbug, 2010; Shaw et al., 2019), where approximately a third to half of victimised school-aged children do not disclose to adults (van der Ploeg et al., 2022). However, disclosing is necessary in order for peer victimisation to be addressed as it is the first step before children are able to receive support from others to help cope with any negative feelings that may arise as a result (Mishna & Alaggia, 2005). In particular, exposure to these feelings and speaking openly about the victimisation are often the main components in many intervention programmes (Salmivalli, 2014; Veenstra et al., 2014).

Given the findings of the meta-analysis and a review of further literature, a new direction has been proposed which suggests that targeting anxiety may be a more effective route in reducing peer victimisation (Hunt et al., 2022), as it is more likely that adults interacting with the child in question (i.e., parents or school staff) may be more aware of anxiety difficulties compared with whether they have been victimised by their peers (Stavrinides et al., 2015; Rapee et al., 1994). This is supported by various interventions that have targeted anxiety, which has led to a significant

reduction to the ongoing risk of peer victimisation (Berry & Hunt, 2009; Chu et al., 2015, La Greca et al., 2016); For instance, Berry & Hunt (2009) adopt a CBT approach that focused on anxiety and low-self-esteem by incorporating adaptive coping strategies. Similarly, other studies have drawn on CBT strategies (e.g., exposure techniques) to address symptoms of anxiety directly (La Greca et al., 2016; Chu et al., 2015). These interventions found reductions in peer victimisation experiences alongside reductions in anxiety symptoms in their participants.

To contribute to this evidence-base, the empirical study presented in the next chapter aimed to assess the feasibility and acceptability of an online, psychoeducation intervention for school staff. The intervention is based on CBT principles, the current gold-standard for treatment of childhood anxiety (Higa-McMillian et al., 2016) and the modality drawn upon in the previous studies highlighted. The intervention aimed to provide school staff that work directly with children aged four to 11, with an overview of childhood mild to moderate anxiety difficulties, along with strategies that may be helpful to implement at school to support the more anxious children they work with. This intervention has been adapted from the established and strongly evidenced parent-led CBT intervention for childhood anxiety, which utilises the self-help guide 'Helping your Child with Fears and Worries' (Creswell & Willetts, 2019). This existing intervention targets the same age group of four to 11, and therefore information can be directly transferable and applicable. Additionally, childhood anxiety symptoms typically emerge before the age of 11 and tend to persist into adulthood without intervention (Kessler et al., 2005), therefore highlighting the importance and appropriateness of targeting this age range within this intervention. Considering, Vygotsky's (1987) sociocultural development theory which suggests that children learn and develop higher-order functions/skills actively through hands-on experience and the culture at large (i.e., the adults around the child), it is important that adults regularly surrounding the child are consistently helping them to integrate their learning. Additionally, the 'Zone of Proximal Development' proposed by Vygotsky (1987), suggests that it is help from others that enables children to progressively develop and increase their own skills and scope of understanding and managing their world (i.e., internal

experiences such as anxiety). Moreover, studies into child development have suggested that children from as young as four have developed cognitive capacities to link physical symptoms to anxiety (Muris et al., 2007). Supporting this, widely accepted child development theories such as Piaget (1970) and Theory of Mind (Muris et al., 1999) propose that children as young as seven have reached the cognitive developmental stage to perceive and understand emotions, as well as showing an increased ability to understand the physical symptoms of emotions such as anxiety. Therefore, this highlights the appropriateness of targeting this age group for an early intervention/preventative approach as proposed in the empirical paper of this thesis.

Currently, a majority of school-based interventions are focused on late childhood and adolescence (Baughman et al., 2020) despite prevalence data suggesting earlier intervention is required (Bayer et al., 2011). Moreover, younger children in particular, are often reliant on adult support (i.e., school staff or parents) to help apply strategies to reduce their anxiety (Hawes & Allen, 2016). Primary school staff are well placed to provide this support, particularly with specific anxieties regarding academic or social difficulties (i.e., peer relations and victimisation) within the school environment (Allen & Lerman, 2017). In addition, responses of school staff and other adults, may maintain or alleviate anxiety in children (Hudson & Rapee, 2004; Murray et al., 2009), which has been evaluated, via limited-efficacy testing, in the present empirical study. Additionally, the involvement of school staff in delivering mental health support to the children they work may help build a positive and safe school environment/culture and help children feel more connected (e.g., a sense of belonging) to their school. Additionally, it may help cultivate more positive social relationships between school staff and children, which has been shown to not only buffer against peer victimisation (Hong & Espelage, 2012), but also act as a protective factor against associated mental health difficulties such as anxiety symptoms (Demaray & Malecki, 2002). Taken together, Chapter Four will examine the feasibility, acceptability, and limited efficacy of this newly developed intervention among school staff and determine whether further testing in a larger investigation is warranted.

**Chapter 4: Empirical Study**

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**A Cognitive-Behavioural Psychoeducation Intervention on Childhood Anxiety for School Staff: A  
Quantitative Feasibility Study**

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### Abstract

**Objective:** The aim of this study is to evaluate the feasibility and acceptability of a newly developed online psychoeducation intervention on childhood anxiety for school staff. The intervention is informed by cognitive behavioural therapy principles.

**Method:** This was a feasibility study using a within groups pre-post design. Participants volunteered to attend a brief online training, and complete two brief questionnaires pre and post training. These included a demographic questionnaire, a standardised measure relating to anxious behaviour responses in the school setting (Teacher Responses to Anxiety in Children Questionnaire) and a structured feedback questionnaire relating to the training and research process.

**Results:** 76 participants were recruited to the study and completed all outcome measures. Following the completion of the intervention, school staff reported that they were significantly less likely to respond to children's anxious behaviours with anxiety-promoting responses (i.e., sanctions, avoidance reinforcement and overprotection), and were more likely to respond with autonomy-promoting responses in line with cognitive behavioural theory (i.e., problem-solving, reward and encouragement). Overall, on average, participants found the intervention engaging, useful, suitable, appropriate and easy-to-access. Participants also reported that they felt more confident in understanding childhood anxiety and implementing anxiety strategies in their work following the intervention. Areas of development were noted regarding the drop-out rates of the online intervention.

**Conclusions:** The novel, online intervention appears to be a feasible and acceptable method for those who participated. In addition, the preliminary outcomes show promise and warrant further investigation. Limitations of the study are discussed with suggestions for future research and areas for improvement.

*Keywords: Anxiety, Schools, Child, Feasibility Studies*

## 1. Introduction

While worry is a universal experience, in excess it can impact mental wellbeing negatively and interfere with daily activities (Layne et al., 2009). Prevalence studies have shown that 70% of children aged between eight and 13 years old worry (Muris et al., 1998), with 4% of children meeting diagnostic criteria for a severe anxiety disorder (Meltzer et al., 2003). Anxiety is likely to become more severe throughout childhood (Beesdo et al., 2007), increase the risk of psychosocial impairments (Kovacs & Devlin.,1998) and other mental health difficulties (Mobach et al., 2019), and ultimately reduce quality of life (Raknes et al., 2017).

Research has shown that childhood anxiety is linked to educational underachievement (Woodward & Fergusson, 2001), dropping out of school prematurely (Kessler et al., 1995) and greater difficulties in vocational and social domains of functioning in adulthood (Rapee et al.,2009; Pine et al.,1998). Particularly in younger children, anxiety difficulties are likely to lead to persistent school refusal that results in greater social and academic difficulties (Berg, 1992), including reduced levels of peer acceptance (Greco & Morris, 2005) and greater levels of peer victimisation (Crawford & Manasiss, 2011). Research has shown that children requiring mental health treatment have limited access to services (Fergusson et al., 1993), whereby anxiety in particular has been associated with persistent unmet needs (Parslow & Jorm, 2001). Taking into account the prevalence, lack of access to treatment, and the complexity of difficulties that follow childhood anxiety, the need for early, accessible intervention and prevention is crucial.

The school setting is increasingly being viewed as an unstigmatized (Armbruster, 2002) and valuable point of access to support children with anxiety difficulties (Mifsud & Rapee, 2005). Previous school-based interventions have been shown to be effective across a range of emotional and behavioural difficulties (Rones & Hoadwood, 2000), and important in preventing deterioration (Lowry-Webster et al., 2001). However, research has shown that there is often a lack of quality evaluations of school-based mental health programs (Rones & Hoagwood, 2000) and generally more widely in children mental health services (Wolpert et al., 2016). In addition, research has indicated

that collaboration with school staff is necessary in the development of school-based interventions (Rothì et al., 2008), and that this collaboration also improves effectiveness and outcomes achieved (DuPaul et al., 2006). Therefore, it is of great importance that any new school-based intervention has high-quality evaluations and ensures that school staff are involved as part of the development, design, and delivery, rather than just acting as a point of access. In support of this, research has shown implementation of school-based interventions are more successful when there is direct involvement with school staff (Pass et al., 2018).

School staff are also often the first point of contact for young people who are worried about their emotional wellbeing (Ford et al., 2008), with previous studies showing that emotional support from teachers improves students' mental wellbeing and reduces behavioural difficulties at school (Joyce & Early, 2014). Having said this, school staff have reported that mental health management is not viewed as part of their primary role (Shepherd et al., 2013; Shelemy et al., 2019) and teachers have felt helpless in situations concerning mental health (Kidger et al., 2009). It is likely that this feeling of helplessness is emphasised by the limited access to support and supervision from mental health professionals when addressing concerns (Sharpe et al., 2016). However, some school staff believe managing the mental health of their students needs to be a part of their role and it is vital to understanding their students' behaviours at school including their attitudes towards academia (Roeser & Midgley, 1997; Kidger et al., 2009). Therefore, it is important to consider that any school-based interventions involving school staff needs to complement their educational role, rather than be considered as a burden or further responsibility.

In support of this, it has been reported that a majority of school professionals also believe that schools are the right place for mental health issues to be addressed (Reinke et al., 2011), with many studies highlighting that school staff have requested a need for training to increase their confidence and knowledge around mental health difficulties (Graham et al., 2011; Moor et al., 2007). However, practically implementing mental health training has proven difficult in past research due

to the busy timetables of school staff (Rothì et al., 2008), considerable time-pressures (Taylor et al., 2014), and low levels of acceptability by school staff (Han & Weiss, 2005).

Based on the literature outlined, the aim of the study was to evaluate the feasibility and acceptability of a newly developed online psychoeducation intervention on childhood anxiety for school staff. Currently, cognitive behavioural therapy (CBT) is widely accepted as the gold-standard psychosocial intervention for anxiety in children and adolescents (Higa-McMillian et al., 2016). Considering this, the content of the psychoeducation intervention was adapted from a current low-intensity, parent-led CBT intervention, which utilised a self-help guide for parents called 'Helping your Child with Fears and Worries' (Creswell & Willetts, 2019). Guided parent-delivered CBT for childhood anxiety has been shown to be promising and effective in both an individual (Thirlwall et al., 2018) and group setting (Evans et al., 2018). Taken together with the evidence base, there is a clear gap in school-based psychoeducation interventions around anxiety and a lack of evaluation around school-based interventions generally.

As this is a new intervention, it is vital that feasibility is tested and evaluated to ensure important design parameters can be estimated (Eldridge et al., 2016; National Institute for Health Research, 2021). Feasibility was assessed by considering factors of appeal, demand, acceptability, practicality, adaptation to a new format, appropriateness, limited efficacy-testing, implementation, and integration in a new environment (Orsmond & Cohn, 2015; Bowen et al., 2009). Findings from the current study would ideally inform a future randomised controlled trial (RCT) that explores the effectiveness and efficacy of this new intervention further and may potentially contribute to school training programmes in the future.

## **2. Method**

### **2.1 Design**

To determine whether this new intervention is appropriate for further testing, a quantitative feasibility study was conducted. A feasibility study ensures the intervention is safe and is

administered as intended, prior to conducting a full-scale RCT (Lancaster., 2015). This is important as unsuccessful RCTs are common and costly (Sully et al., 2013). As the main aim of a feasibility study is to estimate the design parameters to inform future research (National Institute for Health Research, 2021) and not assess effectiveness (Lancaster, 2015), a within-subject design was used.

To inform and guide the intervention in its development phases, a Participant and Public Involvement (PPI) group was formed. The PPI group predominately included school staff (including, pastoral school staff members, pastoral school managers, support staff, class teachers, teacher trainees, teaching assistants and agency primary school teachers), as well as mental health professionals from a Schools Wellbeing Service. In addition, various collaborators who have been involved in developing and evaluating the Creswell and Willetts (2019) intervention were also consulted. This extensive input helped refine areas such as whether the intervention and its accompanying resources are accessible, desirable, and appropriate in this format and setting. This feedback was incorporated into the design of the intervention, for example content was shaped to focus more on practical, applicable skills rather than theory (as seen in research by Gurley, 2018; Hampton & Pearce, 2016). In addition, study-derived questionnaires were amended to account for suggestions made through PPI input. These amendments included changing the wording and format of the demographics and feedback questionnaires to be clearer and more acceptable, accessible, and appropriate, which may help reduce participant burden and response error (Mes et al., 2019).

It was imperative to collaborate with school staff through this consultation process, as research suggests it is key for the successful development and implementation of school-based mental health programs that adopt whole-school changes (Lynn et al., 2003; Roth, et al., 2008). Similarly, for training to be effective and engaging, it must be designed with thorough knowledge of what school staff need and would like (Reinke et al., 2011), which can only be achieved through discussion, consultation, and collaboration with them.

## **2.2 Participants and Recruitment**

Primary school staff working directly with children aged between four and 11 years old regardless of job role were eligible to participate in this study. This enabled a further measure of assessing feasibility as responses from many different professions within schools can be compared and evaluated. School staff who had substantial mental health training prior to study recruitment phase were excluded. This was defined as attending a mental health training course that was longer than three days. Two senior leads working within regional school networks consented to act as gatekeepers and disseminate a study advert (see Appendix E) to education staff who could access the study through an online link detailed on the advert. This method may establish snowball recruitment and potentially improve recruitment rates (Allen, 2017). In addition to gatekeepers, the study advert and the accessible link to the training was shared through social media advertisements to facilitate further recruitment.

