encourage transfer of the skills taught to the home environment (Barrett, 2007a).

Psychological Basis

The psychological basis of Fun FRIENDS lies predominantly in Resiliency Theory and Cognitive Behavioural Therapy (CBT). Its development was underpinned by the idea that resilience is impacted by protective and risk factors acting at different levels (Werner & Smith, 1982; Werner & Smith, 1992). Fun FRIENDS draws on this by building protective factors at different levels, targeting factors within the child, the family and the school environments (Pahl & Barrett, 2007). It also draws on the theory and evidence that helping young children develop the tools to think flexibly in problem situations, and consider a range of solutions, helps them develop resiliency (Arend et al., 1979; Shure & Spivack, 1982).

CBT principles are also incorporated within the Fun FRIENDS programme, adapted to be developmentally appropriate for younger children, for example through experiential learning and play. Fun FRIENDS builds in cognitive behavioural elements by helping young children recognise their emotions using the idea of ‘green thoughts’ and ‘red thoughts’, corresponding to helpful and unhelpful thoughts respectively (Pahl & Barrett, 2007).

While research has suggested that parent-focused CBT is effective in reducing anxiety in children aged 4-7 years (van der Sluis et al., 2012), a more recent study found that CBT-based interventions which incorporate both child and parent elements are even more effective than parent-only interventions (Monga et al., 2015). The fact that Fun FRIENDS has both

child-focused and parent-focused elements could therefore also contribute to it being an effective anxiety intervention.

Rationale and Relevance

Child and adolescent mental health is a current area of priority for the UK government, who are emphasising the importance of early intervention and investing more money in children's mental health services, for example, with the introduction of mental health support teams in schools (DHSC & DfE, 2018). Supporting the social, emotional and mental health of children and young people (CYP) is recognised as an increasingly pertinent aspect of the EP role (DfE, 2019), and an understanding of evidence-based interventions to support mental health is therefore crucial for EPs.

Recent research in the UK suggests that the rate of anxiety disorders increases as children get older. While emotional disorders (including anxiety) are reported to be low for children aged 2 – 4, at around 1% of the population, this increases significantly to 4.1% in children aged 5 – 10, and is nearly 15% by the time young people reach 17 – 19 years old (DHSC, 2017). However, diagnostic methods of identifying anxiety have been criticised for their applicability to very young children, and some studies have suggested the prevalence of anxiety in pre-school aged children and older children is equally high (Egger & Angold, 2006). Higher anxiety levels in children and adolescents is found to be related to poorer school performance and earlier school withdrawal (Mazzone et al., 2007; Van Ameringen et al., 2003), and research is increasingly focused on the importance of early intervention in preventing mental health disorders (McGorry & Mei, 2018). Therefore,

Critical Review of the Evidence Base

Literature Search

A literature search was conducted on 21st

This systematic search yielded 36 studies. At this stage, 11 duplicates were identified and removed. Of the remaining 25 studies, abstract screening excluded 15, and full-text screening excluded a further three (see Appendix A for excluded studies and reasons). Table 2 defines the inclusion and exclusion criteria with rationale. Figure 4 shows a visual summary of the study selection process. Table 3 lists the final seven studies included in the review; further information on these is provided in Appendix B.

Table 2

Inclusion and Exclusion Criteria

Study Feature	Inclusion Criteria	Exclusion Criteria	Rationale
1 Language	Studies published in English	Studies published in languages other than English	Reviewer only understands English and reliable translation services are unavailable
2 Intervention	Studies using the Fun FRIENDS intervention only	Studies not using the Fun FRIENDS intervention, or those using Fun FRIENDS alongside concurrent interventions	This review is looking at the effectiveness of the Fun FRIENDS intervention only and other concurrent interventions may introduce confounding variables
3 Study Design	Studies collecting primary data and pre- and post-intervention measures	Studies not collecting primary data or not collecting pre- and post-measures e.g. Meta-analyses, reviews	This review is looking at the effectiveness of Fun FRIENDS intervention in reducing anxiety therefore measures must be taken from participants before and after the intervention

4 Participants	Participants aged 4-8 years old	Participants aged < 4 years and > 8 years old	The Fun FRIENDS intervention is designed for young children within this age range
5 Outcomes	Studies measuring child anxiety outcomes	No measured outcomes relating to child anxiety	This review is looking at the effectiveness of Fun FRIENDS in reducing anxiety outcomes
6 Publication Type	Published in peer-reviewed journals	Grey literature including those not published in peer reviewed journals and dissertations	To ensure studies are of a high standard and have been scrutinised for quality by independent reviewers

Figure 1

Only one study (Carlyle, 2014) had participants from the UK, which resulted in a higher WoE C rating, as these results may be more generalisable to the UK population. The purpose of this review is to investigate the intervention's effectiveness so that it can be applied to UK schools and the UK Educational Psychology workforce, therefore studies conducted in the UK are considered more relevant. Studies discussing and accounting for higher attrition rates scored higher in WoE A.