To determine sample sizes, Cocks and Torgerson (2013) suggests more than 50 participants are required in feasibility studies. Utilising G\*Power software (Erdfelder et al., 1996), a power calculation (with power set at 0.8) was conducted to determine the minimum number of participants required to achieve a medium effect size (0.5) at a 0.05 significance level for a one tailed, within-subjects study for the limited efficacy testing. The result from this indicated that a minimum of 27 participants were required for parametric testing. To account for attrition problems, we aimed to recruit at least 10% more than this minimum requirement, therefore a target of 30 participants was required to achieve a fully powered study.

## **2.3 Intervention**

The intervention was designed for the current study as an asynchronous, online training package consisting of three brief videos (totalling to 30 minutes) as informed by PPI recommendations. In support of this recommendation, a primary school teacher-led intervention had a high engagement by school staff (over 90%) when training sessions were 20-30 minutes in

length (Bierman et al., 2010). It is also important that training resources were kept short, direct, and clear, to account for the time and work constraints that school staff face (Shelemy et al., 2019). To support the choice of format and mode of delivery, existing research and PPI was consulted. It has been shown that asynchronous learning promotes self-regulation and a sense of control over the learning process which may increase engagement (Fredricks et al., 2004). Additionally, the online and asynchronous nature of this training enabled school staff to plan around their differing time and work commitments and take part at a time that suits them, which increased accessibility and further supports recruitment uptake. Moreover, by expanding flexibility of the delivery in this manner, it was hoped that recruitment might be able to capture a wider representation of varying demographics across the United Kingdom such as socio-economic status and regional differences within the sample, which may enhance the external validity of the findings. Chan et al. (2021) found that similar online learning environments to this study were more suitable and accessible with greater levels of enjoyment and satisfaction due to the larger flexibility participants have at managing their learning through an asynchronous online approach.

The training package was accessed through a singular link, as seen on the study advertisements, and disseminated through gatekeepers and social media adverts. The link was supported by Qualtrics and guided participants through the procedure steps to support user-accessibility. This singular link included the embedded training videos, the forms (e.g., the participant information sheet and consent form), and the questionnaires (e.g., the two brief measures pre and post the training videos). Participants were able to take part at any time using this active study link.

The script for the training videos was written and developed by EN. Its content was heavily influenced by the 'Teacher's Guide' featured within the 'Helping your Child with Fears and Worries' manual (Creswell & Willetts, 2019) and its corresponding therapist's manual (Halldorsson et al., 2021). The training videos were developed and produced by EN using the animation software



VideoScribe and the license for this software was obtained through the University of East Anglia's (UEA) Learning and Technology Department. The videos were informed by PPI input who provided feedback on the acceptability of the images used, speed of the animation, and overall engagement levels. The voice-over was recorded by EN using the free audio recording software Audacity and a Blue Snowball professional microphone to ensure the quality of the audio recordings. The videos were hosted privately on the video sharing platform YouTube, which were then embedded into the Qualtrics program. Frequent reminders of support services were provided throughout the training along with a reference list at the conclusion of the training for participants to refer to for further reading if they wish.

The first video detailed the CBT understanding of anxiety including fight, flight and freeze responses (Cannon, 1915), its maintenance through safety behaviours (Salkovskis, 1991; Halldorsson et al., 2021), childhood anxiety prevalence rates, impact of anxiety on the school experience, the importance of this training for school staff, and highlighting common worries children might have at school through the use of common example scenarios e.g., social situations with peers, contributing in class, and teacher interactions (Halldorsson et al., 2021). This is important as targeting and covering the most common school-based scenarios and issues has been found to be a vital component for school staff training programmes in mental health (Fazel et al., 2014).

The second video covered brief and practical strategies based on CBT, that school staff could implement to support the more anxious children they work with. These strategies included goal setting (SMART goals; Rubin, 2002), using normalising statements and language (Fazel et al., 2014), externalising worry using creative methods (White, 2007), graded exposure to tackle avoidance, problem-solving, and using rewards and encouragement (Creswell & Willets, 2019; Halldorsson et al., 2021). The same case examples were used throughout the training for cohesiveness and consistency and to help further illustrate the implementation of strategies. The use of consistent case examples in mental health trainings has been described in research by school staff to be a

useful and helpful tool in understanding and applying practical solutions within educational settings (Shelemy et al., 2019). At the end of the second training video, there was an option for participants to download a practical checklist of strategies which was adapted from the 'Teacher's Guide' (Halldorsson et al., 2021; see Appendix F for this adapted version). A concrete list such as this, with practical strategies that can be easily referred to by school staff, has been highlighted in research to be an important requirement of mental health training for school staff (Shelemy et al., 2019).

The third video covered common questions as seen in the 'Teacher's Guide' (Creswell & Willetts, 2019; Halldorsson et al., 2021), further resources to refer to, self-care for school-staff, and information regarding when to seek extra support and make referrals to other services. There was also a list of contacts for mental health support services that school staff can access if needed.

Additionally, the first two videos ended with a short quiz (3-5 multiple choice questions) to add an element of interactivity which has been shown to increase satisfaction in an online learning environment (Eom & Ashill, 2016) and check understanding which has been highlighted as crucial for the retention of information (Shelemy et al., 2019). Several sample images from the training are included in the appendices, along with the links to access the embedded training videos (See Appendix G).

To make the training more accessible and inclusive, it was designed using multimodal techniques to support different learning styles and needs. The training incorporated a narrative commentary/voice over and had optional subtitles throughout, as well as visual aids such as text and picture animations to support both auditory and visual learners. Supporting this, research has highlighted that using creative methods such as text-based and multimodal production (i.e., animation or pictures) can increase engagement in online learning environments (Bond et al., 2020) and promote further engagement across different ages and generations (Hampton & Pearce, 2016). This enhancement of engagement has also been linked with improved persistence and retention of information (Kuh et al., 2008). More specifically, it has been viewed as essential to contain a mix of

teaching styles in mental health trainings in order to appeal to a range of different learners (Shelemy et al., 2019). This is especially important in the current study, as the demographic variables of school staff participating may vary considerably (i.e., age, job role) and are not restricted within the eligibility criteria. It's important to note that the training itself was also free-of-charge and was accessible at any time during the recruitment window, which has been highlighted in research as a core barrier in school staff accessing mental health training (Graham et al., 2011).

## **2.4 Measures**

### **2.4.1 Demographic Questionnaire**

Demographic information was collected regarding age, gender, job title, length working in education, mental health training experience, and whether they have any pastoral responsibility (see Appendix H). This allowed for the exploration of interactions between demographics and responses to the intervention. This information was collected prior to the online training videos.

### **2.4.2 Structured Feedback Questionnaire**

A structured feedback questionnaire was developed in collaboration with the PPI group (see Appendix I). This questionnaire focused on the participants' experience of the intervention and aimed to assess several factors of feasibility. This information was collected via an online questionnaire that used a 7-point Likert Scale, immediately following the training videos.

### **2.4.3 Teacher Responses to Anxiety in Children Questionnaire (TRAC; Allen & Lerman, 2017).**

In order to assess a change in knowledge, the TRAC measure was completed pre and immediately post the completion of the training videos (see Appendix J). This measure has been developed to measure teacher responses to anxiety in their students based on a CBT framework and has been shown to have good reliability and validity among primary school staff in the United Kingdom (Allen & Lerman, 2017). The measure contains nine typical scenarios of children's anxious behaviours within an education setting. The scenarios relate to the three most prevalent childhood anxiety types: social anxiety, generalised anxiety, and separation anxiety. School staff are expected

to rate the likelihood (from very likely [7] to very unlikely [1]) of responding in six particular approaches to these scenarios. Three of these possible six approaches are overprotection, reinforcement of anxious behaviours and sanctions, which form the Anxiety-Promoting subscale. The remaining three form the Autonomy-Promoting subscale; these include encouragement to face fears, rewarding bravery/independence and problem-solving. The instructions, questions and scoring utilised were consistent with original published questionnaire (Allen & Lerman, 2017). A higher autonomy-promoting response score and a lower anxiety-promoting response score suggests a positive change in knowledge.

## **2.5 Procedure**

Initial contact was made with gatekeepers to disseminate study materials. Interested school staff were encouraged to contact researchers with any questions and had access to a link on the advertisement that took them directly to the intervention to complete the training in their own time. The study link was active between September 2022 and December 2022 and taking part was a completely optional choice. Following this, participants were presented with a screen asking them to read and sign the participant information sheet (PIS; Appendix K) and consent form (Appendix L). On completion, they were directed to the online pre-intervention measures, before being able to proceed and fully access the online training videos. Following the training videos and the accompanying short quizzes, participants were presented with the final two measures to complete: a repeat of the TRAC measure and the structured feedback questionnaire. They were then provided with various resources to refer to for further reading, an opportunity to provide their email address for future research opportunities and contact details for sources of mental-health support for staff and children. In total, the training and its accompanying questionnaires/quizzes took up to 60 minutes to complete which was in line with PPI recommendations. Participants were encouraged to complete the intervention in one sitting; however, they had the opportunity to save their progress and come back to the intervention if they wished. The intervention expired if it was not completed within a one-week period.

## 2.6 Ethics

Ethical approval for the study was granted by the University of East Anglia Faculty of Medicine and Health Sciences Research Ethics Committee (Reference Number: ETH2122-0503). All participants provided written informed consent as detailed in the procedure. There were no gift or monetary incentives for participation.

## 2.7 Analysis Plan

Analysis of the demographic and feedback questionnaires was descriptive; reporting frequencies, percentages and means values with standard deviations. Data regarding recruitment and dropout rates were also reported descriptively. Change in knowledge was measured through the TRAC measure where data was analysed pre and post the training videos. A paired t-test was used to determine the limited efficacy between the pre and post scores and evaluate the difference in knowledge following the intervention. Measures were matched via participant ID numbers and analysed.

## 3. Results

Data was cleaned and incomplete data sets were omitted. Only those participants who completed both measures were used for the purposes of statistical analysis ( $n = 76$ ). Data were screened for outliers and the assumptions for parametric analyses were met. Therefore, a paired-t test was performed to determine whether there was a significant difference in the change of knowledge between pre- and post-intervention. Statistical analysis was performed using SPSS Statistics software. Significance was considered when  $p < 0.05$ .

### 3.1 Demographic Data

In the current study, frequencies and percentages of all demographic data were collected and summarised in Table 1 for all 76 participants. Ethnicity information was also collected. It was found that 60.53% of the sample identified as British, 25% as English, 1.32% each for Turkish, Mauritian, Scottish, Polish, Irish, Half Venezuelan/Half English, Black African, White and Black

African, South African, Eastern European and Chinese (which is worked out to be one participant each).

**Table 1**

*Frequencies and Percentages of Participant Demographics and Characteristics*

| <b>Variable</b>                  | <b>Demographic</b>                   | <b>Frequency<br/>(n = 76)</b> | <b>Percentage<br/>(%)</b> |
|----------------------------------|--------------------------------------|-------------------------------|---------------------------|
| <b>Role</b>                      | Teaching Assistant, ELSA, SEND, 1:1  | 33                            | 43.42                     |
|                                  | Class Teacher                        | 12                            | 15.79                     |
|                                  | Family or Individual Support Workers | 3                             | 3.95                      |
|                                  | Learning Support Assistant           | 11                            | 14.47                     |
|                                  | Deputy Headteacher                   | 5                             | 6.58                      |
|                                  | Pastoral, SENCO, or Wellbeing Team   | 7                             | 9.21                      |
|                                  | Inclusion Managers and Other Leads   | 3                             | 3.95                      |
|                                  | Other                                | 2                             | 2.63                      |
| <b>Region</b>                    | South East England                   | 48                            | 63.16                     |
|                                  | East of England                      | 24                            | 31.58                     |
|                                  | East Midlands England                | 2                             | 2.63                      |
|                                  | West Midlands England                | 1                             | 1.32                      |
|                                  | London                               | 1                             | 1.32                      |
| <b>Pastoral Responsibility</b>   | No                                   | 50                            | 65.79                     |
|                                  | Yes                                  | 26                            | 34.21                     |
| <b>Time Working in Education</b> | More than 10 years                   | 32                            | 42.11                     |
|                                  | 2-5 years                            | 16                            | 21.05                     |
|                                  | 5-10 years                           | 14                            | 18.42                     |
|                                  | Less than 6 months                   | 6                             | 7.89                      |
|                                  | 1-2 years                            | 4                             | 5.26                      |
|                                  | 6-12 months                          | 4                             | 5.26                      |

|  |                             |    |       |
|--|-----------------------------|----|-------|
| <b>Age (years)</b>                       |                             |    |       |
|  | 45 – 54                     | 24 | 31.58 |
|  | 35 - 44                     | 22 | 28.95 |
|  | 25 - 34                     | 16 | 21.05 |
|  | 55 - 64                     | 10 | 13.16 |
|  | 18 - 24                     | 4  | 5.26  |
| <b>Gender</b>                            |                             |    |       |
|  | Female                      | 72 | 94.74 |
|  | Male                        | 2  | 2.63  |
|  | Prefer not to answer        | 1  | 1.32  |
|  | Non-binary                  | 1  | 1.32  |
| <b>Ethnicity</b>                         |                             |    |       |
|  | White                       | 67 | 88.16 |
|  | Other ethnic groups         | 3  | 3.95  |
|  | Prefer not to answer        | 2  | 2.63  |
|  | Other                       | 2  | 2.63  |
|  | Black                       | 1  | 1.32  |
|  | Multiple ethnic backgrounds | 1  | 1.32  |
| <b>Mental Health Training Experience</b> |                             |    |       |
|  | No                          | 46 | 60.53 |
|  | Yes                         | 30 | 39.47 |

---

*Note:* ELSA – Emotional Literacy Support Assistants, SEND – Special Education Needs and Disabilities, SENCO – Special Educational Needs Coordinator.

**Table 2***Mean scores and comparisons for teacher responses on the TRAC (pre and post)*

| <b>Subscale</b>            | <b>Mean (SD) Pre-Training</b> | <b>Mean (SD) Post-Training</b> | <b><i>t</i></b> | <b><i>p</i></b> |
|----------------------------|-------------------------------|--------------------------------|-----------------|-----------------|
| Anxiety Promoting Total    | 2.3249 (.46784)               | 2.0968 (0.49478)               | -4.192          | <.001           |
| Autonomy Promoting Total   | 4.768 (.67042)                | 5.3368 (0.91666)               | 7.422           | <.001           |
| <b>Generalised Anxiety</b> |                               |                                |                 |                 |
| Anxiety Promoting Total    | 2.6535(0.78954)               | 2.2982 (0.56834)               | -4.229          | <.001           |
| Autonomy Promoting Total   | 4.7471 (0.89251)              | 5.1506 (1.0736)                | 3.681           | <.001           |
| <b>Social Anxiety</b>      |                               |                                |                 |                 |
| Anxiety Promoting Total    | 2.4488 (0.67383)              | 2.1842 (0.77632)               | -3.079          | 0.001           |
| Autonomy Promoting Total   | 4.9532 (0.78163)              | 5.538 (0.94508)                | 6.832           | <.001           |
| <b>Separation Anxiety</b>  |                               |                                |                 |                 |
| Anxiety Promoting Total    | 1.9598 (0.44755)              | 1.8925 (0.50014)               | -1.171          | 0.123           |
| Autonomy Promoting Total   | 4.6038 (0.68166)              | 5.3217 (0.91419)               | 8.982           | <.001           |

*Note:* SD - standard deviation; *t* values are presented as post test scores – pre-test scores.



**Table 3***Means and standard deviations of structured feedback questions*

|                         | <b>Item</b>   | <b>Mean</b> | <b>SD</b> |
|-------------------------|---|-------------|-----------|
| <b>Training videos</b>  | 1. The content was easy to understand.  | 6.20        | 1.18      |
|                         | 2. The content was suitable for school staff.   | 6.39        | 1.07      |
|                         | 3. The content was/will be helpful and useful for school staff.   | 6.43        | 1.02      |
|                         | 4. The training is important for school staff in their work.  | 6.38        | 1.06      |
|                         | 5. I would recommend the video to a colleague or contacts at different schools.                                   | 6.26        | 1.14      |
|                         | 6. I found the content interesting.   | 6.34        | 1.00      |
|                         | 7. The content was applicable to a primary school setting.  | 6.46        | 0.97      |
|                         | 8. The content was easy to access.  | 6.32        | 1.11      |
|                         | 9. I feel the content is particularly important in the context of the COVID-19 pandemic.                          | 6.07        | 1.17      |
|                         | 10. I feel there needs to be more training on mental health in my school.   | 5.92        | 1.27      |
|                         | 11. I would have preferred multiple trainings on this topic.  | 4.75        | 1.52      |
|                         | 12. I feel another format other than a pre-recorded video would have been a better way of delivering the content. | 3.37        | 1.73      |
|                         | 13. I found the training was well-paced throughout.   | 6.05        | 1.33      |
|                         | 14. I found the length of the training was appropriate  | 6.16        | 1.02      |
|                         | 15. I found it difficult to find the time to complete this training.  | 2.54        | 1.61      |
|                         | 16. I feel I will use the content of this training in my work.  | 6.24        | 1.03      |
|                         | 17. I feel more confident understanding anxiety.  | 6.09        | 0.98      |
|                         | 18. I feel more confident understanding ways I could identify children with anxiety.                              | 6.12        | 0.97      |
|                         | 19. I feel more confident understanding strategies that may help a child with anxiety.                            | 6.21        | 1.00      |
|                         | 20. I may use some of these strategies going forward in my work.  | 6.32        | 1.02      |
|                         | 21. I know what to do and who to refer to if I come across a child with anxiety.                                  | 6.14        | 1.05      |
| <b>Research process</b> | 1. I understood what the questionnaires were asking me.   | 6.22        | 1.03      |
|                         | 2. It took too long to complete the questionnaires.   | 3.39        | 1.82      |
|                         | 3. I enjoyed taking part in the research study.   | 5.84        | 1.24      |

*Note:* SD - Standard deviation; Scale scores ranged from strongly disagree (1) to strongly agree (7).

### 3.2 Preliminary Limited Efficacy Findings

Table 2 presents the means, standard deviations (SD), *t* values and *p*-values for the outcomes of the pre and post TRAC measure. These analyses demonstrate the likelihood of particular responses towards children's anxious behaviours by school staff.

#### 3.2.1 Anxiety-Promoting Scale

Comparisons of the anxiety subscale scores show that school staff were significantly less likely to respond with anxiety-promoting responses to a student following the training for anxious behaviours generally ( $t(75) = -4.19, p < 0.001$ ), and for behaviours suggestive of generalised anxiety ( $t(75) = -4.229, p < 0.001$ ) and social anxiety ( $t(75) = -3.079, p = 0.001$ ). There were no significant differences in the likelihood of anxiety promoting responses for behaviours suggestive of separation anxiety ( $t(75) = -1.171, p = 0.123$ ).

#### 3.2.2 Autonomy-Promoting Scale

Significant differences were observed among the likelihood of responding with autonomy-promoting responses across all behaviours. School staff were significantly more likely to respond with autonomy-promoting responses following the training for anxious behaviours generally ( $t(75) = 7.422, p < 0.001$ ), and for behaviours suggestive of generalised anxiety ( $t(75) = 3.681, p < 0.001$ ), social anxiety ( $t(75) = 6.832, p < 0.001$ ), and separation anxiety ( $t(75) = 8.982, p < 0.001$ ).

### 3.3 Acceptability and Feasibility Findings

The feedback questionnaire item means and standard deviations are shown in Table 3. The structured feedback questionnaire results showed that on average the training was deemed as engaging, useful (which relates to demand), helpful, suitable, applicable, appropriate and easy-to-access. In assessing its appropriateness of implementation in a new environment and adaption to a new format, this was received well, with on average participants disagreeing that they would prefer a different format. In examining the limited efficacy, participants rated on average that they agree that they now feel more confident understanding and implementing anxiety strategies in their work

at school. Considering the research process, on average participants agreed that they enjoyed taking part and understood what the questionnaires were asking, and on average disagreed that the questionnaires were burdensome. This indicates acceptability and appropriateness of measures and the research process.

Despite the recruitment window being short, spanning three months between September 2022 and December 2022 during school term-time, the study reached its recruitment target of 30 participants for a fully powered study and significantly exceeded the target of 50 which is recommended for feasibility studies in research (Cocks & Torgerson, 2013). In addition, the study was only shared once through gatekeepers at the start of the window and advertised twice on social media during the recruitment window. These recruitment rates, therefore, suggest a high acceptability and feasibility rate among the target audience. In addition to this, 44 out of all 76 participants opted to provide their email addresses to be contacted for similar future research following the end of the study (which equates to 58% of the sample), which reinforces its acceptability as an intervention. However, the sample composition and diversity, regarding gender and ethnicity, was limited.

Due to anonymity and online format of this intervention, reasons for non-completion were not able to be collected. However, survey analytics showed that 20 participants dropped out after consenting at the demographic questionnaire, 24 stopped following this during the pre-TRAC questionnaire, a further 77 dropped out before the first quiz following the first video, 16 after the second quiz, zero after the third quiz and eight during the post-TRAC questionnaire. All those who continued after this point, completed the full feedback measure and were included in the analysis of this study. These analytics may be helpful in identifying the weak links in the process that can potentially be refined in future research.

#### 4. Discussion

This feasibility study demonstrated that a brief, online psychoeducation training for school staff, that aims to improve the understanding of childhood anxiety and learn strategies to support anxious children (aged four-11 years old) in education settings, appears to be a feasible and acceptable method for those that participated in the study. Preliminary results in feasibility studies can help determine whether interventions are appropriate for further efficacy testing (Bowen et al., 2009; Wuest et al., 2015; Orsmond & Cohn, 2015). In this study, preliminary findings show great promise and therefore warrant further investigation.

##### 4.1 Preliminary Limited Efficacy Findings

The results revealed that the training influenced school staff responses towards children's anxious behaviours. In summary, the TRAC measure showed that school staff were significantly less likely to respond with anxiety-promoting responses and were more likely to respond with autonomy-promoting responses towards behaviours that were suggestive of anxiety symptoms generally, as well as behaviours suggestive of specific anxiety disorders, such as generalised anxiety and social anxiety. It was found that there was a non-significant change in anxiety-promoting responses for behaviours suggestive of separation anxiety following the training, but an increase was observed for autonomy promoting responses. In the initial development study for the TRAC measure, it was discussed that managing separation anxiety in a classroom setting may be especially difficult, as it may involve more externalising behaviours such as tantrums and crying, that are regarded as more disruptive to the class as a whole, when compared with behaviours associated with social anxiety and generalised anxiety which may present as more internalised such as social withdrawal (Allen & Lerman, 2017). It may be that separation anxiety is better addressed in routinely used and highly effective parent-led CBT interventions such as the Coping Cat program, FRIENDS program, and the Parent-Child Interaction Therapy intervention (Huang, 2023). However, additional training to further understanding of separation anxiety, how it may present in schools, and how to respond more

specifically may be beneficial for school staff. Further research is required to explore the feasibility and outcomes of such a training.

The evidence base has shown that responses of others, such as school staff, may maintain anxiety in children (Hudson & Rapee, 2004; Murray et al., 2009), through reinforcement via overprotective behaviours (Arbeau et al., 2010; Rudasill & Rimm-Kaufman 2009), or encouragement of avoidance (Allen and Rapee 2005), or by using sanctions and criticism that may worsen anxiety in children (Murray et al., 2009; Rapee, 1997). Despite a majority of research studies concentrating on parents when exploring interpersonal factors and the maintenance of childhood anxiety (Murray et al., 2009), primary school staff are well suited to support anxious children given that they are likely to be the next adults, after parents, that children interact with (Lyneham et al., 2008). In addition, they may be able to support children with more specific anxieties regarding academic or social difficulties within the school setting (Allen & Lerman, 2017). In addition, CBT, the current gold-standard treatment for childhood anxiety (Higa-McMillian et al., 2016), commonly involves problem-solving and graded exposure components, as well as rewards for motivation (Hawes & Allen, 2016). Moreover, it has been observed that younger children are often reliant on adult support (i.e., school staff or parents) to help apply these strategies (Hawes & Allen, 2016), thus supporting the use of this questionnaire to assess the current intervention which is heavily based on CBT principles. Overall, these findings suggest a shift in school staff responses, that are more in line with CBT approaches, towards behaviours that characterise anxiety following the intervention. Further research is required to determine the implementation of these responses and their long-term effects on anxiety symptoms of the children they work with. In addition, further exploration using detailed, more qualitative methods may help contextualise these results and findings.

#### **4.2 Acceptability and Feasibility Findings**

The findings of this study suggest that the training and research process appears to be feasible and acceptable. The initial recruitment target of this feasibility study was calculated as 30

participants for a fully powered study. This was met and significantly exceeded with a total of 76 participants taking part at a time that suits them and completing all outcome measures, despite a small recruitment window of three months. However, there was considerable drop out during the completion of the training. The reasons for withdrawal were not documented due to the anonymity and the online nature of the study. This may indicate issues with the feasibility and implementation, perhaps related to their busy schedules (Rothì et al., 2008) and great time-pressures (Taylor et al., 2014). Having said this, the completed measures and responses showed that, on average, participants enjoyed the research process and felt questionnaires were appropriate and easy to understand. Future research is required to determine the feasibility of retention rates by exploring associated reasons for incomplete measures and drop-out through qualitative and more detailed methods, which will highlight improvements and refinements of the research process to help improve the acceptability of the intervention prior to more rigorous testing (Bowen et al., 2009; Orsmond & Cohn, 2015).

On average, the video was rated as engaging and relevant to education settings, which Shelemy et al. (2019) highlighted as important to education staff for mental health training. In addition, the sample characteristics of participants suggested that a variety of school staff, with a diverse pool of ages, time working in education and job roles, including those with and without pastoral responsibilities and previous mental health training, could be recruited for brief online training around childhood anxiety. This indicates a high demand for this type of mental health training across different professions in education settings.

#### **4.3 Strengths, Limitations and Future Directions**

The development of the training involved extensive PPI (particularly with school staff and mental health professionals) and an extensive literature review relating to the content of the training, as well as its format, length, outcome measures, inclusivity, and accessibility. The extensive PPI input gathered, was through volunteers exclusively, which also echoes the acceptability and

demand of this training. PPI input helped refine and inform the design of the intervention and its accompanying resources. In addition, the TRAC measure was selected as it has been developed and evaluated directly from samples of primary school teachers (Allen & Lerman, 2017), and therefore directly applicable to the sample group in this study. Having said this, the PPI group did not include children who had lived experience of anxiety within the school environment. It may have been helpful to include them as part of the PPI group, as it may have enhanced the quality and appropriateness of the research (Brett et al., 2012), improved recruitment rates (Ennis & Wykes, 2013) and influence the impact and usefulness of the findings (Staley et al., 2013). Future research should aim to include those with lived experience to refine the current intervention and help improve relevance, research outcomes, as well as increase the positive impact for anxious children at school.

Another strength of this study is the extensive collection of demographic data which can determine the generalisability of the sample. According to the Publication Manual of the American Psychological Association (APA, 2013), it is best practice to collect a range of demographic data, such that samples groups can be described as exactly as possible to allow for associations to be drawn between group demographic variables. This has been shown in research to improve clarity, generalisability and allows for easier replication of the study (Hughes et al., 2016). In addition, the demographics collected have been fully reported within this study to support replication in future research, which is sometimes neglected within the field of psychology (Arnett, 2008).

However, there is also a potential methodological limitation related to the representativeness and generalisability of the sample. The sample predominantly identified as female (95%), white (88%) and from the Southeast (63.2%) and East of England (31.6%). Research has shown that cultural gender roles may influence male school staff to respond in a different way than females to anxious children (Tatar & Emmanuel, 2001), and that this finding may reflect differences seen in maternal and paternal responses to displays of negative emotion by children

(Chaplin et al., 2005). Furthermore, it has been shown that male primary school staff are less likely to refer children with anxiety to mental health services than female primary school staff (Headley & Campbell, 2011). This, therefore, highlights differences between genders that requires further exploration and addressing in future research. As well as gender differences, a lack of diversity of ethnicity and region may hinder the generalisability of these findings further (Gerbing & Anderson, 1985). However, it is important to note that recent research has shown that 24% of schools within the United Kingdom do not have a single male classroom teacher, and 60% of UK schools do not have a teacher from an ethnic minority background (Fullard, 2022). Having said this, further efforts should be made to hear the voice of those who do not typically volunteer to participate in research and future research may benefit from seeking ways to overcome these barriers and target recruitment in specific communities. This will enable for a greater understanding of feasibility and acceptability across a range of backgrounds and contexts throughout the United Kingdom and beyond.