Study Design

Two of the included studies were randomised control trials (RCTs) (Anticich et al., 2013; Pahl & Barrett, 2010), while the other five were quasi-experimental or small-N designs without a control group (Barrett et al., 2015; Carlyle, 2014; Gallegos-Guajardo et al., 2020; Garcia et al., 2019; van der Mheen et al., 2020). The AB design in the small-N study showed a lack of experimental control and threat to internal validity. Furthermore, a baseline phase using repeated measurements was not established, reliable-change indexes were not reported nor was there overt measurement of intervention fidelity. This resulted in a low WoE A rating for Carlyle (2014).

RCTs are considered best evidence for intervention effectiveness (Petticrew & Roberts, 2003) as they allow us to conclude with more certainty that any reduction in anxiety is attributable to the intervention rather than another confounding variable. Therefore, studies without a control group were given lower ratings for both methodological quality (WoE A) and methodological relevance (WoE B). While it is acknowledged that there are ethical issues around withholding interventions from some participants, waitlist control

There was a discrepancy within one study (Garcia et al., 2019) regarding their use of the Spence Children's Anxiety Scale (SCAS) (Nauta et al., 2004; Spence, 1998). The body of text described using the parent-report version of the SCAS (Nauta et al., 2004), however the corresponding reference in their bibliography was the SCAS self-report version (Spence, 1998). This discrepancy is significant because the children in the study are aged 5-7 and the SCAS self-report version is only validated for children over the age of 8.

Two studies (Garcia et al., 2019; van der Mheen et al., 2020) used the Child Behaviour Checklist (CBCL) (Achenbach & Rescorla, 2001), which has an internalising sub-scale encompassing symptoms of anxiety, as well as an anxiety problems scale. The two studies with clinically anxious participants (Barrett et al., 2015; van der Mheen et al., 2020) used the Anxiety Disorders Interview Schedule for Children

shown in WoE C, only two studies assessed intervention fidelity by requiring interventionalists to complete a weekly checklist to encourage and assess adherence to the manual (Anticich et al., 2013; Pahl & Barrett, 2010). This is reflected in higher WoE A ratings.

Findings and Effect Sizes

Effect sizes are summarised in Table 5. Only three studies (Gallegos-Guajardo et al., 2020; Pahl & Barrett, 2010; van der Mheen et al., 2020) reported effect sizes which is accounted for in WoE A. For within-participant changes, d_{corr} was calculated (Becker, 1988). A small sample bias correction was then applied, and Hedge's *g* is reported. For the between-participant comparison (Pahl & Barrett, 2010) an online calculator was used to calculate Hedge's *g* (Wilson, 2021). Where only t-test data was reported (Barrett et al., 2015), d_z was calculated using another online calculator (Lakens, 2019). For one study (Carlyle, 2014), data for calculating effect sizes was not available in the paper or from the author directly. WebPlotDigitizer (Rohatgi, 2020) was used to extract data points from the graph to enable calculation of means, standard deviations and effect sizes. Effect sizes and the data for calculating these were also unavailable in one of the RCTs (Anticich et al., 2013). Partial eta squared was calculated from the F statistic (Lakens, 2019) and then converted to Cohen's *d* on Psychometrica (Lenhard & Lenhard, 2016). While the resulting effect size was large, it was across three groups at three timepoints therefore one cannot determine from this where significant difference lies. Data points were again extracted in WebPlotDi

between the intervention and waitlist control (Wilson, 2021). These revealed medium-large effect sizes for Fun Friends compared with the waitlist control group.

All of the included studies found some reductions in anxiety following the Fun FRIENDS intervention, with effect sizes ranging from small to large (Cohen, 1988). However, the larger effect sizes are generally in stuwithl95.32 841.we Fun

The Preschool Anxiety Scale (PAS)	Repeated measures pre-intervention and follow-up	$d_z = 1.18$	Large

any reduction in anxiety is due to the intervention rather than another variable.