It's important to note that the results gathered in this study are all entirely self-report and are not based on observations of behaviours that have been implemented. Ratings were solely based on perceived likelihood of responding to children's anxious behaviours in a certain manner and that these responses may be influenced by social desirability (i.e., reporting a low level of likelihood of using anxiety-promoting responses), response bias and demand characteristics (Hoskin, 2012). Generally, self-reporting rating scales are limited by their entirely subjective nature as they are reliant on their individual interpretation. Therefore, results may not be consistent across the sample (Austin et al., 1998) and may have influenced the pattern seen in the results (Vowles et al., 2014). To mitigate this, data was anonymised and confidential and this was made clear to participants in the consent form prior to enrolling in the study. To further improve this, future research should aim to collect data regarding the feasibility of this intervention from a range of assessment methods including observational techniques to view the effectiveness of the implemented strategies and multi-informant reporting (i.e., from school staff, child, and parent) to



help further understand the usefulness and impact of this intervention on childhood anxiety from different perspectives.

A further limitation of the findings is that the sample group was recruited entirely through volunteer sampling methods (i.e., either through gatekeepers or social media), which may have resulted in school staff, who have a personal interest in mental health difficulties and developing their own understanding, being the most likely to take part in the study. Therefore, displaying a risk of an existing bias to the value they place in the training which may have skewed the results found, particularly those related to feasibility and acceptability. To overcome this, it is recommended that future research utilises random sampling methods when delivering the intervention in specific school samples to support the gathering of a more representative sample and a wider range of views on the feasibility and acceptability of the intervention.

Health and social care research studies have suggested that online trainings have many benefits such as being flexible, low-cost, easily accessible, and user-centred and have been found to be equally as effective as traditional in-person trainings (McCutcheon et al., 2015; Ruggeri et al., 2013). However, the effectiveness of online trainings does seem to be context specific (Ruggeri et al., 2013), therefore, further research is needed to investigate the effectiveness of the online training detailed in this study, within different educational contexts among a diverse group of school staff. In addition, long-term outcomes were not measured within this study, as data collection took place immediately after training, when knowledge was likely the easiest to apply and recall. Therefore, further research is required to measure knowledge attrition and long-term effects of the training to understand its true benefits on children with anxiety. To achieve this, a recommended next step of this research would be to follow-up with participants who provided their email addresses at the end of the intervention for future research opportunities and collect further data on the long-term effects including if strategies were implemented by school staff in their work and the effects that these strategies may have had on children's anxiety at school.

In addition, the collection of school staff knowledge/understanding of anxiety at baseline was not measured or assessed during this study, therefore conclusions on a change of knowledge are difficult to draw robustly. The collection of baseline data as well as the use of an active control group may be useful in future research (i.e., a feasibility RCT) , which may help improve the overall internal validity of the study and enable more robust conclusions to be drawn about the effectiveness of the training and isolate the effects produced. Overall, given that the brief online training in this study shows promising outcomes, further research such as an RCT is warranted (Bowen et al., 2009).

However, it's important to note that the intervention in this study was conducted by a doctoral level Psychologist in training, therefore it is uncertain whether the delivery is transferable to a range of clinicians with different skillsets to further develop the training. Having said this, the existing online structure would potentially fit well with other evaluation studies. Further research is required to examine the intervention's feasibility and implementation more widely and determine effective formats for delivery.

#### **4.4 Conclusions**

The training and research process was deemed as feasible and acceptable, and the preliminary limited efficacy outcomes appear promising. Therefore, it is reasonable to conclude that a larger-scale RCT is feasible to establish further efficacy and to determine the longer-term impact on anxiety levels of children, following the implementation of the learnings by school staff from the intervention. However, further research is required such as replicating findings to underrepresented samples and exploring further elements of feasibility.

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## **Chapter 5: Discussion and Critical Evaluation**

The research discussed in this thesis aimed to examine the bidirectional effects between peer victimisation types and anxiety symptomatology. Specifically, types of anxiety were investigated to determine if they may moderate this relationship. This thesis also examined the feasibility, acceptability, and limited efficacy of a newly developed intervention for school staff focused on the CBT approach of childhood anxiety. This intervention provided an overview of mild to moderate childhood anxiety difficulties, as well as strategies that school staff could implement to support the more anxious children they work with. This chapter starts with an overview of the findings for each study, followed by a discussion of strengths, limitations, and recommendations for future directions. Finally, the chapter ends with a discussion on the conceptual and clinical implications of the results.

### **1. Overview of Findings**

#### **1.1 Systematic Review and Meta-Analysis**

Bidirectional relationships between peer victimisation and anxiety symptomatology have been demonstrated in previous reviews (Christina et al., 2021; Chiu et al., 2021). However, a substantial proportion of unvalidated measures, many of which are single item, have been used to examine the variable of peer victimisation within these reviews. To our knowledge, this thesis is the first to examine these relationships using exclusively validated and published measures of peer victimisation and anxiety symptomatology, and the first to examine the varying subtypes of anxiety and peer victimisation in one collective review. Five electronic databases were systematically searched (Web of Science, MEDLINE, PsychINFO, CINAHL and ERIC), and 14 studies met the inclusion criteria. Results indicated there were small yet significant bidirectional relationships between all types of peer victimisation and anxiety symptomatology, except for relational victimisation which demonstrated a moderate relationship for predicting anxiety symptoms. General anxiety symptoms and social anxiety were evaluated as moderators of the relationship between peer victimisation and anxiety symptoms. It was found that relational peer victimisation predicted social anxiety to a

greater and more significant extent than general anxiety symptoms, and that general anxiety symptoms had a significantly larger effect on predicting overt peer victimisation than social anxiety. In summary, these findings were consistent with previous, similar reviews which points to a robustness of these associations. Interestingly, the results in the current review showed a somewhat stronger relationship in both directions, when using exclusively validated measures and focusing solely on anxiety symptomatology. This may suggest the bidirectional effects are larger for anxiety compared with internalised symptoms that encompass depression symptoms also, and perhaps were enabled to be observed by the use of more sensitive and reliable measures.

## **1.2 Empirical Study**

Anxiety is often associated with difficulties within school settings i.e., school truancy, lack of classroom participation, academic underperformance, and social difficulties (Muroff & Ross, 2011). A majority of school professionals also believe schools are the right place for mental health difficulties to be addressed (Reinke et al., 2011), with many studies highlighting that school staff have requested a need for training to increase confidence and knowledge concerning mental health difficulties (Graham et al., 2011; Moor et al., 2007). To address this, a training package focused on cognitive-behavioural understandings of anxiety and strategies was developed and its feasibility evaluated in this thesis. To the knowledge of the authors, there has been no known published evaluation of an online CBT psycho-education training relating to childhood anxiety for school staff. Following the training, school staff were significantly less likely to respond with anxiety-promoting responses (i.e., using sanctions, encouraging avoidance and overprotection), and were more likely to respond with autonomy-promoting responses that are in line with CBT approaches (i.e., problem-solving skills, and using encouragement and rewards), towards children's anxious behaviours. Moreover, on average participants found the training engaging, useful, suitable, appropriate and easy-to-access as well as reporting that they felt more confident understanding and implementing anxiety strategies in their work following the training. In summary, this novel online training appears

to be a feasible and acceptable method for those who participated, and results show promise and warrant further investigation.

## **2. Strengths, Limitations and Future Directions**

This section highlights strengths, limitations, and recommendations for future directions. Firstly, the findings from the meta-analysis have been shown to be consistent with previous reviews (Christina et al., 2021; Chiu et al., 2021), which emphasises the robustness of the findings. Differing from these previous reviews, the findings also showcased a unique contribution relating to the association between anxiety symptomatology directly (including different anxiety types), examining different types of peer victimisation, as well as increasing accuracy and validity of the findings by exclusively including studies with published and validated measures. When examining specific relationships between types of anxiety and victimisation, it was found that relational peer victimisation predicted social anxiety to a greater and more significant extent than general anxiety symptoms, and that general anxiety symptoms had a significantly larger difference than social anxiety on predicting overt peer victimisation. These associations have been found to be supported in individual studies (Landoll et al., 2015), however an overlap between these two specific types of victimisations has been highlighted in a previous meta-analysis (Casper & Card., 2016). Despite the overlapping nature of these two victimisation types, the effects on psychological factors have been shown to differ, thus supporting the importance of viewing them as separate yet related constructs.

It has been suggested that often there is a developmental trajectory that moves from overt types of aggression in younger children to relational types of aggression during adolescence (Björkqvist et al., 1992), which may be similar with peer victimisation trajectories. This may be because as children become adolescents, there is an increase in the development of cognitive abilities (Batanova & Loukas, 2011), where intimacy, secrecy and competitiveness between peers increase as the social status within the peer group becomes more important (Hawley, 1999; Prinzie & Cillessen, 2003). These reasons may lead to engagement with peer victimisation

involvement, both as perpetrators and victims (Casper & Card, 2010; Pronk & Zimmer-Gembeck, 2010). In support of these concepts, it was found that as relationally victimised children got older, their anxiety increased over time, however this association became weaker for overt forms of victimisation (Casper & Card, 2016). It is hypothesised that as peer relations become viewed as more important across development, children experience higher levels of internalised distress from negative relational experiences (Thompson & Leadbeater, 2013). Moreover, externalising symptoms, such as conduct difficulties, and a lack of peer social support are more greatly linked to overt forms of victimisation (Hodges et al., 1999; Casper & Card, 2016). This supports findings found by the meta-analysis featured in this thesis, as it may be that these externalising symptoms, that are also similar to symptoms that characterise anxiety, may lead to children being targets of overt victimisation (Casper & Card, 2016).

Additionally, other forms of victimisations have been observed to overlap, i.e., children who experience physical or relational victimisation are also likely to have experiences of cybervictimisation (Kowalski et al., 2014; Wigderson & Lynch, 2013). As well as this, there is overlap between being a target and perpetrator of peer victimisation; for instance, anxious children who are aggressive to other peers are more likely to be targets of overt forms of victimisation themselves (Hunt et al., 2022). Typically, peer victimisation continues to be viewed as a single construct (Moore et al., 2017), despite clear, unique contributions that can be found by examining these different types separately. Having said this, it is important not to neglect the fact that these constructs are related and linked, and that the dynamics are far more complex than initially estimated within the present meta-analysis. These factors require further investigation in order to explore the processes driving their associations. It is recommended that focused and targeted interventions relating to different subtypes of victimisation and anxiety symptoms are required to be developed and the effects evaluated. Age, in particular, needs to be collected and examined alongside efficacy testing, to determine and add to the understanding behind the developmental trajectories.

A limitation of the literature is the lack of studies included within the meta-analysis that investigated the relationships between reputational victimisation and anxiety. Despite the limited studies examined, small yet significant bidirectional effects were found. Reputational victimisation has been shown to predict significant levels of anxiety across a range of disorders, however out of the two indirect types, relational victimisation was a superior predictor for all types of anxiety except for obsessive-compulsive disorders (Ferraz de Camargo et al., 2022). However, it's important to consider that this study in question was cross-sectional in nature and therefore does not allow for conclusions about direction of influence to be drawn. It is therefore recommended that future research investigates longitudinal relationships between anxiety symptoms and reputational victimisation, as an individual and separate construct.

Additionally, another limitation of the evidence base was the lack of generalisability; for instance, a majority of studies were conducted within a school setting. Although, peer victimisation is typically more common in the school environment (Landoll et al., 2015; Modecki et al., 2014), it is essential to examine whether these bidirectional results are transferable to other settings such as clinically and within the community through future research. Additionally, a majority of the studies were also carried out within the United States which highlights a key limitation in the literature. Future research should aim to diversify these samples by recruiting and carrying out studies in different population groups across different countries. Diversifying samples is particularly important in this area of research, as ethnicity has been shown as a unique predictive factor in anxiety following peer victimisation, where being a member of the majority ethnic group at school and being victimised, leads to reinforcement of self-blame, loneliness, and ultimately greater levels of anxiety symptoms (Bellmore et al., 2004, Graham et al., 2009). In addition, diversity with multiple ethnicities within a school environment has been noted as a protective factor against peer victimisation (Juvonen et al., 2006).

A limitation in the review itself was its specific eligibility criteria which required studies to be self-report based and in the English language, which again may have limited the generalisability of the findings. Utilising a variety of methods for data collection i.e., observational and informant reports and expanding the criteria to include studies in other languages may have helped overcome this limitation and further increase external validity of the findings in the review.

The empirical study showed great strengths, particularly in its developmental phase through extensive consultation of the PPI to ensure the training was flexible, easy-to-access and accommodating to the needs and constraints of school staff. PPI involvement is often best practice, and particularly for school interventions, has been shown to improve outcomes (Pass et al., 2018). Additionally, this research was the first to explore the delivery of a psychoeducation training for school staff targeting anxiety of children. It contributes to the literature for mental health training for school staff, particularly as it focuses on behavioural change models, which has been highlighted in the evidence-base as limited (Kelly et al., 2007). However, a key limitation of the study, is that the PPI group that was consulted did not include children who had lived experience of anxiety within the school environment. Therefore, taking extra measures to include them as part of the PPI group to inform the development of the intervention, may have enhanced the quality and appropriateness of the research (Brett et al., 2012), improved recruitment rates (Ennis & Wykes., 2013) and influenced the impact and usefulness of the findings (Staley et al., 2013). Future research should aim to include those with lived experience to help improve relevance, research outcomes, and increase the positive impact for anxious children at school.

Additionally, a wide range of demographic data was collated to help improve clarity, generalisability and allows for an easier replication of the study (Hughes et al., 2016), which is sometimes neglected within the field of psychology (Arnett, 2008). Additionally, the design of the intervention was online, free, and accessible to all, and preliminary findings showed that the

intervention was feasible, acceptable and in demand. However, this online, confidential nature, was also a limiting factor of the study, as reasons for drop-out rates were not able to be recorded.

A key limitation of the empirical study is the methodological issues relating to lack of generalisability. Firstly, the sample was predominately female and white, and therefore fails to capture the experiences and views of the underrepresented groups within the educational field. Secondly, the measures were all self-reported, which gives rise to social desirability bias, and volunteer bias, as those who responded are most likely to have a key interest in mental health within their role and are likely to respond in ways that are seen to be more favourable. To mitigate this, the study responses were anonymous and made clear to participants in the information sheet prior to proceeding with the intervention. Future research should aim to reduce these methodological issues, by promoting the study in more diverse communities and settings to support recruitment uptake.

It's also important to consider how cultural norms and beliefs might influence responses to anxiety and how these may vary across different cultural groups. It has been noted that those with cultural values and beliefs that do not match with the CBT model consistently, may be less likely to engage in CBT-based interventions (Koydemir & Essau, 2018). Several examples of this concept have been observed in various studies; for example, 'African American', 'Asian Pacific Islander', and 'Latino' parents were less likely than 'non-Hispanic White' parents to attribute mental health difficulties to biopsychosocial reasons (Yeh et al., 2004) and in numerous non-Western cultures there is a tendency to avoid discussing personal emotions openly (Kirmayer, 2001). Therefore, culture-specific values and norms may have had an influence on the engagement in the school staff intervention featured in this thesis and consequently may have impacted the likelihood of implementing the recommended strategies. As such the intervention should aim to be inclusive by incorporating and discussing the potentially differing cultural norms and values of the population group it is designed to benefit. Therefore, future research should not only aim to collect data from a

sample that is representative of a range of ethnic, racial, and cultural factors but to also have a diverse PPI group that reflects this to inform the research. This will enable the development of a more culturally sensitive and inclusive intervention.

Moreover, this study presented preliminary findings of change within the responses by school staff towards childhood anxiety at school, however it only reflected on their perceived likelihood of responding differently. It would be helpful to follow-up this study to determine if these new responses were implemented and to gather information around the effect these changes had on children's anxiety at school. The robustness of these findings could be enhanced by using a control group and conducting an RCT. A follow-up to determine long-term effects was initially considered as part of this thesis, but due to the timeframe it was not possible for this to be implemented and completed. It is theorised that this could possibly be a future research project, where future researchers can potentially contact the participants who provided their email addresses at the end of the intervention for future research opportunities. This future research project would aim to address some of the limitations of the current empirical study, improve on the highlighted development areas, and examine long-term effects of this intervention both if strategies were implemented by school staff and the effects that these strategies may have on children's anxiety at school. To combine findings of the two papers, there could potentially be an additional measure introduced to measure the effects of peer victimisation levels (including specific subtypes) at baseline and once again following the implementation of the skills and strategies acquired through the intervention to manage childhood anxiety. The findings from such a trial, would help determine whether this school-based intervention targeting childhood anxiety, also impacted peer victimisation prevalence rates.

### **3. Clinical and Theoretical Implications**

Findings from the meta-analysis revealed that programmes designed to reduce peer victimisation or anxiety, particularly within school settings, may also have bidirectional effects. In



support of this, targeting anxiety in interventions has had a significant impact on the ongoing risk to peer victimisation (Berry & Hunt, 2009; Chu et al., 2015, La Greca et al., 2016), and incorporating anxiety management strategies in school-based peer victimisation programs has also been shown to produce promising results for both variables (Rapee et al., 2020). Based on the findings of the meta-analysis, there were specific associations found between relational victimisation predicting social anxiety, and general anxiety symptoms predicting overt forms of victimisation. The development of future interventions that specifically focus on these associations may be beneficial due to more targeted support. There is some evidence that school-based interventions targeting relational victimisation have been helpful in preventing the development of social anxiety (La Greca et al., 2016).

It has been proposed that targeting anxiety might be a more acceptable pathway to care than targeting peer victimisation (Hunt et al., 2022), as it is likely parents and school staff will be aware of the anxiety that a child is experiencing compared with whether they have been victimised, due to low disclosure rates (Stavrinides et al., 2015; Rapee et al., 1994). It is theorised based on the findings of the current meta-analysis and other reviews that have shown bidirectional effects (Christina et al., 2021; Chiu et al, 2021) that these interventions aiming to treat anxiety symptoms, may play an important role in prevention against peer victimisation and improve peer relations.

Regarding theoretical implications, the mechanisms that underpin the association between anxiety and peer victimisation are not well understood. The development of anxiety is multi-layered and often involves a complex interaction between biological, contextual, and individual factors (Hambrick et al., 2010). Some studies suggest that peer victimisation leads to a conditioned fear response (Dygdon et al., 2004) that are combined with vulnerabilities (e.g., low self-efficacy in coping), which may contribute to an elevated expectation of potential threats (Barlow, 2000; Mineka & Oehlberg, 2008). These factors have been shown to mediate the relationship between peer victimisation and anxiety in cross-sectional data (Singh & Bussey, 2011; Giannotta et al., 2021), but

further research is needed to investigate their prospective and longitudinal bidirectional association. Having said this, these mechanisms are supported by a cognitive-behavioural perspective, as anxious children with low self-efficacy may hold positive beliefs about their peer group when victimised, and consequently may blame themselves; this reinforces their own negative perceptions of their social capabilities, and thus increases their experience of anxiety (Cohen & Kendall, 2015; Clark & Beck, 2009; Essau & Ollendick, 2013).

Given that anxiety arises during childhood (Kessler et al., 2005) and tends to continue into adulthood without intervention (Copeland et al., 2014), it highlights the need for early and preventive approaches. The school setting is considered at the forefront of the delivery of such interventions internationally (McLaughlin, 2017) as not only is it viewed as an unstigmatized point of access for children (Armbruster, 2002), but it's also the environment where peer victimisation often takes place (Landoll et al., 2015; Modecki et al., 2014). It has also been identified as a key setting for building on mental health outcomes due to the amount of time children spend at school (Goldberg et al., 2018). When conceptualising potential school interventions, it is important to consider that children are part of a wider system with different interplaying factors and that typically peer victimisation involves others beyond the bully and victim such as bystanders, reinforcers, and defenders (Salmivalli, 2010; Zych et al., 2017). Therefore, whole school approaches that encompass the entire school community, including school staff, may enhance the outcomes produced. The empirical paper builds on this approach by devising and evaluating a brief, online, CBT-informed school intervention for school staff, which aims to equip school staff with strategies to support and reduce childhood anxiety symptoms at school.

However, the implementation of such interventions may be challenging for many reasons e.g., great-time pressures (Taylor et al., 2014), competing priorities and workload management (Turner, 2018). Key factors that may improve feasibility, acceptability, and access of this intervention were considered, implemented, and examined in the research. The results indicated that school

staff's self-reported confidence and knowledge for anxiety difficulties and strategies increased. In addition, school staff also reported that their perceived likelihood of responding to children's anxious behaviours in CBT-informed approaches significantly increased following the intervention. These new, changed responses towards childhood anxiety may be helpful in modelling social emotional competencies during everyday situations at school (Oberle et al., 2016) and may help reinforce skills to children that promote their development in emotional, behavioural, and social functioning (Jones & Bouffard, 2012; Meyers et al., 2015). Furthermore, it has been indicated that outcomes are more successful, when skills have been effectively integrated into the school culture and everyday practice, therefore consistent responses to anxious behaviours among all school staff in and outside the classroom may further improve the outcomes observed (Barry et al., 2017; Jones & Bouffard, 2012). Although testing for efficacy was limited with the feasibility timeframe of the empirical project, the promising results warrant further investigation to examine the long-term effects.

Although the format of the intervention did not permit for the documentation of reasons for drop-out rates, it is hypothesised that this may be because school staff did not have dedicated and protected time to take part in the training during the school day, and therefore had to rely on their own free time. Further research is needed to determine these reasons and develop innovative ways to improve the accessibility of the intervention for all school staff. Typically, the eligibility of participation by non-teaching staff in school interventions is limited in research. In contrast, the empirical study showed an impressive uptake by non-teaching staff, who formed a majority of the participants (84.21% of the sample group). This indicates a high demand for such a training for non-teaching staff, and thus future research should strongly consider recruiting and involving both teaching and non-teaching staff in school-based interventions. Interestingly, non-teaching staff are a large part (50%) of the school workforce (Department of Education [DfE], 2021), therefore it is in line with current government guidelines and recent research that promote interventions that target whole school approaches (i.e., involving the entire school community) (National Institute for Health

Care Excellence [NICE], 2008, 2009; Department of Health and Social Care and Department for Education [DHSCE & DfE], 2017; Public Health England et al., 2021).

It is important to consider this research in line with current changes within mental health provision in the United Kingdom. In recent years, mental health provision has been transforming resulting in the introduction of new Mental Health Support Teams in schools, who aim to support children and adolescents with mild to moderate mental health difficulties, including anxiety by utilising CBT approaches (Department of Health and Social Care and Department for Education, 2017). These teams also include Educational Mental Health Practitioners (EMHPs) who are specialised in whole-school approaches as well as delivering psychoeducation workshops and providing training and consultations to school staff (DHSCE & DfE, 2017). The aim of these new teams was to expand the capacity and build on existing practices to best support children by providing early intervention and prevention approaches. The recommendations include whole school approaches, but there appears to be gap around how school staff can support this. It has been reported that school staff often have to rely on their own subjective understandings and attitudes when faced with situations concerning mental health at work (Trudgen & Lawn, 2011). To address this gap, further training, like the one detailed in the empirical study, needs to be developed and provided to school staff in future research. School staff have previously voiced a need for such trainings (Graham et al., 2011; Moor et al., 2007), and thus supports this recommendation further.

It is important to note that the intervention was developed and conducted by a doctoral level Psychologist in training, therefore it is uncertain whether the delivery is transferable to a range of clinicians with different skillsets to further develop and test the training. However, the training in its current form is fully accessible, flexible, and cost-effective through an online format so may be disseminated and implemented more widely using its existing structure. Another alternative is dissemination through Mental Health Support teams, and more specifically by EMHPs. The content of the training was adapted and heavily built upon, a current CBT parent-led intervention (Creswell &

Willetts, 2019), commonly used by EMHPs. Therefore, this psychoeducation training could potentially be implemented more widely by EMHPs within the schools they work in, as they are trained in this intervention and in psychoeducation workshops/trainings for school staff. Future research is recommended to further investigate the feasibility and to evaluate the potential wider implementation of this training by EMHPs. As the EMHPs programme is still in its initial phases, it is important robust and routine evaluations are taking place to assess its impact on children's mental health. This recommendation ties together with the evidence base around school-based interventions, whole school approaches and offers a suggestion for wider implementation within schools across the United Kingdom.

Clinically, an online mental health intervention appears to be feasible and acceptable to school staff, but more research is needed, particularly around the long-term effects and to investigate wider implementation of such an intervention.

#### **4. Conclusions**

Taken together, the thesis portfolio demonstrated bidirectional relationships between several types of peer victimisation and anxiety symptoms, which may help expand the current understanding regarding its development and maintenance, and also inform clinical and school-based interventions for anxiety and peer victimisation. Children tend to spend the majority of their time with their peers within the school setting, where forming and maintaining positive peer relations becomes crucial and may be impacted by presenting anxiety difficulties. There has been an increasing focus for schools to intervene and prevent the escalation of childhood anxiety difficulties due to their early emergence, by encompassing the whole school community, including teaching and non-teaching staff. This whole school approach may enable for more effective integration of cognitive-behavioural strategies as school staff are able to implement them within their daily interactions and practices. To facilitate this, school staff must first be adequately supported and trained around these approaches. The thesis portfolio contributes to this by developing and

implementing an online, psychoeducation intervention based on CBT, to support school staff in understanding and reducing anxiety symptoms in their students. This thesis showed that this intervention appeared to be acceptable and feasible, with promising preliminary outcomes. However, further efficacy testing is needed, particularly regarding the mental health outcomes of the children they work with following the implementation of the strategies by school staff.

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## **6. Appendices**

### **Chapter 2: Systematic Review and Meta-Analysis**

Appendix A: Author Guidelines for The Journal of Anxiety Disorders

Appendix B: Search Terms and Syntax for Systematic Review

Appendix C: Funnel Plots of the Meta-Analysis

### **Chapter 4: Empirical Study**

Appendix D: Author Guidelines for The Journal of School Psychology

Appendix E: Study Poster Advertisement

Appendix F: Adapted Checklist for School Staff

Appendix G: Training Sample Images and Accessible Links

Appendix H: Participant Demographic Questionnaire

Appendix I: Structured Feedback Questionnaire

Appendix J: Teacher Responses to Anxiety in Children (TRAC) Questionnaire

Appendix K: Participant Information Sheet (PIS)

Appendix L: Consent Form

## Appendix A

## Author Guidelines for The Journal of Anxiety Disorders



# JOURNAL OF ANXIETY DISORDERS

## AUTHOR INFORMATION PACK

### TABLE OF CONTENTS

|                          |     |
|--------------------------|-----|
| Description              | p.1 |
| Audience                 | p.1 |
| Impact Factor            | p.1 |
| Abstracting and Indexing | p.2 |
| Editorial Board          | p.2 |
| Guide for Authors        | p.4 |



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*Journal of Anxiety Disorders* is an interdisciplinary journal that publishes research papers dealing with all aspects of anxiety disorders for all age groups (child, adolescent, adult and geriatric). Manuscripts that focus on disorders formerly categorized as anxiety disorders (obsessive-compulsive disorder, posttraumatic stress disorder) and the new category of illness anxiety disorder are also within the scope of the journal. Research areas of focus include: traditional, behavioral, cognitive and biological assessment; diagnosis and classification; psychosocial and psychopharmacological treatment; genetics; epidemiology; and prevention. Theoretical and review articles that contribute substantially to current knowledge in the field are appropriate for submission.