The small-N design (Carlyle, 2014)e

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Appendix B – Mapping the Field

Table 6

Mapping the field

Author	N	Participants	Location	Design	Interventionalist and Setting	Anxiety Measure

Appendix C – Weight of Evidence

Weight of Evidence A – Methodological Quality

Two coding protocols were used (Gersten et al., 2005; Horner et al., 2005). The Gersten et al. (2005) protocol was used to evaluate the six experimental and quasi-experimental designs. This was amended slightly

it indicate whether they were comparable across conditions?		
Did the study provide not only internal consistency reliability but also test-retest reliability and interrater reliability (when appropriate) for outcome measures? Were data collectors and/or scorers blind to study conditions and equally (un) familiar to examinees across study conditions?	Did the study provide not only internal consistency reliability but also test-retest reliability and interrater reliability (when appropriate) for outcome measures?	Not all studies with quasi-experimental designs included a control group.

Each study was given a WoE A rating according to the following criteria. These were adapted from Gersten et al. (2005) to acknowledge where studies may have met slightly fewer essential criteria but met a large number of desirable criteria.

Table 8

Criteria for WoE A using Gersten et al. (2005)

WoE A Rating	Criteria
3 (High)	Study meets at least 9 essential criteria and at least 4 desirable criteria
2 (Medium)	Study meets at least 9 essential criteria and fewer than 4 desirable criteria **OR** Study meets 7-8 essential criteria and at least 4 desirable criteria
1 (Low)	Study meets 7-8 essential criteria and fewer than 4 desirable criteria **OR**

	3. Measures taken pre-intervention and post-intervention
2 (Medium)	Quasi-experimental designs with control group 1. Intervention group compared with at least one control group 2. Non-random assignment to intervention or control. 3. Measures taken pre-intervention and post-intervention
1 (Low)	Quasi-experimental designs, cohort studies, single case experimental designs 1. No Control Group 2. Measures taken pre-intervention and post-intervention
0 (Very Low)	Qualitative research, surveys, case control studies, non-experimental evaluations

Table 13

WoE B Ratings

Study	WoE B
Anticich et al. (2013)	3
Barrett et al. (2015)	1
Carlyle (2014)	1
Gallegos-Guajardo et al. (2020)	1
Garcia et al. (2019)	1
Pahl & Barrett (2010)	3
van der Mheen et al.	

Weight of Evidence C (WoE C) – Topic Relevance

WoE C ratings are assigned according to topic relevance to the review question. The criteria in Table 14 were developed and each study received a 0 – 3 rating based on their average score across these four criteria. Member countries of the Organisation for Economic Co-operation and Development (OECD, 2020) were considered more similar to the UK therefore studies carried out in OECD countries were giving a higher WoE C. The scores and WoE C ratings are displayed in Table 15.

Table 14

WoE C Criteria

Criteria	Scoring	Rationale
A – Intervention Fidelity: Sessions follow the Fun FRIENDS leader's manual Parental involvement 10 core sessions 1-1.5 hours in length Trained facilitators	3 = Study meets	

	0 = Delivered outside of school setting by untrained interventionalist	
C – Participants	3 = Clinically anxious children 2 = Children referred for concerns around anxiety 1 = Universal population (study included both anxious and non-anxious children) 0 = No information about participants	This review considers the effectiveness of Fun FRIENDS on reducing anxiety therefore 726.85 522.

Yes

No

N/A

Unknown/Unable to Code

Essential Quality Indicators – Quality Indicators for Implementation of the Intervention and Description of Comparison Conditions

Yes

No

N/A

Unknown/Unable to Code

Desirable Quality Indicators

Was data available on attrition rates among intervention samples? Was severe overall attrition documented? If so, is attrition comparable across samples? Is overall attrition less than 30%?

Yes

No

N/A

Unknown/Unable to Code

Did the study provide not only internal consistency reliability but also test-retest reliability and interrater reliability (when appropriate) for outcome measures?

Unknown/Unable to Code

Was evidence of the criterion-related validity and construct validity of the measures provided?

Yes

No

N/A

Unknown/Unable to Code

Did the research team assess not only surface features of fidelity implementation (e.g., number of minutes allocated to the intervention or teacher/interventionist following procedures specified), but also examine quality of implementation?

Yes

No

N/A

Unknown/Unable to Code

Was any documentation of the nature of instruction or series provided in comparison conditions?

Yes

No

N/A

Unknown/Unable to Code

Did the research report include actual audio or videotape excerpts that capture the nature of the intervention?

Yes

No

N/A

Unknown/Unable to Code

Were results presented in a clear, coherent fashion?

Yes

No

N/A

Unknown/Unable to Code

	Total	Score
Essential Quality Indicators ≥ 9 = score 2 7-8 = score 1 < 7 = score 0	9	2
Desirable Quality Indicators ≥ 4 = score 1 < 4 = score 0	5	1
Weighting of Evidence A Rating Score for Essential + Desirable		3

Unknown/Unable to Code

Yes