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## Appendix B

### Search Terms and Syntax for Systematic Review

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(MH "Bullying+") OR (MH "Cyberbullying") OR AB ("bull\*" or "cyberbully\*" or "cyber-bully" or "bullied" or "victimisation" or "victimization" )

AND (MM "Child+") OR (MM "Adolescent") OR TI ("adolescent\*" or "youth" or "child\*" or "teenager" or "young p\*" )

AND (( (MM "Anxiety+") OR (MM "Anxiety Disorders+") ) OR AB ( "anx\*" or "anxiety symptom\*" or "anxiety disorder\*" or "fear" or "worry" or "phobia" )

#### **Web of Science, Core Collection – 1033**

AB = ("Bullying" OR "Cyberbullying" OR "bull" or "cyberbully" or "cyber-bully" or "bullied" or "victimisation" or "victimization")

AND

TI= ("Child" or "Adolescent" OR "adolescent\*" or "youth" or "child\*" or "teenager" or "young p\*" )

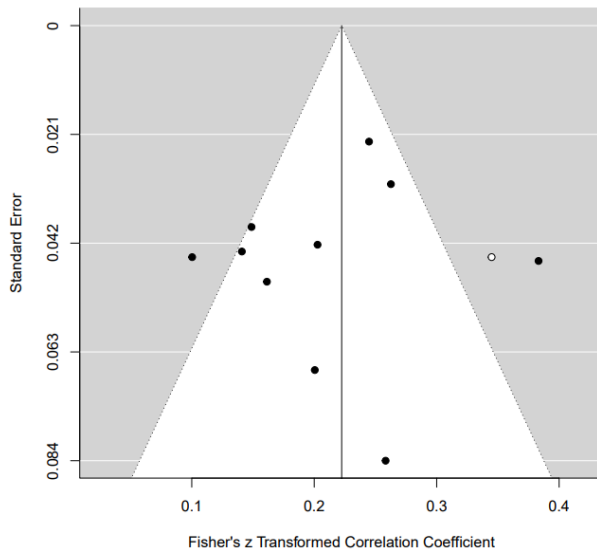
AND

AB= ("Anxiety" OR "Anxiety Disorders" OR "anx\*" or "anxiety symptom\*" or "anxiety disorder\*" or "fear" or "worry" or "phobia" )

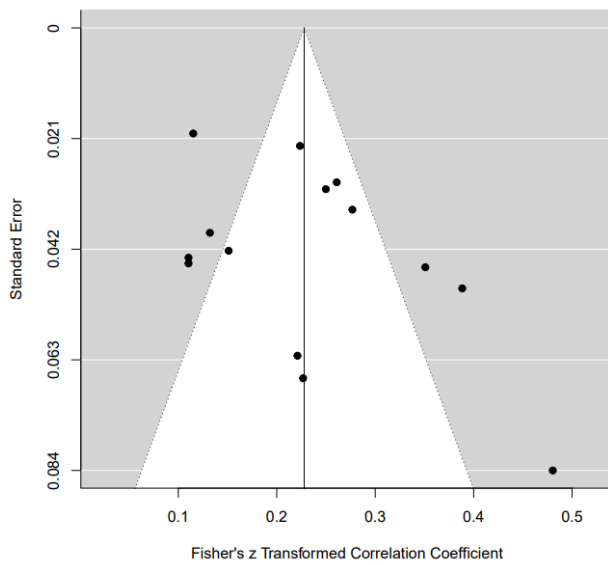
Appendix C

Funnel Plots of the Meta-Analysis

(a) Anxiety as a predictor for peer victimisation

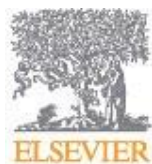


(b) Peer victimisation as a predictor for anxiety



## Appendix D

## Author Guidelines for The Journal of School Psychology



# JOURNAL OF SCHOOL PSYCHOLOGY

The Journal of the Society for the Study of School Psychology (SSSP)

## AUTHOR INFORMATION PACK

### TABLE OF CONTENTS

|                          |     |
|--------------------------|-----|
| Description              | p.1 |
| Audience                 | p.1 |
| Impact Factor            | p.1 |
| Abstracting and Indexing | p.2 |
| Editorial Board          | p.2 |
| Guide for Authors        | p.6 |



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### DESCRIPTION

The *Journal of School Psychology* publishes original empirical articles and critical reviews of the literature on research and practices relevant to **psychological** and **behavioral processes** in **school** settings. *JSP* presents research on intervention mechanisms and approaches; schooling effects on the development of social, cognitive, mental-health, and achievement-related outcomes; assessment; and consultation. Submissions from a variety of disciplines are encouraged.

All manuscripts are read by the Editor and one or more editorial consultants with the intent of providing appropriate and constructive written reviews.

The Editorial office of *JSP* may be contacted at *Journal of School Psychology*: Craig A. Albers, University of Wisconsin-Madison, Department of Educational Psychology, Madison, WI, USA, 53706. Tel: (608) 262-4586. Email: craig.albers@wisc.edu.

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Psychologists, Educators, Social Workers, Sociologists

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**ABSTRACTING AND INDEXING**

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Current Contents - Social & Behavioral Sciences Australian Educational Index

PsycINFO

Academic Journal Guide (Chartered Association of Business Schools) Adolescent Mental Health Abstracts

Research Alert

Chi Abstr to Read & Learn Disa ERIC

Except Child Educ Abstr PsycLIT

Social Work Research & Abstracts

ERA (Educational Research Abstracts Online) Scopus

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### ***Reporting sex- and gender-based analyses***

#### ***Reporting guidance***

For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender



dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

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Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

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To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

### ***Article structure***

#### ***Subdivision - unnumbered sections***

Divide your article into clearly defined sections. Each subsection is given a brief heading. Each heading should appear on its own separate line. Subsections should be used as much as possible when cross-referencing text: refer to the subsection by heading as opposed to simply 'the text'.

#### ***Introduction***

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

### *Material and methods*

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

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A Theory section should extend, not repeat, the background to the article already dealt with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

### *Results*

Results should be clear and concise.

### *Discussion*

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The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

### *Appendices*

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

### ***Essential title page information***

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**Author names and affiliations.** Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address.

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### **Keywords**

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

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Reference to a journal publication:

Van der Geer, J., Hanraads, J. A. J., & Lupton, R. A. (2010). The art of writing a scientific article.

*Journal of Scientific Communications*, 163, 51–59. <https://doi.org/10.1016/j.sc.2010.00372>.

Reference to a journal publication with an article number:

Van der Geer, J., Hanraads, J. A. J., & Lupton, R. A. (2018). The art of writing a scientific article.

*Heliyon*, 19, Article e00205. <https://doi.org/10.1016/j.heliyon.2018.e00205>. Reference to a book:

Strunk, W., Jr., & White, E. B. (2000). *The elements of style* (4th ed.). Longman (Chapter 4). Reference to a chapter in an edited book:

Mettam, G. R., & Adams, L. B. (2009). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281–304). E-Publishing Inc.

Reference to a website:

Powertech Systems. (2015). *Lithium-ion vs lead-acid cost analysis*. Retrieved from <http://www.powertechsystems.eu/home/tech-corner/lithium-ion-vs-lead-acid-cost-analysis/>. Accessed January 6, 2016

Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., & Nakashizuka, T. (2015). *Mortality data for Japanese oak wilt disease and surrounding forest compositions*. Mendeley Data, v1. <https://doi.org/10.17632/xwj98nb39r.1>.

Reference to a conference paper or poster presentation:

Engle, E.K., Cash, T.F., & Jarry, J.L. (2009, November). *The Body Image Behaviours Inventory-3: Development and validation of the Body Image Compulsive Actions and Body Image Avoidance Scales*. Poster session presentation at the meeting of the Association for Behavioural and Cognitive Therapies, New York, NY.

Reference to software:

Coon, E., Berndt, M., Jan, A., Svyatsky, D., Atchley, A., Kikinzon, E., Harp, D., Manzini, G., Shelef, E., Lipnikov, K., Garimella, R., Xu, C., Moulton, D., Karra, S., Painter, S., Jafarov, E., & Molins, S. (2020, March 25). *Advanced Terrestrial Simulator (ATS) v0.88 (Version 0.88)*. Zenodo. <https://doi.org/10.5281/zenodo.3727209>.

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Journal names should be abbreviated according to the List of Title Word Abbreviations.

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## Appendix E

## Study Poster Advertisement

**Online training for school staff on childhood anxiety!**

We are looking for any staff member in an education setting working directly with children aged between 4 to 11 years old. You may be a teacher, a teaching assistant or part of the pastoral support team.

**What's Involved?**

Attending a 30-minute online training and answering two questionnaires before and after the training. You can also opt-in for us to be in contact for future research opportunities.

**What will I gain for taking part?**

To understand more about childhood anxiety and learn strategies to help manage childhood anxiety in education settings.

**How do I get involved?**

To find out more and to take part, please scan the QR code or click on the link below.



[https://ueapsych.eu.qualtrics.com/jfe/form/SV\\_bIJstMvHpeJM5Mi](https://ueapsych.eu.qualtrics.com/jfe/form/SV_bIJstMvHpeJM5Mi)

Any questions? Please email Elene Nicola (primary researcher) on  
[e.nicola@uea.ac.uk](mailto:e.nicola@uea.ac.uk)

## Appendix F

## Adapted Checklist for School Staff

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# CHECKLIST FOR SCHOOL STAFF TO HELP CHILDREN OVERCOME ANXIETY IN SCHOOL

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Adapted from:

Halldorsson, B., Elliott, L., Chessell, C., Willetts, L., & Creswell, C. (2021). *Helping Your Child with Fears and Worries: Guided Self-Help Manual for Therapists Working with Groups*. (This can be accessed freely on:

<https://centaur.reading.ac.uk/65533/>)

1. As much as possible, work with the child to set SMART goals so you both know what they want to achieve.
2. Think about what the child needs to learn in order to challenge their anxious expectations.
3. Work with the child to develop a plan to test out fears and gain new knowledge that they can cope. Make a step-by-step plan to gradually try out new things to test their anxious expectations.
4. If the child struggles with a step, it may simply be too difficult, in which case break it down into smaller ones.
5. Use normalising statements, to show the child you understand it can be upsetting or frustrating when things are difficult but encourage them to keep trying if it's manageable. It can also be helpful to share your own experiences and worries of learning new skills.
6. Be open and explicit with parents/caregivers about the strategies you are using so that you can work together. If a similar approach is being taken at home and at school, change will occur faster. Meet with parent/caregivers to review progress regularly and discuss ways in which you can work together to implement some of this work.
7. Find ways to motivate and reward the child. You could speak with parents or caregivers to help facilitate this – facing fears is hard work (and they may not always show you how hard they are finding it)!
8. Be positive and praise the child – just having a go is an achievement, even if they struggled or couldn't do it all. Show your confidence in them with your body language and let them know you think they can do it!
9. Be prepared for setbacks, they always happen. Just try again the next day or the next week.

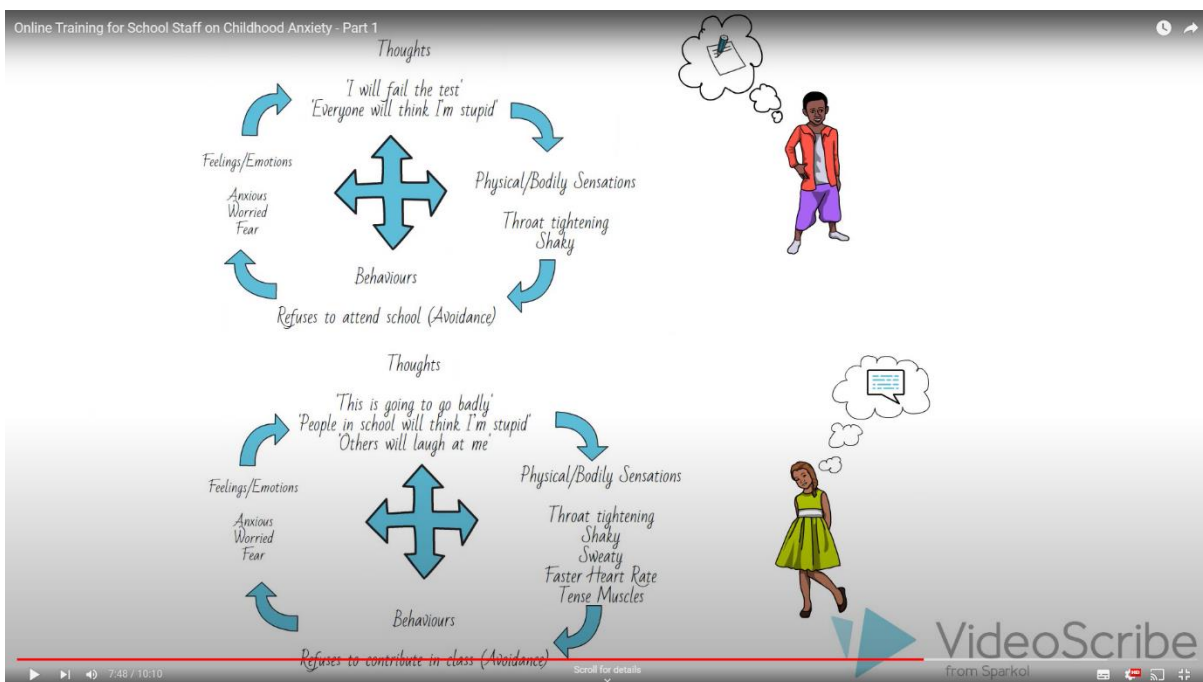
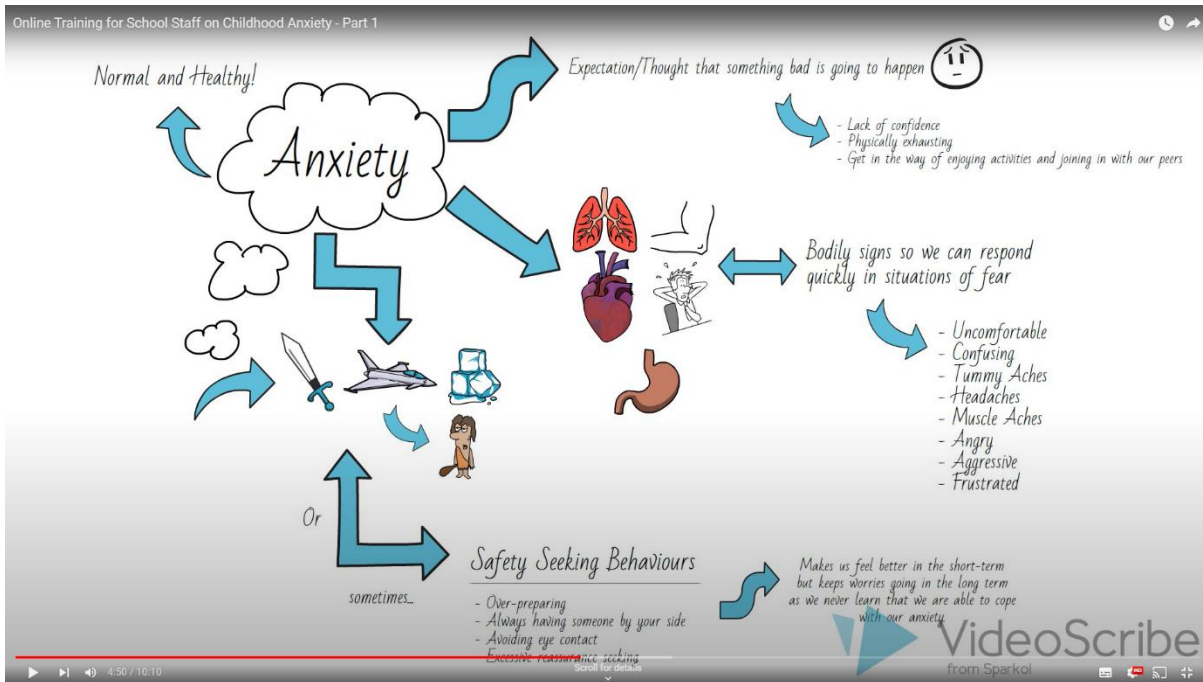
Appendix G

Training Sample Images and Accessible Links

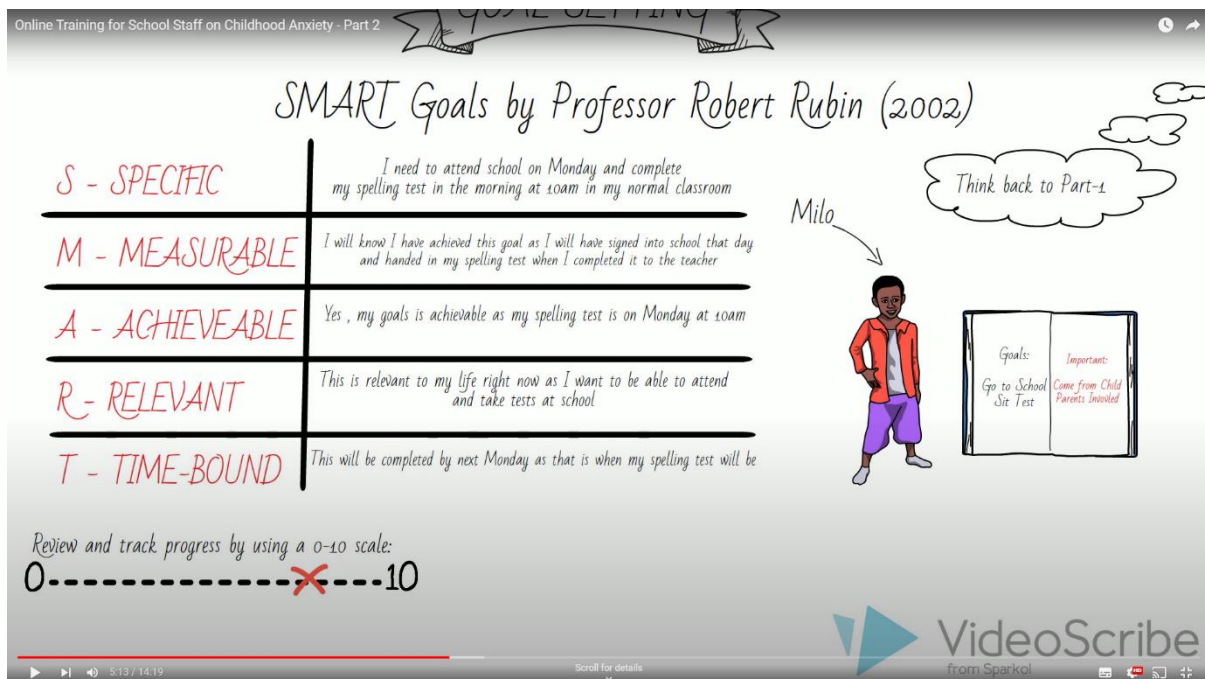
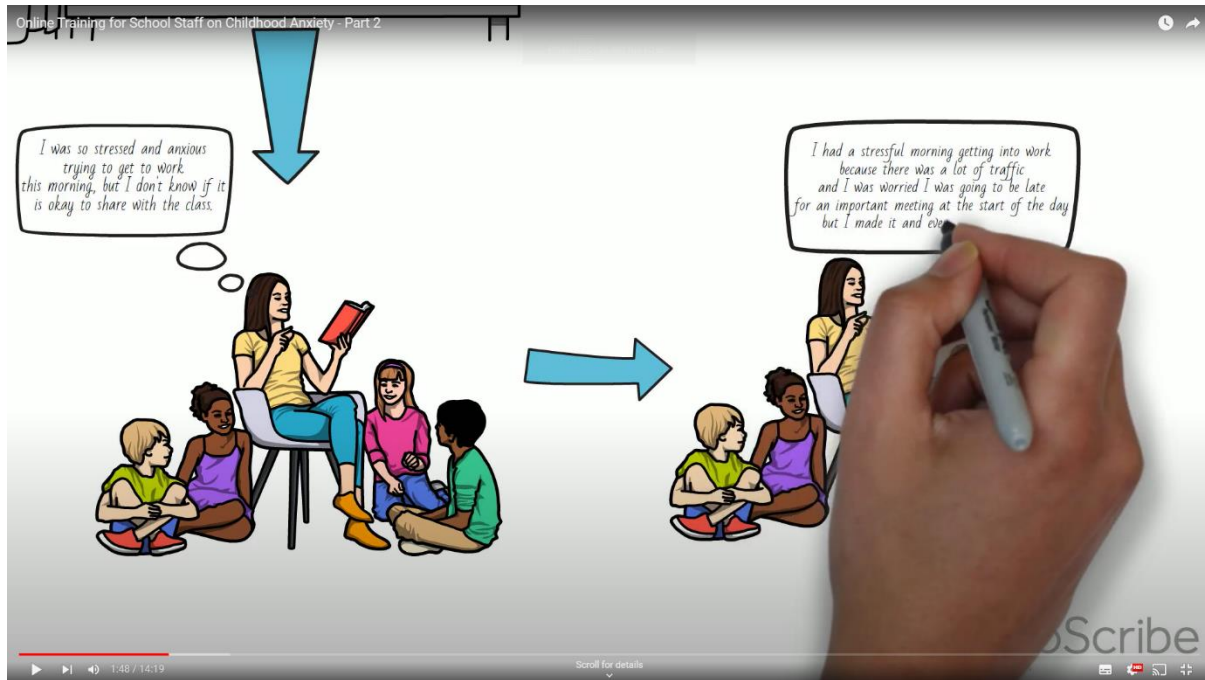
Video 1: <https://www.youtube.com/watch?v=bGQzStgF-K8>

Video 2: <https://www.youtube.com/watch?v=1IYV-3QRICU>

Video 3: <https://www.youtube.com/watch?v=gE4rZCHYRI0&t=1s>









Online Training for School Staff on Childhood Anxiety - Part 2


### Strategy 1:

## Overcoming Avoidance (Facing Fears Gradually)

**Avoidance**

- Prevents us from gathering new information around our ability to cope
- Makes anxiety stronger and becomes more difficult to face fear each time
- Reinforces safety seeking behaviors

First Step: Identify the worry



VideoScribe from Sparkol

6:15 / 14:19

Online Training for School Staff on Childhood Anxiety - Part 2

### Strategy 2:

## Problem-solving

Sometimes children might have a realistic anxious expectation.  
Anxious children will likely avoid instead of coming up with solutions to help stop the problem.


To help you problem solve you can use this step-by-step guide:

- 1) Describe the problem
- 2) Brainstorming solutions
- 3) Decide on the best solution
- 4) Make a decision and have a go!

After these steps, reflect on how it went.

Struggles with spelling tests

Solutions:  
- Practising spelling regularly with parents or teachers



VideoScribe from Sparkol

10:38 / 14:19

## Video 1 Quiz Display Page:



What are the names of the three automatic responses when we perceive a feared situation? (tick all that apply)

- Shout
- Hide
- Flight
- Ignore
- Fight
- Freeze

What are the 4 factors that make up the CBT maintenance cycle? (tick all that apply)

- Behaviours
- Reactions from others
- Physical/Bodily Sensations
- Feelings/Emotions
- Thoughts
- Previous experiences

What are examples of safety seeking behaviours? (tick all that apply)

- Over-preparing
- Facing your fears
- Being independent
- Avoiding eye contact
- Asking others for reassurance excessively
- Always having someone by your side


It may be possible that the training may cause you to have some difficult thoughts or feelings or may lead you to reflect on personal upsetting matters. If this does happen, and you wish to speak to someone, please read and use the contact information of the support services listed below:

- Mind ([www.mind.co.uk](http://www.mind.co.uk)) – 0300 123 3393 (Monday to Friday, 9am to 6pm)
- Samaritans ([www.samaritans.org.uk](http://www.samaritans.org.uk)) – 116 123 (free 24-hour helpline)
- SANE ([www.sane.org.uk](http://www.sane.org.uk)) – 0300 304 7000 (04:30am-10:30pm every day)
- POPYRUS (Under 35s) ([www.papyrus-uk.org](http://www.papyrus-uk.org)) – 0800 068 4141

Contacting your friends and family, as well as your GP is recommended if you require mental health advice and support.



## Video 2 Quiz Display Page:



How do we encourage a safe space for children to share their worries? (tick all that apply)

Normalising Statements  
 Open Questions  
 Being Curious  
 Telling Them Off  
 Closed Questions  
 Leading Questions

What does SMART stand for in goal setting?

Specific, Measurable, Achievable, Relevant, Time-Bound  
 Simple, Manageable, Absolute, Reachable, Thoughtful  
 Standard, Material, Attainable, Realistic, Tangible

What are the functions of avoidance? (tick all that apply)

Reduces anxiety over time  
 Prevents us from learning new information about the feared situation  
 Makes anxiety stronger over time  
 Helps us find out that we can cope  
 Reinforces safety seeking behaviours

When is problem-solving strategy helpful to use?

When an anxious expectation is realistic and what they expect to happen might actually be a likely outcome  
 When an anxious expectation is unrealistic and we are certain that the anxious expectation will not happen

What are helpful ways to reward and encourage children to face their fears? (tick all that apply)

Encourage the child to use safety seeking behaviours  
 Use creative methods to externalise worry e.g., writing, drawing  
 Be overprotective of them  
 Praise  
 Reward effort  
 School staff/parents modelling brave and calm responses to anxiety

It may be possible that the training may cause you to have some difficult thoughts or feelings or may lead you to reflect on personal upsetting matters. If this does happen, and you wish to speak to someone, please read and use the contact information of the support services listed below:

- Mind ([www.mind.co.uk](http://www.mind.co.uk)) – 0300 123 3393 (Monday to Friday, 9am to 6pm)
- Samaritans ([www.samaritans.org.uk](http://www.samaritans.org.uk)) – 116 123 (free 24-hour helpline)
- SANE ([www.sane.org.uk](http://www.sane.org.uk)) – 0300 304 7000 (04:30am-10:30pm every day)
- POPYRUS (Under 35s) ([www.papyrus-uk.org](http://www.papyrus-uk.org)) – 0800 068 4141

Contacting your friends and family, as well as your GP is recommended if you require mental health advice and support.


←




→

0%  100%

## Final Display Page:



**Thank you for taking part in this study!**

The purpose of this study was to provide school staff with an overview and understanding of childhood anxiety. We also spent some time learning some strategies that could be used at work, that may be helpful in supporting the more anxious children at school. If you are happy for us to contact you regarding future research opportunities, please can you provide your email address in the box below:

All data gained through this study will remain anonymous and no participant will be able to be identified. All participants have been assigned an ID number for completing questionnaire responses and this will be stored separately to your email address. We hope through obtaining such data, will determine whether this type of intervention is feasible and whether it can be rolled out to more school staff and implemented into teaching training programmes by Educational Mental Health Practitioners.

**If you are interested in learning more about young people's anxiety, here are some useful online resources:**

- <https://www.annafreud.org/schools-and-colleges/resources/>
- <https://youngminds.org.uk/resources/school-resources/>
- <https://research.reading.ac.uk/andy/resources/resources-schools/>
- <https://www.samaritans.org/how-we-can-help/schools/education-professionals/>

**If you would like more information about the training today, below are the books that the training session was based on for you to refer to:**

- Creswell, C., & Willetts, L. (2019). *Helping Your Child with Fears and Worries: A Self-help Guide for Parents* (2nd ed.). Robinson.
- Halldorsson, B., Elliott, L., Chessell, C., Willetts, L., & Creswell, C. (2021). *Helping Your Child with Fears and Worries: Guided Self-Help Manual for Therapists Working with Groups*. (This can be requested and accessed on: <https://centaur.reading.ac.uk/65533/>)

If any of the content during this research has been distressing for you, we recommend that you seek support. Contacting your friends and family, as well as your GP is recommended if you require mental health advice and support.

**Below are details of contact numbers if you would like further external support:**

- Mind ([www.mind.co.uk](http://www.mind.co.uk)) – 0300 123 3393 (Monday to Friday, 9am to 6pm)
- Samaritans ([www.samaritans.org.uk](http://www.samaritans.org.uk)) – 116 123 (free 24-hour helpline)
- SANE ([www.sane.org.uk](http://www.sane.org.uk)) – 0300 304 7000 (04:30am-10:30pm every day)
- PAPYRUS (Under 35s) ([www.papyrus-uk.org](http://www.papyrus-uk.org)) – 0800 068 4141

If you have any questions regarding the research or any of the study's elements, then please feel free to contact the primary researcher on the below details: Elene Nicola  
E.nicola@uea.ac.uk

**Thank you again for taking part!**  
**Please ensure you click the button below to submit your data.**

Submit

←

→

0%

100%

## Appendix H

## Participant Demographics Questionnaire

1. What is your job title? .....
  
2. What region do you work in? (Select from drop down menu: *North East England, North West England, Yorkshire and The Humber, East Midlands England, West Midlands England, East of England, London, South East England, South West England, Scotland, Wales, Northern Ireland*)  
  
If other (please state) .....
  
3. Do you have pastoral responsibility? Yes / No
  
4. Please specify pastoral responsibility held: .....
  
5. How long have you been working in an education setting for? (Select from drop down menu: *less than 6 months, 6-12 months, 1-2 years, 2-5 years, 5-10 years, 10+ years*)
  
6. How old are you? (select from drop down menu: *a list of numbers from 0-100*)
  
7. What gender term do you identify with? (Select from drop down menu: *Male, Female, Non-Binary, Trans-gender, Prefer not to answer*)  
  
If other (please state) .....
  
8. What is your ethnicity? (Select from drop down menu: *White [British, English, Welsh Scottish, Northern Irish, Irish, Irish Traveller, Any other white background]. Black [African, Caribbean or any other Black background]. Multiple ethnic groups [White and Black Caribbean, White and Black African, White and Asian, Any other multiple ethnic background], Asian [Indian, Pakistani, Bangladeshi, Chinese, Any other Asian background], Other ethnic group [Arab], Prefer not to answer*)  
  
If other (please state) .....
  
9. Have you had any mental health training in the past? Yes/No  
If yes, can you explain what you had?.....

## Appendix I

## Structured 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 content was easy to understand.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

2. The content was suitable for school staff.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

3. The content was/will be helpful and useful for school staff.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

4. The training is important for school staff in their work.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

5. I would recommend the video to a colleague or contacts at different schools.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

6. I found the content interesting.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

7. The content was applicable to a primary school setting.

| 1                 | 2 | 3 | 4                         | 5 | 6              | 7 |
|-------------------|---|---|---------------------------|---|----------------|---|
| Strongly disagree |   |   | Neither agree or disagree |   | Strongly agree |   |

|                   |  |  |  |  |  |  |  |                           |  |  |  |  |  |  |  |  |  |                |
|-------------------|--|--|--|--|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|----------------|
| Strongly disagree |  |  |  |  |  |  |  | Neither agree or disagree |  |  |  |  |  |  |  |  |  | Strongly agree |
|-------------------|--|--|--|--|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|----------------|

8. The content was easy to access.

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

9. I feel the content is particularly important in the context of the COVID-19 pandemic.

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

10. I feel there needs to be more training on mental health in my school.

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

11. I would have preferred multiple trainings on this topic.

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

12. I feel another format other than a pre-recorded video would have been a better way of delivering the content (if so, please specify in the comments box below).

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

13. I found the training was well-paced throughout.

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

14. I found the length of the training was appropriate (if not, please specify an appropriate length in comments box below).

|                   |          |          |          |          |          |          |                           |  |  |  |  |  |  |  |  |  |  |                |
|-------------------|----------|----------|----------|----------|----------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|----------------|
| <b>1</b>          | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> |                           |  |  |  |  |  |  |  |  |  |  |                |
| Strongly disagree |          |          |          |          |          |          | Neither agree or disagree |  |  |  |  |  |  |  |  |  |  | Strongly agree |

15. I found it difficult to find the time to complete this training.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

16. I feel I will use the content of this training in my work.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

17. I feel more confident understanding anxiety.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

18. I feel more confident understanding ways I could identify children with anxiety.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

19. I feel more confident understanding strategies that may help a child with anxiety.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

20. I may use some of these strategies going forward in my work.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

21. I know what to do and who to refer to if I come across a child with anxiety.

| 1                 | 2 | 3 | 4                         | 5 | 6 | 7              |
|-------------------|---|---|---------------------------|---|---|----------------|
| Strongly disagree |   |   | Neither agree or disagree |   |   | Strongly agree |

Please provide any further comments about the training package:



**Section 2**

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

|   |          |          |                           |          |                |          |
|---|----------|----------|---------------------------|----------|----------------|----------|
| 1. I understood what the questionnaires were asking me. |          |          |                           |          |                |          |
| <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b>                  | <b>5</b> | <b>6</b>       | <b>7</b> |
| Strongly disagree                                       |          |          | Neither agree or disagree |          | Strongly agree |          |
| 2. It took too long to complete the questionnaires.     |          |          |                           |          |                |          |
| <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b>                  | <b>5</b> | <b>6</b>       | <b>7</b> |
| Strongly disagree                                       |          |          | Neither agree or disagree |          | Strongly agree |          |
| 3. I enjoyed taking part in the research study.         |          |          |                           |          |                |          |
| <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b>                  | <b>5</b> | <b>6</b>       | <b>7</b> |
| Strongly disagree                                       |          |          | Neither agree or disagree |          | Strongly agree |          |

Please provide any comments about the research process:

**Section 3****General Feedback**

Please provide any other comments or feedback:

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

## Appendix J

## Teacher Responses to Anxiety in Children (TRAC) Questionnaire

Instructions: In the following items, please indicate on a scale from 1 (very unlikely) to 7 (very likely) the likelihood that you would respond in the ways listed for each item. Please read each item carefully and respond as honestly and sincerely as you can. For each response, please circle a number from 1-7.

---

|                 |               |   |   |        |   |   |             |
|-----------------|---------------|---|---|--------|---|---|-------------|
| Response Scale: | 1             | 2 | 3 | 4      | 5 | 6 | 7           |
|                 | Very Unlikely |   |   | Medium |   |   | Very Likely |

Generalized anxiety/worry scenarios:

**If a child in my class was worried about getting a task right and he/she is refusing to complete a piece of work, I would:**

- a) Tell the child it's OK, and do some of the work for him/her (OP)
- b) Keep the child in at assembly or break to finish the work (S)
- c) Encourage the child to keep trying (E)
- d) Offer a small incentive for completing the work (R)
- e) Sit down with the child and help him/her to figure out how to do the work (PS)
- f) Give the child easier work (AR)

**If a child in my class is asked to learn a new skill (e.g., calculation method) and looks visibly worried, I would:**

- a) Tell the child he/she can keep doing the task the way he/she is used to<sup>a</sup> (AR)
- b) Tell the child he/she will have to stay in at break time if he/she doesn't try to do it (S)
- c) Repeatedly show the child how to do the task<sup>a</sup> (OP)
- d) Tell the child to 'have a go' (E)
- e) Tell the child that he/she will receive a small reward if he/she tries the new skill (R)
- f) Sit down with the child and help him/her to practice the new skill (PS)

**If a child in my class becomes very upset when another child scribbles on his/her work, I would:**

- a) Tell the child to calm down and stop over-reacting (S)
- b) Tell the child that it's understandable that he/she is so upset (AR)
- c) Sit down and re-do the work for the child (OP)
- d) Tell the child they will get a reward when he/she has another go at it (R)
- e) Talk with the child about how to fix the work (PS)
- f) Encourage the child to have another go at it (E)

Social anxiety scenarios:

**If a child and looked scared when asked to speak in front of the class, I would:**

- a) Ask another child to speak instead (AR)
- b) Tell the child to stop being nervous (S)
- c) Ask the child whisper to you what he/she wants to say and then say it to the class for him/her (OP)
- d) Tell the child he/she will get a reward for participating (R)
- e) Talk with the child about strategies to help him/her feel more confident speaking in class (PS)
- f) Encourage the child to give it a try (E)

**If a child is in the playground, watching their classmates play, but hanging back and not joining in, I would:**

- a) Leave him/her to watch (AR)
- b) Ask the child to come and do some jobs for you in the classroom (OP)
- c) Tell the child 'you should be playing with the other children' (S)
- d) Help the child figure out what to do so that he/she can join in (PS)
- e) Tell the child if he/she joins in you will give them all a reward (R)
- f) Encourage the child to play with their classmates (E)

**If a child in my class was really quiet, and not joining in a group discussion, I would:**

- a) Leave the child to listen to the discussion (AR)
- b) Give the child suggestions as to what he/she could say (OP)
- c) Tell the child that he/she will have to stay in at lunchtime if he/she doesn't participate (S)
- d) Praise the child for any contributions he/she makes to the discussion (R)
- e) Help the child practice what he/she could say in the group (PS)
- f) Encourage the child to participate (E)

Separation anxiety scenarios:

**If a child stayed as close to you as possible during class and playtimes, I would:**

- a) Let him/her stay close (AR)
- b) Tell the child to stop or you will send him/her to see another teacher (S)
- c) You tell the child he/she can stay with you and do fun activities (OP)
- d) Tell the child he/she will get a certificate or other reward if he/she sits/plays with his/her classmates (R)
- e) Help the child think about what activities he/she could do with their classmates (PS)
- f) Encourage the child join the group (E)

**If a child in my class is inconsolably upset, and tells you that he/she misses their parent(s) and wants to go home, I would:**

- a) Let the child speak to his/her parent(s) over the phone (AR)
- b) Tell the child if he/she doesn't calm down, he/she will miss out on a fun activity (S)
- a) Tell him/her to sit with you until he/she settles (OP)
- c) Tell the child he/she can choose a small reward when he/she joins in with class (R)
- d) Help the child to think of things to do that would make him/her feel better about being at school (PS)
- e) Remind the child of times when he/she has missed their parents before and coped well with it (E)

**If a child was crying after arriving at school away from his/her parents, I would:**

- a) Tell the child you will call his/her parent(s) and ask them to take him/her home (AR)
- b) Tell the child to calm down, he/she is over-reacting (S)
- g) Tell him/her to sit with you until they settle (OP)
- c) Tell the child he/she will get a reward for staying at school (R)
- d) Help the child to figure out strategies to help him/her feel settled at school (PS)
- e) Tell the child he/she is brave for coming to school (E)

Note. Scales are abbreviated as follows: Avoidance Reinforcement (AR), Overprotection (OP), Sanction (S), Reward (R), Problem solving (PS), Encouragement (E). Items removed from scale during main analyses due to low inter-item total correlations.

**Appendix K****Participant Information Sheet (PIS)****Brief Online Training in Understanding Childhood Anxiety for School Staff****Invitation and brief summary**

We would like to invite you to take part in a research study a newly developed online psychoeducation intervention focusing on childhood anxiety. The purpose of this study is to provide school staff with an overview and understanding of childhood anxiety. We will also be spending some time learning some strategies that could be used at work, that may be helpful in supporting the more anxious children at your school. Please take time to read the following information carefully as it will explain why the research is being done and what it involves for you as a participant.

**What's involved?**

You will be asked to complete a 30-minute online training and you can complete the training in more than one sitting, across a week, if you wish. You will also be asked to answer two questionnaires before and after the study. This is estimated to take up to 15 minutes all together. We will also ask at the end of this training whether you are happy for us to be in contact via email in the future to complete further questionnaires. This will be a separate study and you will only be contacted with an invitation to take part.

**What are the possible benefits of taking part?**

Taking part is free and will provide you with the opportunity to learn and understand more about childhood anxiety. You will also learn scientifically evidence-based anxiety alleviating strategies that may be useful in helping children manage their anxiety. This online training will also be made available to you after completion of this study, for you to re-refer to if you wish.

**What are the possible disadvantages and risks of taking part?**

We do not expect that the study will cause you any harm or risk by taking part. It may be possible that the study causes you to have some difficult thoughts or feelings or reflect on personal upsetting matters. If this does happen, and you wish to speak to someone; frequent reminders of support services will be provided throughout the training that you can contact, or a list of support services are detailed below:

- Mind ([www.mind.co.uk](http://www.mind.co.uk)) – 0300 123 3393 (Monday to Friday, 9am to 6pm)
- Samaritans ([www.samaritans.org.uk](http://www.samaritans.org.uk)) – 116 123 (free 24-hour helpline)
- SANE ([www.sane.org.uk](http://www.sane.org.uk)) – 0300 304 7000 (04:30am-10:30pm every day)
- PAPYRUS (Under 35s) ([www.papyrus-uk.org](http://www.papyrus-uk.org)) – 0800 068 4141

If at any point, the content during this research has been distressing for you, we recommend that you seek support. Contacting your friends and family, as well as your GP is recommended if you require mental health advice and support.

**Where will my information be stored?**

Taking part in this study is completely voluntary and the information you provide will remain anonymous. Your data will be assigned a participant ID number and all information collected in the study will be stored on password protected servers. If you opt to provide your email address for future

research involvement at the end of training, these email addresses will be de-identified from the data you have submitted in this study and stored on a separate database to ensure anonymity. Following the completion of this study, data will be kept securely for 10 years as per UEA Research Data Management Policy before it is destroyed.

You are free to withdraw from the study at any time up until clicking submit at the end of the intervention. You do not need to give a reason – please just close your browser window. You will not be able to withdraw your contribution in this study after submission if you have not provided your email address for future research, as anonymous data is unidentifiable.

### **Further Supporting Information**

If you have concerns or questions about any aspect of the study, you can contact the research team using the following contact information:

#### **Primary researcher:**

Elene Nicola ([e.nicola@uea.ac.uk](mailto:e.nicola@uea.ac.uk)), Trainee Clinical Psychologist, University of East Anglia.

#### **Supervisors:**

Dr Laura Pass ([l.pass@uea.ac.uk](mailto:l.pass@uea.ac.uk)), Clinical Associate Professor, EMHP Programme Director, University of East Anglia.

Kiki Mastroyannopoulou ([k.mastroyannopoulou@uea.ac.uk](mailto:k.mastroyannopoulou@uea.ac.uk)), Clinical Associate Professor, University of East Anglia.

If you have any concerns or complaints: please contact Professor Niall Broomfield ([n.broomfield@uea.ac.uk](mailto:n.broomfield@uea.ac.uk)), Head of Department of Clinical Psychology and Psychological Therapies (CPPT), Professor of Clinical Psychology, Programme Director for ClinPsyD, Director of Postgraduate Studies, University of East Anglia.

**Thank you for taking time to read this information. If you are happy to take part, please click the continue button below, which will take you to the consent form.**

## Appendix L

## Consent Form

**Title of Study: A CBT-informed brief psychoeducation intervention on childhood anxiety for primary-school staff: A quantitative feasibility study**

**Name of Researcher: Elene Nicola, University of East Anglia**

**Contact information: [e.nicola@uea.ac.uk](mailto:e.nicola@uea.ac.uk)**

**Please tick the box if you agree with the statements.**

1. I confirm I am a member of staff in an education setting working directly with children aged 4 to 11 years old.
2. I confirm that I have not attended a 3-day or longer course of mental health training for anxiety within the last 5 years.
3. I confirm that I have read the information sheet for the above study and have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
4. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, and I can withdraw from this study without reason, up until I click submit, by closing my browser.
5. I understand that the information collected from me may be used to support other research in the future and may be shared anonymously with other researchers.
6. I understand that my research data will be stored securely by the research team.
7. I agree to take part in the above study.

**By clicking 'agree' below you are confirming that you agree with all of the above statements. Once you have clicked agree, you will be taken to the first questionnaire of this study.**